ckb-next

v0.2.8 at branch master

Generated by Doxygen 1.8.6

Tue May 16 2017 20:57:16

Contents

1 ckb-next: RGB Driver for Linux and OS X **1**

2 Building ckb **9**

3 cbk Improvements Roadmap **11**

4 DAEMON **13**

5 Todo List **21**

6 Deprecated List **23**

7 Namespace Index **25**

7.1 Namespace List 25

8 Hierarchical Index **27**

8.1 Class Hierarchy 27

9 Data Structure Index **31**

9.1 Data Structures 31

10 File Index **35**

10.1 File List 35

11 Namespace Documentation **41**

11.1 Ui Namespace Reference 41

12 Data Structure Documentation **43**

12.1 Ui::AnimAddDialog Class Reference 43

12.1.1 Detailed Description 44

12.1.2 Member Function Documentation 44

12.1.2.1 retranslateUi 44

12.1.2.2 setupUi 45

12.1.3 Field Documentation 46

12.1.3.1 animBox 46

12.1.3.2 buttonBox 47

12.1.3.3 gridLayout . . . 47
12.1.3.4 horizontalLayout . . . 47
12.1.3.5 horizontalSpacer . . . 47
12.1.3.6 horizontalSpacer_2 . . . 47
12.1.3.7 label . . . 47
12.1.3.8 label_2 . . . 47
12.1.3.9 presetBox . . . 47
12.1.3.10 previewBox . . . 47
12.1.3.11 verticalSpacer_2 . . . 48
12.1.3.12 verticalSpacer_3 . . . 48
12.2 AnimAddDialog Class Reference . . . 48
12.2.1 Detailed Description . . . 49
12.2.2 Constructor & Destructor Documentation . . . 49
12.2.2.1 AnimAddDialog . . . 50
12.2.2.2 ∼AnimAddDialog . . . 50
12.2.3 Member Function Documentation . . . 50
12.2.3.1 chosenPreset . . . 50
12.2.3.2 chosenScript . . . 51
12.2.3.3 on_animBox_activated . . . 51
12.2.3.4 on_presetBox_activated . . . 52
12.2.3.5 on_previewBox_clicked . . . 53
12.2.4 Field Documentation . . . 53
12.2.4.1 _keys . . . 53
12.2.4.2 _light . . . 53
12.2.4.3 scripts . . . 53
12.2.4.4 showPreview . . . 54
12.2.4.5 ui . . . 54
12.3 AnimScript Class Reference . . . 54
12.3.1 Detailed Description . . . 58
12.3.2 Data Structure Documentation . . . 58
12.3.2.1 struct AnimScript::Param . . . 58
12.3.3 Member Typedef Documentation . . . 59
12.3.3.1 PresetValue . . . 59
12.3.4 Constructor & Destructor Documentation . . . 59
12.3.4.1 ∼AnimScript . . . 59
12.3.4.2 AnimScript . . . 59
12.3.4.3 AnimScript . . . 60
12.3.5 Member Function Documentation . . . 60
12.3.5.1 advance . . . 60
12.3.5.2 author . . . 60

12.3.5.3 begin . . . 61
12.3.5.4 colors . . . 62
12.3.5.5 copy . . . 62
12.3.5.6 copyright . . . 63
12.3.5.7 count . . . 63
12.3.5.8 description . . . 64
12.3.5.9 end . . . 64
12.3.5.10 frame . . . 65
12.3.5.11 guid . . . 66
12.3.5.12 hasFrame . . . 66
12.3.5.13 hasKeypress . . . 67
12.3.5.14 hasParam . . . 67
12.3.5.15 init . . . 68
12.3.5.16 keypress . . . 69
12.3.5.17 license . . . 70
12.3.5.18 list . . . 70
12.3.5.19 load . . . 71
12.3.5.20 name . . . 74
12.3.5.21 param . . . 74
12.3.5.22 parameters . . . 75
12.3.5.23 paramIterator . . . 76
12.3.5.24 path . . . 76
12.3.5.25 preset . . . 77
12.3.5.26 presets . . . 77
12.3.5.27 printParams . . . 77
12.3.5.28 readProcess . . . 78
12.3.5.29 retrigger . . . 79
12.3.5.30 scan . . . 80
12.3.5.31 setDuration . . . 81
12.3.5.32 stop . . . 81
12.3.5.33 version . . . 82
12.3.5.34 year . . . 82
12.3.6 Field Documentation . . . 83
12.3.6.1 _colorBuffer . . . 83
12.3.6.2 _colors . . . 83
12.3.6.3 _info . . . 83
12.3.6.4 _keys . . . 83
12.3.6.5 _map . . . 83
12.3.6.6 _paramValues . . . 83
12.3.6.7 _path . . . 83

12.3.6.8 _presets . . . 84
12.3.6.9 _presetValues . . . 84
12.3.6.10 durationMsec . . . 84
12.3.6.11 firstFrame . . . 84
12.3.6.12 inFrame . . . 84
12.3.6.13 initialized . . . 84
12.3.6.14 KP_NAME . . . 84
12.3.6.15 KP_NONE . . . 84
12.3.6.16 KP_POSITION . . . 84
12.3.6.17 lastFrame . . . 85
12.3.6.18 minX . . . 85
12.3.6.19 minY . . . 85
12.3.6.20 process . . . 85
12.3.6.21 readAnyFrame . . . 85
12.3.6.22 readFrame . . . 85
12.3.6.23 repeatMsec . . . 85
12.3.6.24 scripts . . . 85
12.3.6.25 stopped . . . 85
12.4 Ui::AnimSettingDialog Class Reference . . . 86
12.4.1 Detailed Description . . . 88
12.4.2 Member Function Documentation . . . 88
12.4.2.1 retranslateUi . . . 88
12.4.2.2 setupUi . . . 89
12.4.3 Field Documentation . . . 93
12.4.3.1 animName . . . 93
12.4.3.2 buttonBox . . . 93
12.4.3.3 delayBox . . . 93
12.4.3.4 gridLayout . . . 94
12.4.3.5 gridLayout_2 . . . 94
12.4.3.6 horizontalSpacer . . . 94
12.4.3.7 horizontalSpacer_2 . . . 94
12.4.3.8 horizontalSpacer_3 . . . 94
12.4.3.9 horizontalSpacer_4 . . . 94
12.4.3.10 horizontalSpacer_5 . . . 94
12.4.3.11 horizontalSpacer_6 . . . 94
12.4.3.12 infoTab . . . 94
12.4.3.13 kpDelayBox . . . 95
12.4.3.14 kpModeStopBox . . . 95
12.4.3.15 kpReleaseBox . . . 95
12.4.3.16 kpRepeatBox . . . 95

12.4.3.17 kpRepeatLabel . . . 95
12.4.3.18 kpRepeatLabel_2 . . . 95
12.4.3.19 label . . . 95
12.4.3.20 label_10 . . . 95
12.4.3.21 label_11 . . . 95
12.4.3.22 label_12 . . . 96
12.4.3.23 label_13 . . . 96
12.4.3.24 label_2 . . . 96
12.4.3.25 label_3 . . . 96
12.4.3.26 label_4 . . . 96
12.4.3.27 label_5 . . . 96
12.4.3.28 label_6 . . . 96
12.4.3.29 label_7 . . . 96
12.4.3.30 label_8 . . . 96
12.4.3.31 label_9 . . . 97
12.4.3.32 line . . . 97
12.4.3.33 line_2 . . . 97
12.4.3.34 repeatBox . . . 97
12.4.3.35 repeatLabel . . . 97
12.4.3.36 repeatLabel_2 . . . 97
12.4.3.37 sAuthorLabel . . . 97
12.4.3.38 sDescLabel . . . 97
12.4.3.39 settingsGrid . . . 97
12.4.3.40 settingTab . . . 98
12.4.3.41 sLicenseLabel . . . 98
12.4.3.42 sNameLabel . . . 98
12.4.3.43 sVerLabel . . . 98
12.4.3.44 sYearLabel . . . 98
12.4.3.45 tabWidget . . . 98
12.4.3.46 timeGrid . . . 98
12.4.3.47 timeTab . . . 98
12.4.3.48 verticalSpacer . . . 98
12.4.3.49 verticalSpacer_2 . . . 99
12.4.3.50 verticalSpacer_3 . . . 99
12.5 AnimSettingDialog Class Reference . . . 99
12.5.1 Detailed Description . . . 102
12.5.2 Constructor & Destructor Documentation . . . 102
12.5.2.1 AnimSettingDialog . . . 102
12.5.2.2 ~AnimSettingDialog . . . 107
12.5.3 Member Function Documentation . . . 107

12.5.3.1 angleDialChanged . . . 108
12.5.3.2 angleSpinnerChanged . . . 108
12.5.3.3 hLine . . . 109
12.5.3.4 name . . . 110
12.5.3.5 newDuration . . . 110
12.5.3.6 on_delayBox_valueChanged . . . 111
12.5.3.7 on_kpDelayBox_valueChanged . . . 112
12.5.3.8 on_kpReleaseBox_stateChanged . . . 112
12.5.3.9 on_kpRepeatBox_valueChanged . . . 113
12.5.3.10 on_repeatBox_valueChanged . . . 114
12.5.3.11 updateParam . . . 114
12.5.3.12 updateStops . . . 117
12.5.4 Field Documentation . . . 118
12.5.4.1 _anim . . . 118
12.5.4.2 angleDialMapper . . . 118
12.5.4.3 angleSpinnerMapper . . . 118
12.5.4.4 angleSpinners . . . 119
12.5.4.5 hasRepeat . . . 119
12.5.4.6 kpStopCheck . . . 119
12.5.4.7 lastDuration . . . 119
12.5.4.8 settingWidgets . . . 119
12.5.4.9 stopCheck . . . 119
12.5.4.10 ui . . . 119
12.5.4.11 updateMapper . . . 119
12.6 AutoRun Class Reference . . . 120
12.6.1 Detailed Description . . . 120
12.6.2 Member Function Documentation . . . 120
12.6.2.1 available . . . 120
12.6.2.2 disable . . . 121
12.6.2.3 enable . . . 121
12.6.2.4 isEnabled . . . 122
12.6.2.5 once . . . 123
12.7 CkbSettings Class Reference . . . 124
12.7.1 Detailed Description . . . 126
12.7.2 Constructor & Destructor Documentation . . . 126
12.7.2.1 CkbSettings . . . 126
12.7.2.2 CkbSettings . . . 126
12.7.2.3 CkbSettings . . . 127
12.7.2.4 ~CkbSettings . . . 127
12.7.3 Member Function Documentation . . . 127

12.7.3.1 beginGroup . . . 127
12.7.3.2 childGroups . . . 127
12.7.3.3 childKeys . . . 128
12.7.3.4 cleanUp . . . 129
12.7.3.5 contains . . . 130
12.7.3.6 containsGroup . . . 130
12.7.3.7 endGroup . . . 131
12.7.3.8 get . . . 131
12.7.3.9 isBusy . . . 132
12.7.3.10 pwd . . . 133
12.7.3.11 pwd . . . 134
12.7.3.12 remove . . . 135
12.7.3.13 set . . . 135
12.7.3.14 setValue . . . 137
12.7.3.15 value . . . 137
12.7.4 Field Documentation . . . 138
12.7.4.1 backing . . . 138
12.7.4.2 groups . . . 138
12.7.4.3 removeCache . . . 139
12.7.4.4 writeCache . . . 139
12.8 CkbSettingsWriter Class Reference . . . 139
12.8.1 Detailed Description . . . 140
12.8.2 Constructor & Destructor Documentation . . . 140
12.8.2.1 CkbSettingsWriter . . . 140
12.8.2.2 ~CkbSettingsWriter . . . 141
12.8.3 Member Function Documentation . . . 141
12.8.3.1 run . . . 141
12.8.4 Field Documentation . . . 141
12.8.4.1 _backing . . . 141
12.8.4.2 _removals . . . 141
12.8.4.3 _updates . . . 141
12.9 ColorButton Class Reference . . . 141
12.9.1 Detailed Description . . . 144
12.9.2 Constructor & Destructor Documentation . . . 144
12.9.2.1 ColorButton . . . 144
12.9.3 Member Function Documentation . . . 144
12.9.3.1 allowAlpha . . . 144
12.9.3.2 allowAlpha . . . 145
12.9.3.3 bigIcons . . . 145
12.9.3.4 bigIcons . . . 146

12.9.3.5 color . . . 146
12.9.3.6 color . . . 147
12.9.3.7 colorChanged . . . 148
12.9.3.8 pickColor . . . 148
12.9.3.9 setLabel . . . 149
12.9.3.10 setLabel . . . 149
12.9.3.11 updateImage . . . 149
12.9.4 Field Documentation . . . 150
12.9.4.1 _alpha . . . 150
12.9.4.2 _bigIcons . . . 150
12.9.4.3 _color . . . 150
12.9.4.4 _setLabel . . . 150
12.10 ColorMap Class Reference . . . 151
12.10.1 Detailed Description . . . 152
12.10.2 Constructor & Destructor Documentation . . . 152
12.10.2.1 ColorMap . . . 152
12.10.2.2 ~ColorMap . . . 152
12.10.2.3 ColorMap . . . 152
12.10.3 Member Function Documentation . . . 153
12.10.3.1 alloc . . . 153
12.10.3.2 clear . . . 153
12.10.3.3 colorForName . . . 154
12.10.3.4 colorForName . . . 155
12.10.3.5 colors . . . 155
12.10.3.6 colors . . . 156
12.10.3.7 count . . . 156
12.10.3.8 deAlloc . . . 156
12.10.3.9 init . . . 157
12.10.3.10 keyNames . . . 158
12.10.3.11 operator= . . . 158
12.10.4 Field Documentation . . . 159
12.10.4.1 _colors . . . 159
12.10.4.2 _count . . . 159
12.10.4.3 _keyNames . . . 159
12.10.4.4 _mapCount . . . 159
12.11 devcmd.__unnamed__ Struct Reference . . . 160
12.11.1 Detailed Description . . . 161
12.11.2 Field Documentation . . . 161
12.11.2.1 active . . . 161
12.11.2.2 allocprofile . . . 161

12.11.2.3 bind . . . 161
12.11.2.4 dpi . . . 161
12.11.2.5 dpisel . . . 161
12.11.2.6 erase . . . 161
12.11.2.7 eraseprofile . . . 161
12.11.2.8 freeprofile . . . 161
12.11.2.9 fwupdate . . . 161
12.11.2.10 get . . . 161
12.11.2.11 hwload . . . 161
12.11.2.12 hwsave . . . 161
12.11.2.13 iauto . . . 161
12.11.2.14 id . . . 161
12.11.2.15 idle . . . 161
12.11.2.16 inotify . . . 161
12.11.2.17 ioff . . . 161
12.11.2.18 ion . . . 161
12.11.2.19 lift . . . 161
12.11.2.20 loadprofile . . . 162
12.11.2.21 macro . . . 162
12.11.2.22 name . . . 162
12.11.2.23 notify . . . 162
12.11.2.24 pollrate . . . 162
12.11.2.25 profileid . . . 162
12.11.2.26 profilename . . . 162
12.11.2.27 rebind . . . 162
12.11.2.28 restart . . . 162
12.11.2.29 rgb . . . 162
12.11.2.30 setmodeindex . . . 162
12.11.2.31 snap . . . 162
12.11.2.32 start . . . 162
12.11.2.33 unbind . . . 162
12.11.2.34 updatedpi . . . 162
12.11.2.35 updateindicators . . . 162
12.11.2.36 updatergb . . . 162
12.12 Ui::ExtraSettingsWidget Class Reference . . . 162
12.12.1 Detailed Description . . . 164
12.12.2 Member Function Documentation . . . 165
12.12.2.1 retranslateUi . . . 165
12.12.2.2 setupUi . . . 166
12.12.3 Field Documentation . . . 170

12.12.3.1 animCountLabel . . . 170
12.12.3.2 animPathLabel . . . 170
12.12.3.3 animScanButton . . . 170
12.12.3.4 brightnessBox . . . 170
12.12.3.5 buttonBox . . . 170
12.12.3.6 delayBox . . . 170
12.12.3.7 ditherBox . . . 170
12.12.3.8 fpsBox . . . 170
12.12.3.9 fpsWarnLabel . . . 171
12.12.3.10 gridLayout . . . 171
12.12.3.11 horizontalLayout . . . 171
12.12.3.12 horizontalLayout_2 . . . 171
12.12.3.13 horizontalSpacer . . . 171
12.12.3.14 horizontalSpacer_2 . . . 171
12.12.3.15 horizontalSpacer_3 . . . 171
12.12.3.16 label . . . 171
12.12.3.17 label_10 . . . 171
12.12.3.18 label_11 . . . 172
12.12.3.19 label_2 . . . 172
12.12.3.20 label_3 . . . 172
12.12.3.21 label_5 . . . 172
12.12.3.22 label_6 . . . 172
12.12.3.23 line . . . 172
12.12.3.24 line_2 . . . 172
12.12.3.25 line_3 . . . 172
12.12.3.26 mAccelBox . . . 172
12.12.3.27 osxLabel . . . 173
12.12.3.28 osxLine . . . 173
12.12.3.29 sAccelBox . . . 173
12.12.3.30 sSpeedBox . . . 173
12.12.3.31 sSpeedWidget . . . 173
12.12.3.32 trayBox . . . 173
12.12.3.33 verticalSpacer . . . 173
12.12.3.34 verticalSpacer_10 . . . 173
12.12.3.35 verticalSpacer_11 . . . 173
12.12.3.36 verticalSpacer_2 . . . 174
12.12.3.37 verticalSpacer_3 . . . 174
12.12.3.38 verticalSpacer_4 . . . 174
12.12.3.39 verticalSpacer_5 . . . 174
12.12.3.40 verticalSpacer_6 . . . 174

12.12.3.41 verticalSpacer_7 . . . 174
12.12.3.42 verticalSpacer_8 . . . 174
12.12.3.43 verticalSpacer_9 . . . 174
12.13 ExtraSettingsWidget Class Reference . . . 175
12.13.1 Detailed Description . . . 176
12.13.2 Constructor & Destructor Documentation . . . 177
12.13.2.1 ExtraSettingsWidget . . . 177
12.13.2.2 ~ExtraSettingsWidget . . . 178
12.13.3 Member Function Documentation . . . 178
12.13.3.1 on_animScanButton_clicked . . . 178
12.13.3.2 on_brightnessBox_clicked . . . 179
12.13.3.3 on_delayBox_clicked . . . 179
12.13.3.4 on_ditherBox_clicked . . . 180
12.13.3.5 on_fpsBox_valueChanged . . . 180
12.13.3.6 on_mAccelBox_clicked . . . 180
12.13.3.7 on_sAccelBox_clicked . . . 181
12.13.3.8 on_sSpeedBox_valueChanged . . . 181
12.13.3.9 on_trayBox_clicked . . . 182
12.13.3.10 pollUpdates . . . 182
12.13.4 Field Documentation . . . 183
12.13.4.1 ui . . . 183
12.14 KbFirmware::FW Struct Reference . . . 183
12.14.1 Detailed Description . . . 184
12.14.2 Constructor & Destructor Documentation . . . 184
12.14.2.1 FW . . . 184
12.14.3 Field Documentation . . . 184
12.14.3.1 ckbVersion . . . 184
12.14.3.2 fileName . . . 184
12.14.3.3 fwVersion . . . 184
12.14.3.4 hash . . . 184
12.14.3.5 url . . . 184
12.15 FwUpgradeDialog Class Reference . . . 184
12.15.1 Detailed Description . . . 186
12.15.2 Constructor & Destructor Documentation . . . 186
12.15.2.1 FwUpgradeDialog . . . 186
12.15.2.2 ~FwUpgradeDialog . . . 187
12.15.3 Member Function Documentation . . . 187
12.15.3.1 cleanBlob . . . 187
12.15.3.2 closeEvent . . . 188
12.15.3.3 exec . . . 188

12.15.3.4 fwUpdateFinished . . . 189
12.15.3.5 fwUpdateProgress . . . 190
12.15.3.6 on_actionButton_clicked . . . 190
12.15.3.7 on_cancelButton_clicked . . . 191
12.15.3.8 removeDev . . . 191
12.15.3.9 saveBlob . . . 192
12.15.4 Field Documentation . . . 192
12.15.4.1 blob . . . 193
12.15.4.2 evLoop . . . 193
12.15.4.3 exitSuccess . . . 193
12.15.4.4 kb . . . 193
12.15.4.5 savePath . . . 193
12.15.4.6 ui . . . 193
12.16 Ui::FwUpgradeDialog Class Reference . . . 193
12.16.1 Detailed Description . . . 195
12.16.2 Member Function Documentation . . . 196
12.16.2.1 retranslateUi . . . 196
12.16.2.2 setupUi . . . 196
12.16.3 Field Documentation . . . 198
12.16.3.1 actionButton . . . 198
12.16.3.2 cancelButton . . . 198
12.16.3.3 curLabel . . . 198
12.16.3.4 devLabel . . . 198
12.16.3.5 gridLayout . . . 199
12.16.3.6 gridLayout_2 . . . 199
12.16.3.7 horizontalSpacer . . . 199
12.16.3.8 horizontalSpacer_2 . . . 199
12.16.3.9 horizontalSpacer_3 . . . 199
12.16.3.10 horizontalSpacer_4 . . . 199
12.16.3.11 label_2 . . . 199
12.16.3.12 label_4 . . . 199
12.16.3.13 newLabel . . . 199
12.16.3.14 progressBar . . . 200
12.16.3.15 statusLabel . . . 200
12.17 GradientButton Class Reference . . . 200
12.17.1 Detailed Description . . . 201
12.17.2 Constructor & Destructor Documentation . . . 202
12.17.2.1 GradientButton . . . 202
12.17.3 Member Function Documentation . . . 202
12.17.3.1 fromString . . . 202

12.17.3.2 gradientChanged . . . 203
12.17.3.3 pickGradient . . . 203
12.17.3.4 toString . . . 204
12.17.3.5 updateImage . . . 205
12.17.4 Field Documentation . . . 206
12.17.4.1 _alpha . . . 206
12.17.4.2 _stops . . . 206
12.18 Ui::GradientDialog Class Reference . . . 206
12.18.1 Detailed Description . . . 208
12.18.2 Member Function Documentation . . . 208
12.18.2.1 retranslateUi . . . 208
12.18.2.2 setupUi . . . 209
12.18.3 Field Documentation . . . 211
12.18.3.1 buttonBox . . . 211
12.18.3.2 gridLayout . . . 211
12.18.3.3 gridLayout_2 . . . 211
12.18.3.4 gridLayout_3 . . . 212
12.18.3.5 groupBox_2 . . . 212
12.18.3.6 horizontalLayout . . . 212
12.18.3.7 horizontalLayout_2 . . . 212
12.18.3.8 horizontalSpacer . . . 212
12.18.3.9 horizontalSpacer_2 . . . 212
12.18.3.10 horizontalSpacer_3 . . . 212
12.18.3.11 label . . . 212
12.18.3.12 label_2 . . . 212
12.18.3.13 presetDelete . . . 213
12.18.3.14 presetList . . . 213
12.18.3.15 presetName . . . 213
12.18.3.16 presetSave . . . 213
12.18.3.17 stopBox . . . 213
12.18.3.18 stopColor . . . 213
12.18.3.19 stopOpacity . . . 213
12.18.3.20 stopPos . . . 213
12.18.3.21 verticalSpacer . . . 214
12.18.3.22 verticalSpacer_2 . . . 214
12.18.3.23 widget . . . 214
12.19 GradientDialog Class Reference . . . 214
12.19.1 Detailed Description . . . 217
12.19.2 Constructor & Destructor Documentation . . . 217
12.19.2.1 GradientDialog . . . 217

12.19.2.2 ~GradientDialog . . . 218
12.19.3 Member Function Documentation . . . 218
12.19.3.1 addPreset . . . 218
12.19.3.2 colorChanged . . . 219
12.19.3.3 currentChanged . . . 219
12.19.3.4 getGradient . . . 220
12.19.3.5 makeIcon . . . 221
12.19.3.6 on_presetDelete_clicked . . . 222
12.19.3.7 on_presetList_currentItemChanged . . . 222
12.19.3.8 on_presetName_textEdited . . . 223
12.19.3.9 on_presetSave_clicked . . . 223
12.19.3.10 on_stopOpacity_valueChanged . . . 224
12.19.3.11 on_stopPos_valueChanged . . . 224
12.19.3.12 setPreset . . . 225
12.19.3.13 updatePresets . . . 226
12.19.4 Field Documentation . . . 226
12.19.4.1 currentPreset . . . 226
12.19.4.2 presets . . . 227
12.19.4.3 ui . . . 227
12.20 GradientDialogWidget Class Reference . . . 227
12.20.1 Detailed Description . . . 230
12.20.2 Constructor & Destructor Documentation . . . 230
12.20.2.1 GradientDialogWidget . . . 230
12.20.3 Member Function Documentation . . . 230
12.20.3.1 colorAt . . . 230
12.20.3.2 current . . . 231
12.20.3.3 currentChanged . . . 231
12.20.3.4 fillRect . . . 231
12.20.3.5 makeStops . . . 232
12.20.3.6 mouseMoveEvent . . . 233
12.20.3.7 mousePressEvent . . . 234
12.20.3.8 mouseReleaseEvent . . . 235
12.20.3.9 moveCurrent . . . 235
12.20.3.10 paintEvent . . . 236
12.20.3.11 selectedStop . . . 237
12.20.3.12 selectionColors . . . 238
12.20.3.13 setCurrentColor . . . 239
12.20.3.14 setStops . . . 239
12.20.3.15 stopCount . . . 240
12.20.3.16 stopRect . . . 241

12.20.3.17 stops . . . 241
12.20.4 Field Documentation . . . 242
12.20.4.1 _colors . . . 242
12.20.4.2 _current . . . 242
12.20.4.3 _stops . . . 242
12.20.4.4 selected . . . 242
12.20.4.5 selectedOffset . . . 242
12.20.4.6 selectedPos . . . 242
12.21 JlCompress Class Reference . . . 243
12.21.1 Detailed Description . . . 244
12.21.2 Member Function Documentation . . . 244
12.21.2.1 compressDir . . . 244
12.21.2.2 compressFile . . . 245
12.21.2.3 compressFile . . . 246
12.21.2.4 compressFiles . . . 248
12.21.2.5 compressSubDir . . . 250
12.21.2.6 extractDir . . . 252
12.21.2.7 extractFile . . . 254
12.21.2.8 extractFile . . . 256
12.21.2.9 extractFiles . . . 257
12.21.2.10 getFileList . . . 258
12.21.2.11 removeFile . . . 260
12.22 Kb Class Reference . . . 261
12.22.1 Detailed Description . . . 266
12.22.2 Constructor & Destructor Documentation . . . 266
12.22.2.1 ~Kb . . . 266
12.22.2.2 Kb . . . 267
12.22.3 Member Function Documentation . . . 269
12.22.3.1 appendProfile . . . 269
12.22.3.2 autoSave . . . 269
12.22.3.3 currentBind . . . 269
12.22.3.4 currentLight . . . 270
12.22.3.5 currentMode . . . 271
12.22.3.6 currentPerf . . . 271
12.22.3.7 currentProfile . . . 272
12.22.3.8 deleteHw . . . 272
12.22.3.9 deletePrevious . . . 273
12.22.3.10 dither . . . 273
12.22.3.11 dither . . . 274
12.22.3.12 find . . . 274

12.22.3.13 frameRate . . . 275
12.22.3.14 frameRate . . . 275
12.22.3.15 frameUpdate . . . 276
12.22.3.16 fwUpdate . . . 277
12.22.3.17 fwUpdateFinished . . . 278
12.22.3.18 fwUpdateProgress . . . 278
12.22.3.19 getKeyMap . . . 279
12.22.3.20 getMacroNumber . . . 279
12.22.3.21 getMacroPath . . . 280
12.22.3.22 hwProfile . . . 280
12.22.3.23 hwProfile . . . 280
12.22.3.24 hwSave . . . 281
12.22.3.25 indexOf . . . 282
12.22.3.26 infoUpdated . . . 283
12.22.3.27 isKeyboard . . . 283
12.22.3.28 isMouse . . . 284
12.22.3.29 isOpen . . . 285
12.22.3.30 layout . . . 285
12.22.3.31 layout . . . 286
12.22.3.32 load . . . 286
12.22.3.33 macroDelay . . . 287
12.22.3.34 macroDelay . . . 287
12.22.3.35 matches . . . 288
12.22.3.36 modeChanged . . . 288
12.22.3.37 model . . . 289
12.22.3.38 modeRenamed . . . 289
12.22.3.39 mouseAccel . . . 289
12.22.3.40 mouseAccel . . . 290
12.22.3.41 needsSave . . . 290
12.22.3.42 newMode . . . 290
12.22.3.43 newMode . . . 291
12.22.3.44 newProfile . . . 292
12.22.3.45 newProfile . . . 292
12.22.3.46 profileAdded . . . 293
12.22.3.47 profileChanged . . . 293
12.22.3.48 profileRenamed . . . 294
12.22.3.49 profiles . . . 294
12.22.3.50 profiles . . . 295
12.22.3.51 readNotify . . . 295
12.22.3.52 run . . . 299

12.22.3.53 save . . . 300
12.22.3.54 scrollSpeed . . . 301
12.22.3.55 scrollSpeed . . . 301
12.22.3.56 setCurrentMode . . . 302
12.22.3.57 setCurrentMode . . . 302
12.22.3.58 setCurrentMode . . . 303
12.22.3.59 setCurrentProfile . . . 304
12.22.3.60 updateLayout . . . 305
12.22.3.61 writeProfileHeader . . . 306
12.22.4 Friends And Related Function Documentation . . . 307
12.22.4.1 KbManager . . . 307
12.22.5 Field Documentation . . . 307
12.22.5.1 _currentMode . . . 307
12.22.5.2 _currentProfile . . . 307
12.22.5.3 _delay . . . 307
12.22.5.4 _dither . . . 307
12.22.5.5 _frameRate . . . 307
12.22.5.6 _hwProfile . . . 308
12.22.5.7 _layout . . . 308
12.22.5.8 _model . . . 308
12.22.5.9 _mouseAccel . . . 308
12.22.5.10 _needsSave . . . 308
12.22.5.11 _profiles . . . 308
12.22.5.12 _scrollSpeed . . . 308
12.22.5.13 cmd . . . 308
12.22.5.14 cmdpath . . . 308
12.22.5.15 devpath . . . 309
12.22.5.16 features . . . 309
12.22.5.17 firmware . . . 309
12.22.5.18 fwUpdPath . . . 309
12.22.5.19 hwLoading . . . 309
12.22.5.20 HWMODE_MAX . . . 309
12.22.5.21 hwModeCount . . . 309
12.22.5.22 iState . . . 309
12.22.5.23 lastAutoSave . . . 309
12.22.5.24 macroNumber . . . 310
12.22.5.25 macroPath . . . 310
12.22.5.26 monochrome . . . 310
12.22.5.27 notifyNumber . . . 310
12.22.5.28 notifyPath . . . 310

12.22.5.29 pollrate . . . 310
12.22.5.30 prefsPath . . . 310
12.22.5.31 prevMode . . . 310
12.22.5.32 prevProfile . . . 310
12.22.5.33 usbModel . . . 311
12.22.5.34 usbSerial . . . 311
12.23 KbAnim Class Reference . . . 311
12.23.1 Detailed Description . . . 314
12.23.2 Member Enumeration Documentation . . . 314
12.23.2.1 Mode . . . 314
12.23.3 Constructor & Destructor Documentation . . . 315
12.23.3.1 KbAnim . . . 315
12.23.3.2 KbAnim . . . 316
12.23.3.3 KbAnim . . . 317
12.23.4 Member Function Documentation . . . 317
12.23.4.1 blend . . . 317
12.23.4.2 catchUp . . . 319
12.23.4.3 commitParams . . . 320
12.23.4.4 effectiveParams . . . 321
12.23.4.5 guid . . . 321
12.23.4.6 hasParameter . . . 322
12.23.4.7 isActive . . . 322
12.23.4.8 isRunning . . . 322
12.23.4.9 keypress . . . 323
12.23.4.10 keys . . . 324
12.23.4.11 keys . . . 325
12.23.4.12 map . . . 325
12.23.4.13 map . . . 326
12.23.4.14 mode . . . 326
12.23.4.15 mode . . . 326
12.23.4.16 name . . . 327
12.23.4.17 name . . . 327
12.23.4.18 needsSave . . . 327
12.23.4.19 newId . . . 328
12.23.4.20 opacity . . . 328
12.23.4.21 opacity . . . 328
12.23.4.22 parameter . . . 329
12.23.4.23 parameter . . . 329
12.23.4.24 reInit . . . 330
12.23.4.25 resetParams . . . 330

12.23.4.26 save . . . 331
12.23.4.27 script . . . 332
12.23.4.28 scriptName . . . 332
12.23.4.29 stop . . . 333
12.23.4.30 trigger . . . 334
12.23.4.31 updateParams . . . 335
12.23.5 Field Documentation . . . 336
12.23.5.1 _guid . . . 336
12.23.5.2 _isActive . . . 336
12.23.5.3 _isActiveKp . . . 336
12.23.5.4 _keys . . . 336
12.23.5.5 _map . . . 336
12.23.5.6 _mode . . . 336
12.23.5.7 _name . . . 336
12.23.5.8 _needsSave . . . 337
12.23.5.9 _opacity . . . 337
12.23.5.10 _parameters . . . 337
12.23.5.11 _script . . . 337
12.23.5.12 _scriptGuid . . . 337
12.23.5.13 _scriptName . . . 337
12.23.5.14 _tempParameters . . . 337
12.23.5.15 kpRepeatMsec . . . 337
12.23.5.16 kpRepeatTime . . . 337
12.23.5.17 kpStopTime . . . 338
12.23.5.18 repeatKey . . . 338
12.23.5.19 repeatMsec . . . 338
12.23.5.20 repeatTime . . . 338
12.23.5.21 stopTime . . . 338
12.24 Ui::KbAnimWidget Class Reference . . . 338
12.24.1 Detailed Description . . . 340
12.24.2 Member Function Documentation . . . 340
12.24.2.1 retranslateUi . . . 340
12.24.2.2 setupUi . . . 341
12.24.3 Field Documentation . . . 344
12.24.3.1 aCopyLabel . . . 344
12.24.3.2 aMissingLabel . . . 344
12.24.3.3 aMissingPage . . . 344
12.24.3.4 aNameLabel . . . 344
12.24.3.5 animList . . . 344
12.24.3.6 animPage . . . 345

12.24.3.7 aVerLabel . . . 345
12.24.3.8 blendBox . . . 345
12.24.3.9 deleteButton . . . 345
12.24.3.10 gridLayout . . . 345
12.24.3.11 gridLayout_2 . . . 345
12.24.3.12 gridLayout_3 . . . 345
12.24.3.13 gridLayout_4 . . . 345
12.24.3.14 horizontalLayout . . . 345
12.24.3.15 horizontalSpacer . . . 346
12.24.3.16 horizontalSpacer_2 . . . 346
12.24.3.17 horizontalSpacer_3 . . . 346
12.24.3.18 horizontalSpacer_4 . . . 346
12.24.3.19 horizontalSpacer_5 . . . 346
12.24.3.20 keyButton . . . 346
12.24.3.21 label_5 . . . 346
12.24.3.22 label_6 . . . 346
12.24.3.23 label_7 . . . 346
12.24.3.24 nameBox . . . 347
12.24.3.25 noAnimLabel . . . 347
12.24.3.26 noSelPage . . . 347
12.24.3.27 opacityBox . . . 347
12.24.3.28 propertyButton . . . 347
12.24.3.29 selectionStack . . . 347
12.24.3.30 verticalLayout . . . 347
12.24.3.31 verticalSpacer . . . 347
12.24.3.32 verticalSpacer_2 . . . 347
12.24.3.33 verticalSpacer_3 . . . 348
12.25 KbAnimWidget Class Reference . . . 348
12.25.1 Detailed Description . . . 350
12.25.2 Constructor & Destructor Documentation . . . 350
12.25.2.1 KbAnimWidget . . . 350
12.25.2.2 ~KbAnimWidget . . . 351
12.25.3 Member Function Documentation . . . 351
12.25.3.1 addAnim . . . 351
12.25.3.2 animChanged . . . 352
12.25.3.3 clearSelection . . . 353
12.25.3.4 didUpdateSelection . . . 353
12.25.3.5 duplicateAnim . . . 354
12.25.3.6 on_animList_currentItemChanged . . . 355
12.25.3.7 on_animList_customContextMenuRequested . . . 355

12.25.3.8 on_animList_itemChanged . . . 356
12.25.3.9 on_blendBox_activated . . . 356
12.25.3.10 on_deleteButton_clicked . . . 357
12.25.3.11 on_keyButton_clicked . . . 358
12.25.3.12 on_nameBox_textEdited . . . 358
12.25.3.13 on_opacityBox_valueChanged . . . 359
12.25.3.14 on_propertyButton_clicked . . . 359
12.25.3.15 refreshList . . . 360
12.25.3.16 reorderAnims . . . 361
12.25.3.17 setCurrent . . . 362
12.25.3.18 setLight . . . 363
12.25.3.19 setSelectedKeys . . . 364
12.25.4 Field Documentation . . . 365
12.25.4.1 animations . . . 365
12.25.4.2 current . . . 365
12.25.4.3 light . . . 365
12.25.4.4 noReorder . . . 365
12.25.4.5 selectedKeys . . . 365
12.25.4.6 ui . . . 365
12.26 KbBind Class Reference . . . 366
12.26.1 Detailed Description . . . 369
12.26.2 Constructor & Destructor Documentation . . . 369
12.26.2.1 KbBind . . . 369
12.26.2.2 KbBind . . . 369
12.26.3 Member Function Documentation . . . 370
12.26.3.1 action . . . 370
12.26.3.2 bindAction . . . 371
12.26.3.3 defaultAction . . . 371
12.26.3.4 devParent . . . 372
12.26.3.5 didLoad . . . 372
12.26.3.6 friendlyActionName . . . 373
12.26.3.7 friendlyName . . . 373
12.26.3.8 getMacroNumber . . . 374
12.26.3.9 getMacroPath . . . 375
12.26.3.10 globalRemap . . . 375
12.26.3.11 handleNotificationChannel . . . 376
12.26.3.12 isISO . . . 377
12.26.3.13 isKeyboard . . . 377
12.26.3.14 isMouse . . . 377
12.26.3.15 keyEvent . . . 378

12.26.3.16layoutChanged . . . 379
12.26.3.17light . . . 380
12.26.3.18load . . . 380
12.26.3.19loadGlobalRemap . . . 381
12.26.3.20map . . . 382
12.26.3.21map . . . 383
12.26.3.22modeParent . . . 383
12.26.3.23needsSave . . . 384
12.26.3.24noAction . . . 384
12.26.3.25noAction . . . 384
12.26.3.26perf . . . 385
12.26.3.27resetAction . . . 386
12.26.3.28resetAction . . . 386
12.26.3.29save . . . 387
12.26.3.30saveGlobalRemap . . . 388
12.26.3.31setAction . . . 389
12.26.3.32setAction . . . 390
12.26.3.33setGlobalRemap . . . 390
12.26.3.34setNeedsUpdate . . . 391
12.26.3.35update . . . 391
12.26.3.36updated . . . 393
12.26.3.37winLock . . . 393
12.26.3.38winLock . . . 394
12.26.4 Friends And Related Function Documentation . . . 394
12.26.4.1 KeyAction . . . 394
12.26.5 Field Documentation . . . 394
12.26.5.1 _bind . . . 394
12.26.5.2 _devParent . . . 394
12.26.5.3 _globalRemap . . . 394
12.26.5.4 _map . . . 394
12.26.5.5 _needsSave . . . 394
12.26.5.6 _needsUpdate . . . 394
12.26.5.7 _winLock . . . 395
12.26.5.8 globalRemapTime . . . 395
12.26.5.9 lastCmd . . . 395
12.26.5.10lastGlobalRemapTime . . . 395
12.27Ui::KbBindWidget Class Reference . . . 395
12.27.1 Detailed Description . . . 397
12.27.2 Member Function Documentation . . . 397
12.27.2.1 retranslateUi . . . 397

12.27.2.2 setupUi . . . 398
12.27.3 Field Documentation . . . 400
12.27.3.1 copyButton . . . 400
12.27.3.2 gridLayout . . . 400
12.27.3.3 gridLayout_2 . . . 400
12.27.3.4 horizontalLayout_2 . . . 400
12.27.3.5 horizontalSpacer . . . 400
12.27.3.6 horizontalSpacer_2 . . . 401
12.27.3.7 keyWidget . . . 401
12.27.3.8 label . . . 401
12.27.3.9 label_2 . . . 401
12.27.3.10 line . . . 401
12.27.3.11 line_2 . . . 401
12.27.3.12 rbWidget . . . 401
12.27.3.13 resetButton . . . 401
12.27.3.14 selectLabel . . . 401
12.27.3.15 verticalLayout . . . 402
12.27.3.16 verticalSpacer . . . 402
12.27.3.17 widget . . . 402
12.28 KbBindWidget Class Reference . . . 402
12.28.1 Detailed Description . . . 404
12.28.2 Constructor & Destructor Documentation . . . 405
12.28.2.1 KbBindWidget . . . 405
12.28.2.2 ~KbBindWidget . . . 405
12.28.3 Member Function Documentation . . . 406
12.28.3.1 newLayout . . . 406
12.28.3.2 newSelection . . . 407
12.28.3.3 on_copyButton_clicked . . . 407
12.28.3.4 on_resetButton_clicked . . . 408
12.28.3.5 setBind . . . 409
12.28.3.6 updateBind . . . 410
12.28.3.7 updateSelDisplay . . . 411
12.28.4 Field Documentation . . . 412
12.28.4.1 bind . . . 412
12.28.4.2 currentSelection . . . 412
12.28.4.3 profile . . . 413
12.28.4.4 ui . . . 413
12.29 KbFirmware Class Reference . . . 413
12.29.1 Detailed Description . . . 415
12.29.2 Member Enumeration Documentation . . . 416

12.29.2.1 anonymous enum . . . 416
12.29.3 Constructor & Destructor Documentation . . . 416
12.29.3.1 KbFirmware . . . 416
12.29.3.2 ~KbFirmware . . . 416
12.29.4 Member Function Documentation . . . 416
12.29.4.1 _checkUpdates . . . 416
12.29.4.2 _fileForBoard . . . 417
12.29.4.3 _latestForBoard . . . 418
12.29.4.4 checkUpdates . . . 419
12.29.4.5 dataForBoard . . . 419
12.29.4.6 downloaded . . . 420
12.29.4.7 downloadFinished . . . 421
12.29.4.8 hasDownloaded . . . 421
12.29.4.9 initManager . . . 421
12.29.4.10 processDownload . . . 422
12.29.4.11 versionForBoard . . . 423
12.29.5 Field Documentation . . . 424
12.29.5.1 fwTable . . . 424
12.29.5.2 fwTableHash . . . 424
12.29.5.3 hasGPG . . . 424
12.29.5.4 instance . . . 424
12.29.5.5 lastCheck . . . 425
12.29.5.6 lastFinished . . . 425
12.29.5.7 networkManager . . . 425
12.29.5.8 tableDownload . . . 425
12.30 KbLight Class Reference . . . 425
12.30.1 Detailed Description . . . 428
12.30.2 Member Typedef Documentation . . . 429
12.30.2.1 AnimList . . . 429
12.30.3 Constructor & Destructor Documentation . . . 429
12.30.3.1 KbLight . . . 429
12.30.3.2 KbLight . . . 429
12.30.3.3 ~KbLight . . . 430
12.30.4 Member Function Documentation . . . 430
12.30.4.1 addAnim . . . 430
12.30.4.2 animKeypress . . . 431
12.30.4.3 animList . . . 431
12.30.4.4 animList . . . 432
12.30.4.5 base . . . 432
12.30.4.6 close . . . 433

12.30.4.7 color . . . 434
12.30.4.8 color . . . 435
12.30.4.9 colorMap . . . 435
12.30.4.10 didLoad . . . 436
12.30.4.11 dimming . . . 436
12.30.4.12 dimming . . . 436
12.30.4.13 duplicateAnim . . . 437
12.30.4.14 findAnim . . . 438
12.30.4.15 findAnimIdx . . . 438
12.30.4.16 frameDisplayed . . . 439
12.30.4.17 frameUpdate . . . 439
12.30.4.18 isStarted . . . 441
12.30.4.19 load . . . 441
12.30.4.20 map . . . 443
12.30.4.21 map . . . 443
12.30.4.22 needsSave . . . 444
12.30.4.23 open . . . 445
12.30.4.24 previewAnim . . . 445
12.30.4.25 printRGB . . . 446
12.30.4.26 rebuildBaseMap . . . 447
12.30.4.27 resetIndicators . . . 448
12.30.4.28 restartAnimation . . . 448
12.30.4.29 save . . . 449
12.30.4.30 setIndicator . . . 450
12.30.4.31 shareDimming . . . 451
12.30.4.32 shareDimming . . . 451
12.30.4.33 stopPreview . . . 451
12.30.4.34 updated . . . 452
12.30.5 Field Documentation . . . 452
12.30.5.1 _animList . . . 452
12.30.5.2 _animMap . . . 453
12.30.5.3 _colorMap . . . 453
12.30.5.4 _dimming . . . 453
12.30.5.5 _indicatorList . . . 453
12.30.5.6 _indicatorMap . . . 453
12.30.5.7 _map . . . 453
12.30.5.8 _needsMapRefresh . . . 453
12.30.5.9 _needsSave . . . 453
12.30.5.10 _previewAnim . . . 453
12.30.5.11 _qColorMap . . . 454

12.30.5.12 _start . . . 454
12.30.5.13 lastFrameSignal . . . 454
12.30.5.14 MAX_DIM . . . 454
12.31 Ui::KbLightWidget Class Reference . . . 454
12.31.1 Detailed Description . . . 456
12.31.2 Member Function Documentation . . . 456
12.31.2.1 retranslateUi . . . 456
12.31.2.2 setupUi . . . 457
12.31.3 Field Documentation . . . 460
12.31.3.1 animButton . . . 460
12.31.3.2 animWidget . . . 460
12.31.3.3 bgButton . . . 460
12.31.3.4 brightnessBox . . . 460
12.31.3.5 gridLayout . . . 460
12.31.3.6 gridLayout_2 . . . 460
12.31.3.7 gridLayout_4 . . . 460
12.31.3.8 horizontalLayout . . . 461
12.31.3.9 horizontalLayout_2 . . . 461
12.31.3.10 horizontalLayout_3 . . . 461
12.31.3.11 horizontalSpacer_3 . . . 461
12.31.3.12 horizontalSpacer_4 . . . 461
12.31.3.13 horizontalSpacer_5 . . . 461
12.31.3.14 horizontalSpacer_6 . . . 461
12.31.3.15 keyWidget . . . 461
12.31.3.16 label . . . 462
12.31.3.17 label_2 . . . 462
12.31.3.18 label_3 . . . 462
12.31.3.19 line . . . 462
12.31.3.20 line_2 . . . 462
12.31.3.21 selLabel . . . 462
12.31.3.22 showAnimBox . . . 462
12.31.3.23 verticalLayout . . . 462
12.31.3.24 verticalSpacer_2 . . . 462
12.31.3.25 verticalSpacer_3 . . . 463
12.31.3.26 widget . . . 463
12.32 KbLightWidget Class Reference . . . 463
12.32.1 Detailed Description . . . 465
12.32.2 Constructor & Destructor Documentation . . . 465
12.32.2.1 KbLightWidget . . . 465
12.32.2.2 ~KbLightWidget . . . 466

12.32.3 Member Function Documentation . . . 466
12.32.3.1 changeAnim . . . 466
12.32.3.2 changeAnimKeys . . . 466
12.32.3.3 changeColor . . . 467
12.32.3.4 newSelection . . . 468
12.32.3.5 on_animButton_clicked . . . 469
12.32.3.6 on_bgButton_clicked . . . 470
12.32.3.7 on_brightnessBox_activated . . . 470
12.32.3.8 on_showAnimBox_clicked . . . 471
12.32.3.9 setLight . . . 471
12.32.3.10 setMonochrome . . . 473
12.32.3.11 toggleSidelight . . . 473
12.32.3.12 updateLight . . . 474
12.32.4 Field Documentation . . . 475
12.32.4.1 currentSelection . . . 475
12.32.4.2 light . . . 475
12.32.4.3 ui . . . 475
12.33 KbManager Class Reference . . . 476
12.33.1 Detailed Description . . . 478
12.33.2 Constructor & Destructor Documentation . . . 478
12.33.2.1 KbManager . . . 478
12.33.3 Member Function Documentation . . . 479
12.33.3.1 ckbDaemonVersion . . . 479
12.33.3.2 ckbDaemonVersionF . . . 479
12.33.3.3 ckbGuiVersion . . . 480
12.33.3.4 ckbGuiVersionF . . . 480
12.33.3.5 devices . . . 481
12.33.3.6 eventTimer . . . 481
12.33.3.7 fps . . . 481
12.33.3.8 init . . . 482
12.33.3.9 kbConnected . . . 483
12.33.3.10 kbDisconnected . . . 483
12.33.3.11 kbManager . . . 483
12.33.3.12 parseVersionString . . . 484
12.33.3.13 scanKeyboards . . . 484
12.33.3.14 scanTimer . . . 486
12.33.3.15 stop . . . 486
12.33.3.16 versionUpdated . . . 487
12.33.4 Field Documentation . . . 487
12.33.4.1 _daemonVersion . . . 487

12.33.4.2 _devices . . . 487
12.33.4.3 _eventTimer . . . 487
12.33.4.4 _guiVersion . . . 488
12.33.4.5 _kbManager . . . 488
12.33.4.6 _scanTimer . . . 488
12.34 KbMode Class Reference . . . 488
12.34.1 Detailed Description . . . 491
12.34.2 Constructor & Destructor Documentation . . . 491
12.34.2.1 KbMode . . . 491
12.34.2.2 KbMode . . . 492
12.34.2.3 KbMode . . . 492
12.34.2.4 ~KbMode . . . 493
12.34.3 Member Function Documentation . . . 493
12.34.3.1 bind . . . 493
12.34.3.2 doUpdate . . . 494
12.34.3.3 id . . . 494
12.34.3.4 id . . . 494
12.34.3.5 keyMap . . . 495
12.34.3.6 light . . . 496
12.34.3.7 name . . . 496
12.34.3.8 name . . . 496
12.34.3.9 needsSave . . . 497
12.34.3.10 newId . . . 497
12.34.3.11 perf . . . 498
12.34.3.12 save . . . 499
12.34.3.13 setNeedsSave . . . 499
12.34.3.14 setNeedsUpdate . . . 500
12.34.3.15 updated . . . 500
12.34.4 Field Documentation . . . 501
12.34.4.1 _bind . . . 501
12.34.4.2 _id . . . 501
12.34.4.3 _light . . . 501
12.34.4.4 _name . . . 501
12.34.4.5 _needsSave . . . 501
12.34.4.6 _perf . . . 501
12.35 KbPerf Class Reference . . . 502
12.35.1 Detailed Description . . . 505
12.35.2 Member Enumeration Documentation . . . 505
12.35.2.1 height . . . 505
12.35.2.2 i_hw . . . 506

12.35.2.3 indicator . . . 506
12.35.3 Constructor & Destructor Documentation . . . 506
12.35.3.1 KbPerf . . . 506
12.35.3.2 KbPerf . . . 507
12.35.4 Member Function Documentation . . . 508
12.35.4.1 _curDpi . . . 508
12.35.4.2 angleSnap . . . 508
12.35.4.3 angleSnap . . . 509
12.35.4.4 applyIndicators . . . 509
12.35.4.5 bind . . . 510
12.35.4.6 curDpi . . . 511
12.35.4.7 curDpi . . . 511
12.35.4.8 curDpi . . . 512
12.35.4.9 curDpiIdx . . . 513
12.35.4.10 curDpiIdx . . . 513
12.35.4.11 didLoad . . . 513
12.35.4.12 dpi . . . 514
12.35.4.13 dpi . . . 514
12.35.4.14 dpi . . . 515
12.35.4.15 dpiColor . . . 515
12.35.4.16 dpiColor . . . 516
12.35.4.17 dpiDown . . . 516
12.35.4.18 dpiEnabled . . . 517
12.35.4.19 dpiEnabled . . . 517
12.35.4.20 dpiIndicator . . . 517
12.35.4.21 dpiIndicator . . . 518
12.35.4.22 dpiUp . . . 518
12.35.4.23 getIndicator . . . 519
12.35.4.24 iOpacity . . . 519
12.35.4.25 iOpacity . . . 520
12.35.4.26 liftHeight . . . 520
12.35.4.27 liftHeight . . . 520
12.35.4.28 light . . . 520
12.35.4.29 lightIndicator . . . 521
12.35.4.30 load . . . 522
12.35.4.31 modeParent . . . 524
12.35.4.32 needsSave . . . 524
12.35.4.33 operator= . . . 524
12.35.4.34 popDpi . . . 525
12.35.4.35 pushDpi . . . 526

12.35.4.36 pushDpi . . . 526
12.35.4.37 pushSniper . . . 527
12.35.4.38 save . . . 528
12.35.4.39 setIndicator . . . 529
12.35.4.40 setNeedsUpdate . . . 529
12.35.4.41 settingsUpdated . . . 530
12.35.4.42 sniperDpi . . . 530
12.35.4.43 sniperDpi . . . 531
12.35.4.44 sniperDpi . . . 531
12.35.4.45 update . . . 532
12.35.5 Field Documentation . . . 533
12.35.5.1 _angleSnap . . . 533
12.35.5.2 _dpiIndicator . . . 533
12.35.5.3 _iOpacity . . . 533
12.35.5.4 _liftHeight . . . 533
12.35.5.5 _needsSave . . . 533
12.35.5.6 _needsUpdate . . . 534
12.35.5.7 DPI_COUNT . . . 534
12.35.5.8 DPI_MAX . . . 534
12.35.5.9 DPI_MIN . . . 534
12.35.5.10 dpiClr . . . 534
12.35.5.11 dpiCurIdx . . . 534
12.35.5.12 dpiCurX . . . 534
12.35.5.13 dpiCurY . . . 534
12.35.5.14 dpiLastIdx . . . 534
12.35.5.15 dpiOn . . . 535
12.35.5.16 dpiX . . . 535
12.35.5.17 dpiY . . . 535
12.35.5.18 HW_I_COUNT . . . 535
12.35.5.19 hwIType . . . 535
12.35.5.20 I_COUNT . . . 535
12.35.5.21 iColor . . . 535
12.35.5.22 iEnable . . . 535
12.35.5.23 light100Color . . . 535
12.35.5.24 muteNAColor . . . 536
12.35.5.25 OTHER . . . 536
12.35.5.26 pushedDpis . . . 536
12.35.5.27 runningPushIdx . . . 536
12.35.5.28 SNIPER . . . 536
12.36 KbProfile Class Reference . . . 536

12.36.1 Detailed Description . . . 539
12.36.2 Member Typedef Documentation . . . 539
12.36.2.1 ModeList . . . 539
12.36.3 Constructor & Destructor Documentation . . . 539
12.36.3.1 KbProfile . . . 539
12.36.3.2 KbProfile . . . 540
12.36.3.3 KbProfile . . . 540
12.36.4 Member Function Documentation . . . 541
12.36.4.1 append . . . 541
12.36.4.2 currentMode . . . 541
12.36.4.3 currentMode . . . 542
12.36.4.4 find . . . 542
12.36.4.5 id . . . 543
12.36.4.6 id . . . 543
12.36.4.7 indexOf . . . 544
12.36.4.8 insert . . . 544
12.36.4.9 keyMap . . . 545
12.36.4.10 keyMap . . . 545
12.36.4.11 modeCount . . . 546
12.36.4.12 modes . . . 546
12.36.4.13 modes . . . 547
12.36.4.14 move . . . 547
12.36.4.15 name . . . 548
12.36.4.16 name . . . 548
12.36.4.17 needsSave . . . 549
12.36.4.18 newId . . . 549
12.36.4.19 removeAll . . . 550
12.36.4.20 save . . . 551
12.36.4.21 setNeedsSave . . . 552
12.36.4.22 setNeedsUpdate . . . 552
12.36.5 Field Documentation . . . 553
12.36.5.1 _currentMode . . . 553
12.36.5.2 _id . . . 553
12.36.5.3 _keyMap . . . 553
12.36.5.4 _modes . . . 553
12.36.5.5 _name . . . 553
12.36.5.6 _needsSave . . . 553
12.37 KbProfileDialog Class Reference . . . 554
12.37.1 Detailed Description . . . 555
12.37.2 Constructor & Destructor Documentation . . . 556

12.37.2.1 KbProfileDialog . . . 556
12.37.2.2 ~KbProfileDialog . . . 556
12.37.3 Member Function Documentation . . . 556
12.37.3.1 addNewProfileItem . . . 556
12.37.3.2 on_profileList_currentItemChanged . . . 557
12.37.3.3 on_profileList_customContextMenuRequested . . . 557
12.37.3.4 on_profileList_itemChanged . . . 559
12.37.3.5 on_profileList_itemClicked . . . 560
12.37.3.6 profileList_reordered . . . 561
12.37.3.7 repopulate . . . 561
12.37.4 Field Documentation . . . 562
12.37.4.1 device . . . 562
12.37.4.2 GUID . . . 563
12.37.4.3 NEW_FLAG . . . 563
12.37.4.4 ui . . . 563
12.38 Ui::KbProfileDialog Class Reference . . . 563
12.38.1 Detailed Description . . . 565
12.38.2 Member Function Documentation . . . 565
12.38.2.1 retranslateUi . . . 565
12.38.2.2 setupUi . . . 566
12.38.3 Field Documentation . . . 567
12.38.3.1 buttonBox . . . 567
12.38.3.2 gridLayout . . . 567
12.38.3.3 horizontalSpacer . . . 567
12.38.3.4 horizontalSpacer_2 . . . 567
12.38.3.5 profileList . . . 567
12.39 KbWidget Class Reference . . . 568
12.39.1 Detailed Description . . . 570
12.39.2 Constructor & Destructor Documentation . . . 570
12.39.2.1 KbWidget . . . 570
12.39.2.2 ~KbWidget . . . 572
12.39.3 Member Function Documentation . . . 572
12.39.3.1 addNewModeItem . . . 572
12.39.3.2 devUpdate . . . 573
12.39.3.3 modeChanged . . . 573
12.39.3.4 modeIcon . . . 575
12.39.3.5 modesList_reordered . . . 576
12.39.3.6 modeUpdate . . . 577
12.39.3.7 name . . . 577
12.39.3.8 on_fwUpdButton_clicked . . . 578

12.39.3.9 on_hwSaveButton_clicked . . . 579
12.39.3.10 on_modesList_currentItemChanged . . . 580
12.39.3.11 on_modesList_customContextMenuRequested . . . 581
12.39.3.12 on_modesList_itemChanged . . . 583
12.39.3.13 on_modesList_itemClicked . . . 583
12.39.3.14 on_profileBox_activated . . . 584
12.39.3.15 on_tabWidget_currentChanged . . . 584
12.39.3.16 profileChanged . . . 585
12.39.3.17 showFirstTab . . . 586
12.39.3.18 showFwUpdate . . . 586
12.39.3.19 showLastTab . . . 587
12.39.3.20 updateFwButton . . . 587
12.39.3.21 updateProfileList . . . 588
12.39.4 Field Documentation . . . 589
12.39.4.1 currentMode . . . 589
12.39.4.2 device . . . 590
12.39.4.3 GUID . . . 590
12.39.4.4 hasShownNewFW . . . 590
12.39.4.5 lastAutoSave . . . 590
12.39.4.6 NEW_FLAG . . . 590
12.39.4.7 ui . . . 590
12.40 Ui::KbWidget Class Reference . . . 590
12.40.1 Detailed Description . . . 592
12.40.2 Member Function Documentation . . . 592
12.40.2.1 retranslateUi . . . 592
12.40.2.2 setupUi . . . 593
12.40.3 Field Documentation . . . 596
12.40.3.1 bindTab . . . 596
12.40.3.2 bindWidget . . . 596
12.40.3.3 devTab . . . 596
12.40.3.4 fwLabel . . . 596
12.40.3.5 fwUpdButton . . . 597
12.40.3.6 fwUpdLabel . . . 597
12.40.3.7 fwUpdLayout . . . 597
12.40.3.8 gridLayout . . . 597
12.40.3.9 gridLayout_2 . . . 597
12.40.3.10 gridLayout_3 . . . 597
12.40.3.11 gridLayout_4 . . . 597
12.40.3.12 gridLayout_5 . . . 597
12.40.3.13 gridLayout_7 . . . 597

12.40.3.14 horizontalSpacer_2 . . . 598
12.40.3.15 horizontalSpacer_3 . . . 598
12.40.3.16 hwSaveButton . . . 598
12.40.3.17 kPerfTab . . . 598
12.40.3.18 kPerfWidget . . . 598
12.40.3.19 label_3 . . . 598
12.40.3.20 label_4 . . . 598
12.40.3.21 label_9 . . . 598
12.40.3.22 lightTab . . . 598
12.40.3.23 lightWidget . . . 599
12.40.3.24 modesList . . . 599
12.40.3.25 mPerfTab . . . 599
12.40.3.26 mPerfWidget . . . 599
12.40.3.27 pollLabel . . . 599
12.40.3.28 pollLabel2 . . . 599
12.40.3.29 profileBox . . . 599
12.40.3.30 serialLabel . . . 599
12.40.3.31 tabWidget . . . 599
12.40.3.32 verticalSpacer . . . 600
12.41 Key Struct Reference . . . 600
12.41.1 Detailed Description . . . 601
12.41.2 Member Function Documentation . . . 601
12.41.2.1 friendlyName . . . 601
12.41.2.2 operator bool . . . 601
12.41.2.3 operator! . . . 602
12.41.2.4 storageName . . . 602
12.41.3 Field Documentation . . . 602
12.41.3.1 _friendlyName . . . 602
12.41.3.2 _storageName . . . 602
12.41.3.3 hasLed . . . 602
12.41.3.4 hasScan . . . 602
12.41.3.5 height . . . 603
12.41.3.6 name . . . 603
12.41.3.7 width . . . 603
12.41.3.8 x . . . 603
12.41.3.9 y . . . 603
12.42 KeyAction Class Reference . . . 603
12.42.1 Detailed Description . . . 607
12.42.2 Member Enumeration Documentation . . . 607
12.42.2.1 Type . . . 607

12.42.3 Constructor & Destructor Documentation . . . 608
12.42.3.1 KeyAction . . . 608
12.42.3.2 KeyAction . . . 608
12.42.3.3 ~KeyAction . . . 608
12.42.3.4 KeyAction . . . 608
12.42.4 Member Function Documentation . . . 608
12.42.4.1 adjustDisplay . . . 608
12.42.4.2 animAction . . . 609
12.42.4.3 animInfo . . . 610
12.42.4.4 defaultAction . . . 610
12.42.4.5 dpiAction . . . 611
12.42.4.6 dpiInfo . . . 611
12.42.4.7 driverName . . . 612
12.42.4.8 friendlyName . . . 613
12.42.4.9 isAnim . . . 614
12.42.4.10 isDPI . . . 614
12.42.4.11 isMacro . . . 615
12.42.4.12 isMedia . . . 615
12.42.4.13 isMouse . . . 615
12.42.4.14 isNormal . . . 616
12.42.4.15 isProgram . . . 617
12.42.4.16 isSpecial . . . 617
12.42.4.17 isUnbound . . . 618
12.42.4.18 isValidMacro . . . 618
12.42.4.19 keyEvent . . . 619
12.42.4.20 keyRelease . . . 622
12.42.4.21 lightAction . . . 622
12.42.4.22 lockAction . . . 623
12.42.4.23 macroAction . . . 623
12.42.4.24 macroContent . . . 624
12.42.4.25 macroDisplay . . . 624
12.42.4.26 macroFullLine . . . 625
12.42.4.27 macroLine . . . 626
12.42.4.28 modeAction . . . 627
12.42.4.29 noAction . . . 627
12.42.4.30 operator QString . . . 627
12.42.4.31 operator= . . . 627
12.42.4.32 programAction . . . 628
12.42.4.33 programInfo . . . 628
12.42.4.34 specialInfo . . . 629

12.42.4.35 type . . . 629
12.42.4.36 value . . . 630
12.42.5 Field Documentation . . . 630
12.42.5.1 _value . . . 630
12.42.5.2 DPI_CUSTOM . . . 630
12.42.5.3 DPI_DOWN . . . 630
12.42.5.4 DPI_SNIPER . . . 631
12.42.5.5 DPI_UP . . . 631
12.42.5.6 LIGHT_DOWN . . . 631
12.42.5.7 LIGHT_DOWN_WRAP . . . 631
12.42.5.8 LIGHT_UP . . . 631
12.42.5.9 LIGHT_UP_WRAP . . . 631
12.42.5.10 LOCK_OFF . . . 631
12.42.5.11 LOCK_ON . . . 631
12.42.5.12 LOCK_TOGGLE . . . 631
12.42.5.13 MODE_NEXT . . . 632
12.42.5.14 MODE_NEXT_WRAP . . . 632
12.42.5.15 MODE_PREV . . . 632
12.42.5.16 MODE_PREV_WRAP . . . 632
12.42.5.17 preProgram . . . 632
12.42.5.18 PROGRAM_PR_INDEF . . . 632
12.42.5.19 PROGRAM_PR_KPSTOP . . . 632
12.42.5.20 PROGRAM_PR_KRSTOP . . . 632
12.42.5.21 PROGRAM_PR_MULTI . . . 632
12.42.5.22 PROGRAM_RE_INDEF . . . 633
12.42.5.23 PROGRAM_RE_KPSTOP . . . 633
12.42.5.24 PROGRAM_RE_MULTI . . . 633
12.42.5.25 relProgram . . . 633
12.42.5.26 sniperValue . . . 633
12.43 KeyMap Class Reference . . . 633
12.43.1 Detailed Description . . . 636
12.43.2 Member Enumeration Documentation . . . 636
12.43.2.1 Layout . . . 636
12.43.2.2 Model . . . 636
12.43.3 Constructor & Destructor Documentation . . . 637
12.43.3.1 KeyMap . . . 637
12.43.3.2 KeyMap . . . 637
12.43.4 Member Function Documentation . . . 638
12.43.4.1 byPosition . . . 638
12.43.4.2 contains . . . 638

12.43.4.3 count . . . 639
12.43.4.4 friendlyName . . . 639
12.43.4.5 fromName . . . 640
12.43.4.6 fromStorage . . . 641
12.43.4.7 getLayout . . . 642
12.43.4.8 getLayout . . . 642
12.43.4.9 getModel . . . 643
12.43.4.10 getModel . . . 643
12.43.4.11 height . . . 644
12.43.4.12 isISO . . . 644
12.43.4.13 isISO . . . 645
12.43.4.14 isKeyboard . . . 645
12.43.4.15 isKeyboard . . . 646
12.43.4.16 isMouse . . . 647
12.43.4.17 isMouse . . . 647
12.43.4.18 key . . . 648
12.43.4.19 keys . . . 648
12.43.4.20 layout . . . 649
12.43.4.21 layoutNames . . . 649
12.43.4.22 locale . . . 650
12.43.4.23 map . . . 651
12.43.4.24 model . . . 651
12.43.4.25 modelHeight . . . 652
12.43.4.26 modelWidth . . . 652
12.43.4.27 name . . . 652
12.43.4.28 operator const QHash< QString, Key > & . . . 653
12.43.4.29 operator[] . . . 653
12.43.4.30 positions . . . 653
12.43.4.31 strLayout . . . 654
12.43.4.32 strModel . . . 654
12.43.4.33 toStorage . . . 655
12.43.4.34 width . . . 655
12.43.5 Field Documentation . . . 656
12.43.5.1 _keys . . . 656
12.43.5.2 keyHeight . . . 656
12.43.5.3 keyLayout . . . 656
12.43.5.4 keyModel . . . 656
12.43.5.5 keyWidth . . . 656
12.44 KeyWidget Class Reference . . . 656
12.44.1 Detailed Description . . . 659

12.44.2 Member Typedef Documentation . . . 659
12.44.2.1 BindMap . . . 659
12.44.3 Member Enumeration Documentation . . . 660
12.44.3.1 anonymous enum . . . 660
12.44.4 Constructor & Destructor Documentation . . . 660
12.44.4.1 KeyWidget . . . 660
12.44.5 Member Function Documentation . . . 660
12.44.5.1 bindMap . . . 660
12.44.5.2 bindMap . . . 661
12.44.5.3 clearAnimation . . . 661
12.44.5.4 clearSelection . . . 661
12.44.5.5 colorMap . . . 662
12.44.5.6 colorMap . . . 662
12.44.5.7 displayColorMap . . . 662
12.44.5.8 drawInfo . . . 663
12.44.5.9 map . . . 663
12.44.5.10 map . . . 664
12.44.5.11 monochrome . . . 664
12.44.5.12 monochrome . . . 665
12.44.5.13 mouseMoveEvent . . . 665
12.44.5.14 mousePressEvent . . . 666
12.44.5.15 mouseReleaseEvent . . . 667
12.44.5.16 paintEvent . . . 668
12.44.5.17 rgbMode . . . 673
12.44.5.18 rgbMode . . . 674
12.44.5.19 selectAll . . . 674
12.44.5.20 selectionChanged . . . 675
12.44.5.21 setAnimation . . . 675
12.44.5.22 setAnimationToSelection . . . 676
12.44.5.23 setSelection . . . 676
12.44.5.24 sidelightToggled . . . 677
12.44.6 Field Documentation . . . 677
12.44.6.1 _bindMap . . . 677
12.44.6.2 _colorMap . . . 678
12.44.6.3 _displayColorMap . . . 678
12.44.6.4 _indicators . . . 678
12.44.6.5 _monochrome . . . 678
12.44.6.6 _rgbMode . . . 678
12.44.6.7 animation . . . 678
12.44.6.8 keyMap . . . 678

12.44.6.9 mouseCurrentX . . . 678
12.44.6.10 mouseCurrentY . . . 678
12.44.6.11 mouseDownMode . . . 679
12.44.6.12 mouseDownX . . . 679
12.44.6.13 mouseDownY . . . 679
12.44.6.14 newSelection . . . 679
12.44.6.15 selection . . . 679
12.45 Ui::KPerfWidget Class Reference . . . 679
12.45.1 Detailed Description . . . 683
12.45.2 Member Function Documentation . . . 683
12.45.2.1 retranslateUi . . . 683
12.45.2.2 setupUi . . . 684
12.45.3 Field Documentation . . . 691
12.45.3.1 capsBox . . . 691
12.45.3.2 capsColorOff . . . 691
12.45.3.3 capsColorOn . . . 691
12.45.3.4 copyButton . . . 691
12.45.3.5 gridLayout . . . 691
12.45.3.6 horizontalLayout . . . 691
12.45.3.7 horizontalLayout_2 . . . 691
12.45.3.8 horizontalSpacer . . . 692
12.45.3.9 horizontalSpacer_2 . . . 692
12.45.3.10 horizontalSpacer_3 . . . 692
12.45.3.11 horizontalSpacer_4 . . . 692
12.45.3.12 horizontalSpacer_5 . . . 692
12.45.3.13 horizontalSpacer_6 . . . 692
12.45.3.14 horizontalSpacer_7 . . . 692
12.45.3.15 horizontalSpacer_8 . . . 692
12.45.3.16 intensityBox . . . 692
12.45.3.17 k95Label1 . . . 693
12.45.3.18 k95Label2 . . . 693
12.45.3.19 k95Label3 . . . 693
12.45.3.20 k95Label4 . . . 693
12.45.3.21 k95Label5 . . . 693
12.45.3.22 k95Label6 . . . 693
12.45.3.23 k95Line . . . 693
12.45.3.24 k95Spacer . . . 693
12.45.3.25 label . . . 693
12.45.3.26 label_10 . . . 694
12.45.3.27 label_11 . . . 694

12.45.3.28 label_12 . . . 694
12.45.3.29 label_14 . . . 694
12.45.3.30 label_15 . . . 694
12.45.3.31 label_16 . . . 694
12.45.3.32 label_17 . . . 694
12.45.3.33 label_18 . . . 694
12.45.3.34 label_19 . . . 694
12.45.3.35 label_2 . . . 695
12.45.3.36 label_20 . . . 695
12.45.3.37 label_21 . . . 695
12.45.3.38 label_22 . . . 695
12.45.3.39 label_23 . . . 695
12.45.3.40 label_24 . . . 695
12.45.3.41 label_3 . . . 695
12.45.3.42 label_4 . . . 695
12.45.3.43 label_5 . . . 695
12.45.3.44 label_6 . . . 696
12.45.3.45 label_7 . . . 696
12.45.3.46 label_8 . . . 696
12.45.3.47 lightBox . . . 696
12.45.3.48 lightColor1 . . . 696
12.45.3.49 lightColor2 . . . 696
12.45.3.50 lightColor3 . . . 696
12.45.3.51 line . . . 696
12.45.3.52 line_2 . . . 696
12.45.3.53 line_3 . . . 697
12.45.3.54 lockBox . . . 697
12.45.3.55 lockColorOff . . . 697
12.45.3.56 lockColorOn . . . 697
12.45.3.57 macroBox . . . 697
12.45.3.58 macroColorOff . . . 697
12.45.3.59 macroColorOn . . . 697
12.45.3.60 modeBox . . . 697
12.45.3.61 modeColorOff . . . 697
12.45.3.62 modeColorOn . . . 698
12.45.3.63 muteBox . . . 698
12.45.3.64 muteColorNA . . . 698
12.45.3.65 muteColorOff . . . 698
12.45.3.66 muteColorOn . . . 698
12.45.3.67 numBox . . . 698

12.45.3.68numColorOff . . . 698
12.45.3.69numColorOn . . . 698
12.45.3.70scrollBox . . . 698
12.45.3.71scrollColorOff . . . 699
12.45.3.72scrollColorOn . . . 699
12.45.3.73verticalSpacer . . . 699
12.45.3.74verticalSpacer_2 . . . 699
12.45.3.75verticalSpacer_3 . . . 699
12.45.3.76verticalSpacer_4 . . . 699
12.46KPerfWidget Class Reference . . . 699
12.46.1 Detailed Description . . . 702
12.46.2 Data Structure Documentation . . . 702
12.46.2.1 struct KPerfWidget::IndicatorUi . . . 702
12.46.3 Member Typedef Documentation . . . 703
12.46.3.1 i_hw . . . 704
12.46.3.2 indicator . . . 704
12.46.4 Member Enumeration Documentation . . . 704
12.46.4.1 HwMode . . . 704
12.46.5 Constructor & Destructor Documentation . . . 704
12.46.5.1 KPerfWidget . . . 704
12.46.5.2 ∼KPerfWidget . . . 706
12.46.6 Member Function Documentation . . . 706
12.46.6.1 mode2Raw . . . 706
12.46.6.2 on_copyButton_clicked . . . 707
12.46.6.3 on_intensityBox_valueChanged . . . 707
12.46.6.4 raw2Mode . . . 708
12.46.6.5 setPerf . . . 708
12.46.6.6 uiUpdated . . . 710
12.46.7 Field Documentation . . . 711
12.46.7.1 HW_I_COUNT . . . 711
12.46.7.2 I_COUNT . . . 711
12.46.7.3 indicators . . . 712
12.46.7.4 k95Widgets . . . 712
12.46.7.5 perf . . . 712
12.46.7.6 profile . . . 712
12.46.7.7 ui . . . 712
12.46.7.8 updateMapper . . . 712
12.47Ui::LayoutDialog Class Reference . . . 712
12.47.1 Detailed Description . . . 714
12.47.2 Member Function Documentation . . . 714

12.47.2.1 retranslateUi . . . 714
12.47.2.2 setupUi . . . 715
12.47.3 Field Documentation . . . 716
12.47.3.1 buttonBox . . . 716
12.47.3.2 comboBox . . . 716
12.47.3.3 gridLayout . . . 716
12.47.3.4 horizontalSpacer . . . 716
12.47.3.5 horizontalSpacer_2 . . . 716
12.47.3.6 label . . . 717
12.47.3.7 label_2 . . . 717
12.47.3.8 verticalSpacer . . . 717
12.47.3.9 verticalSpacer_2 . . . 717
12.47.3.10 verticalSpacer_3 . . . 717
12.47.3.11 verticalSpacer_4 . . . 717
12.48 LayoutDialog Class Reference . . . 717
12.48.1 Detailed Description . . . 719
12.48.2 Constructor & Destructor Documentation . . . 719
12.48.2.1 LayoutDialog . . . 719
12.48.2.2 ~LayoutDialog . . . 719
12.48.3 Member Function Documentation . . . 720
12.48.3.1 selected . . . 720
12.48.4 Field Documentation . . . 720
12.48.4.1 ui . . . 720
12.49 MacroReader Class Reference . . . 720
12.49.1 Detailed Description . . . 722
12.49.2 Constructor & Destructor Documentation . . . 723
12.49.2.1 MacroReader . . . 723
12.49.2.2 MacroReader . . . 723
12.49.2.3 ~MacroReader . . . 723
12.49.3 Member Function Documentation . . . 723
12.49.3.1 startWorkInAThread . . . 723
12.49.4 Field Documentation . . . 724
12.49.4.1 macroReaderThread . . . 724
12.50 MacroReaderThread Class Reference . . . 724
12.50.1 Detailed Description . . . 726
12.50.2 Constructor & Destructor Documentation . . . 726
12.50.2.1 MacroReaderThread . . . 726
12.50.3 Member Function Documentation . . . 727
12.50.3.1 readMacro . . . 727
12.50.3.2 run . . . 727

12.50.4 Field Documentation . . . 727
12.50.4.1 macroBox . . . 728
12.50.4.2 macroNumber . . . 728
12.50.4.3 macroPath . . . 728
12.50.4.4 macroText . . . 728
12.51 Ui::MainWindow Class Reference . . . 728
12.51.1 Detailed Description . . . 730
12.51.2 Member Function Documentation . . . 730
12.51.2.1 retranslateUi . . . 730
12.51.2.2 setupUi . . . 730
12.51.3 Field Documentation . . . 731
12.51.3.1 actionAbout . . . 731
12.51.3.2 actionExit . . . 731
12.51.3.3 centralWidget . . . 732
12.51.3.4 gridLayout . . . 732
12.51.3.5 tabWidget . . . 732
12.52 MainWindow Class Reference . . . 732
12.52.1 Detailed Description . . . 735
12.52.2 Constructor & Destructor Documentation . . . 735
12.52.2.1 MainWindow . . . 735
12.52.2.2 ~MainWindow . . . 736
12.52.3 Member Function Documentation . . . 737
12.52.3.1 addDevice . . . 737
12.52.3.2 checkFwUpdates . . . 738
12.52.3.3 cleanup . . . 738
12.52.3.4 closeEvent . . . 739
12.52.3.5 iconClicked . . . 740
12.52.3.6 quitApp . . . 740
12.52.3.7 removeDevice . . . 741
12.52.3.8 showFwUpdateNotification . . . 741
12.52.3.9 showWindow . . . 742
12.52.3.10 stateChange . . . 743
12.52.3.11 timerTick . . . 744
12.52.3.12 toggleTrayIcon . . . 745
12.52.3.13 updateVersion . . . 745
12.52.4 Field Documentation . . . 746
12.52.4.1 closeAction . . . 746
12.52.4.2 kbWidgets . . . 746
12.52.4.3 mainWindow . . . 746
12.52.4.4 restoreAction . . . 747

12.52.4.5 settingsWidget . . . 747
12.52.4.6 trayIcon . . . 747
12.52.4.7 trayIconMenu . . . 747
12.52.4.8 ui . . . 747
12.53 Ui::ModeSelectDialog Class Reference . . . 747
12.53.1 Detailed Description . . . 749
12.53.2 Member Function Documentation . . . 749
12.53.2.1 retranslateUi . . . 749
12.53.2.2 setupUi . . . 749
12.53.3 Field Documentation . . . 750
12.53.3.1 buttonBox . . . 750
12.53.3.2 gridLayout . . . 751
12.53.3.3 label . . . 751
12.53.3.4 modeList . . . 751
12.53.3.5 selAllButton . . . 751
12.53.3.6 selNoneButton . . . 751
12.54 ModeSelectDialog Class Reference . . . 751
12.54.1 Detailed Description . . . 753
12.54.2 Constructor & Destructor Documentation . . . 753
12.54.2.1 ModeSelectDialog . . . 753
12.54.2.2 ~ModeSelectDialog . . . 754
12.54.3 Member Function Documentation . . . 754
12.54.3.1 on_selAllButton_clicked . . . 754
12.54.3.2 on_selNoneButton_clicked . . . 754
12.54.3.3 selection . . . 754
12.54.4 Field Documentation . . . 755
12.54.4.1 _modeList . . . 755
12.54.4.2 ui . . . 755
12.55 Ui::MPerfWidget Class Reference . . . 755
12.55.1 Detailed Description . . . 758
12.55.2 Member Function Documentation . . . 758
12.55.2.1 retranslateUi . . . 758
12.55.2.2 setupUi . . . 760
12.55.3 Field Documentation . . . 767
12.55.3.1 aSnapBox . . . 767
12.55.3.2 copyButton . . . 767
12.55.3.3 eBox1 . . . 767
12.55.3.4 eBox2 . . . 767
12.55.3.5 eBox3 . . . 767
12.55.3.6 eBox4 . . . 767

12.55.3.7 eBox5 . . . 767
12.55.3.8 gridLayout . . . 768
12.55.3.9 horizontalLayout . . . 768
12.55.3.10 horizontalLayout_2 . . . 768
12.55.3.11 horizontalLayout_4 . . . 768
12.55.3.12 horizontalSpacer . . . 768
12.55.3.13 horizontalSpacer_2 . . . 768
12.55.3.14 horizontalSpacer_3 . . . 768
12.55.3.15 horizontalSpacer_4 . . . 768
12.55.3.16 horizontalSpacer_5 . . . 768
12.55.3.17 horizontalSpacer_6 . . . 769
12.55.3.18 horizontalSpacer_7 . . . 769
12.55.3.19 iButton0 . . . 769
12.55.3.20 iButton1 . . . 769
12.55.3.21 iButton2 . . . 769
12.55.3.22 iButton3 . . . 769
12.55.3.23 iButton4 . . . 769
12.55.3.24 iButton5 . . . 769
12.55.3.25 iButtonO . . . 769
12.55.3.26 indicBox . . . 770
12.55.3.27 label . . . 770
12.55.3.28 label_11 . . . 770
12.55.3.29 label_12 . . . 770
12.55.3.30 label_13 . . . 770
12.55.3.31 label_14 . . . 770
12.55.3.32 label_15 . . . 770
12.55.3.33 label_2 . . . 770
12.55.3.34 label_25 . . . 770
12.55.3.35 label_3 . . . 771
12.55.3.36 label_4 . . . 771
12.55.3.37 label_5 . . . 771
12.55.3.38 label_6 . . . 771
12.55.3.39 label_7 . . . 771
12.55.3.40 label_8 . . . 771
12.55.3.41 lHeightBox . . . 771
12.55.3.42 line . . . 771
12.55.3.43 line_2 . . . 771
12.55.3.44 line_3 . . . 772
12.55.3.45 spinBox . . . 772
12.55.3.46 verticalLayout . . . 772

12.55.3.47 verticalSpacer . . . 772
12.55.3.48 verticalSpacer_2 . . . 772
12.55.3.49 verticalSpacer_3 . . . 772
12.55.3.50 xBox0 . . . 772
12.55.3.51 xBox1 . . . 772
12.55.3.52 xBox2 . . . 772
12.55.3.53 xBox3 . . . 773
12.55.3.54 xBox4 . . . 773
12.55.3.55 xBox5 . . . 773
12.55.3.56 xSlider0 . . . 773
12.55.3.57 xSlider1 . . . 773
12.55.3.58 xSlider2 . . . 773
12.55.3.59 xSlider3 . . . 773
12.55.3.60 xSlider4 . . . 773
12.55.3.61 xSlider5 . . . 773
12.55.3.62 xyBox . . . 774
12.55.3.63 yBox0 . . . 774
12.55.3.64 yBox1 . . . 774
12.55.3.65 yBox2 . . . 774
12.55.3.66 yBox3 . . . 774
12.55.3.67 yBox4 . . . 774
12.55.3.68 yBox5 . . . 774
12.55.3.69 ySlider0 . . . 774
12.55.3.70 ySlider1 . . . 774
12.55.3.71 ySlider2 . . . 775
12.55.3.72 ySlider3 . . . 775
12.55.3.73 ySlider4 . . . 775
12.55.3.74 ySlider5 . . . 775
12.56 MPerfWidget Class Reference . . . 775
12.56.1 Detailed Description . . . 778
12.56.2 Data Structure Documentation . . . 778
12.56.2.1 struct MPerfWidget::DpiUi . . . 778
12.56.3 Constructor & Destructor Documentation . . . 779
12.56.3.1 MPerfWidget . . . 779
12.56.3.2 ~MPerfWidget . . . 781
12.56.4 Member Function Documentation . . . 781
12.56.4.1 boxXChanged . . . 781
12.56.4.2 boxYChanged . . . 782
12.56.4.3 colorChanged . . . 783
12.56.4.4 colorClicked . . . 784

12.56.4.5 enableChanged . . . 784
12.56.4.6 on_aSnapBox_clicked . . . 785
12.56.4.7 on_copyButton_clicked . . . 785
12.56.4.8 on_indicBox_clicked . . . 786
12.56.4.9 on_lHeightBox_activated . . . 786
12.56.4.10 on_spinBox_valueChanged . . . 787
12.56.4.11 on_xyBox_clicked . . . 787
12.56.4.12 setPerf . . . 788
12.56.4.13 sliderXMoved . . . 789
12.56.4.14 sliderYMoved . . . 790
12.56.5 Field Documentation . . . 791
12.56.5.1 _xyLink . . . 791
12.56.5.2 boxXMapper . . . 791
12.56.5.3 boxYMapper . . . 791
12.56.5.4 buttonMapper1 . . . 791
12.56.5.5 buttonMapper2 . . . 792
12.56.5.6 colorLink . . . 792
12.56.5.7 DPI_COUNT . . . 792
12.56.5.8 DPI_MAX . . . 792
12.56.5.9 DPI_MIN . . . 792
12.56.5.10 enableMapper . . . 792
12.56.5.11 isSetting . . . 792
12.56.5.12 perf . . . 792
12.56.5.13 profile . . . 792
12.56.5.14 sliderXMapper . . . 792
12.56.5.15 sliderYMapper . . . 793
12.56.5.16 stages . . . 793
12.56.5.17 ui . . . 793
12.57 GradientDialog::Preset Struct Reference . . . 793
12.57.1 Detailed Description . . . 794
12.57.2 Constructor & Destructor Documentation . . . 794
12.57.2.1 Preset . . . 794
12.57.2.2 Preset . . . 794
12.57.2.3 Preset . . . 794
12.57.3 Field Documentation . . . 794
12.57.3.1 builtIn . . . 794
12.57.3.2 gradient . . . 794
12.57.3.3 name . . . 795
12.58 QDialog Class Reference . . . 795
12.59 QIODevice Class Reference . . . 796

12.60 QIODevice_descriptor Struct Reference . . . 797
12.60.1 Detailed Description . . . 797
12.60.2 Constructor & Destructor Documentation . . . 797
12.60.2.1 QIODevice_descriptor . . . 797
12.60.3 Field Documentation . . . 797
12.60.3.1 pos . . . 797
12.61 QListWidget Class Reference . . . 798
12.62 QMainWindow Class Reference . . . 799
12.63 QObject Class Reference . . . 800
12.64 QPushButton Class Reference . . . 801
12.65 QThread Class Reference . . . 802
12.66 QuaAdler32 Class Reference . . . 803
12.66.1 Detailed Description . . . 804
12.66.2 Constructor & Destructor Documentation . . . 805
12.66.2.1 QuaAdler32 . . . 805
12.66.3 Member Function Documentation . . . 805
12.66.3.1 calculate . . . 805
12.66.3.2 reset . . . 805
12.66.3.3 update . . . 806
12.66.3.4 value . . . 806
12.66.4 Field Documentation . . . 806
12.66.4.1 checksum . . . 806
12.67 QuaChecksum32 Class Reference . . . 806
12.67.1 Detailed Description . . . 808
12.67.2 Member Function Documentation . . . 808
12.67.2.1 calculate . . . 808
12.67.2.2 reset . . . 808
12.67.2.3 update . . . 808
12.67.2.4 value . . . 808
12.68 QuaCrc32 Class Reference . . . 809
12.68.1 Detailed Description . . . 810
12.68.2 Constructor & Destructor Documentation . . . 811
12.68.2.1 QuaCrc32 . . . 811
12.68.3 Member Function Documentation . . . 811
12.68.3.1 calculate . . . 811
12.68.3.2 reset . . . 811
12.68.3.3 update . . . 812
12.68.3.4 value . . . 812
12.68.4 Field Documentation . . . 812
12.68.4.1 checksum . . . 812

12.69 QuaGzipFile Class Reference . . . 812
12.69.1 Detailed Description . . . 815
12.69.2 Constructor & Destructor Documentation . . . 815
12.69.2.1 QuaGzipFile . . . 815
12.69.2.2 QuaGzipFile . . . 815
12.69.2.3 QuaGzipFile . . . 816
12.69.2.4 ~QuaGzipFile . . . 816
12.69.2.5 QuaGzipFile . . . 816
12.69.3 Member Function Documentation . . . 816
12.69.3.1 close . . . 816
12.69.3.2 flush . . . 817
12.69.3.3 getFileName . . . 817
12.69.3.4 isSequential . . . 817
12.69.3.5 open . . . 817
12.69.3.6 open . . . 818
12.69.3.7 operator= . . . 818
12.69.3.8 readData . . . 818
12.69.3.9 setFileName . . . 818
12.69.3.10 writeData . . . 819
12.69.4 Field Documentation . . . 819
12.69.4.1 d . . . 819
12.70 QuaZIODevice Class Reference . . . 819
12.70.1 Detailed Description . . . 822
12.70.2 Constructor & Destructor Documentation . . . 822
12.70.2.1 QuaZIODevice . . . 822
12.70.2.2 ~QuaZIODevice . . . 822
12.70.3 Member Function Documentation . . . 822
12.70.3.1 close . . . 822
12.70.3.2 flush . . . 823
12.70.3.3 getIoDevice . . . 824
12.70.3.4 isSequential . . . 824
12.70.3.5 open . . . 824
12.70.3.6 readData . . . 825
12.70.3.7 writeData . . . 826
12.70.4 Field Documentation . . . 826
12.70.4.1 d . . . 826
12.71 QuaZip Class Reference . . . 827
12.71.1 Detailed Description . . . 829
12.71.2 Member Enumeration Documentation . . . 830
12.71.2.1 CaseSensitivity . . . 830

12.71.2.2 Constants . . . 830
12.71.2.3 Mode . . . 830
12.71.3 Constructor & Destructor Documentation . . . 831
12.71.3.1 QuaZip . . . 831
12.71.3.2 QuaZip . . . 831
12.71.3.3 QuaZip . . . 831
12.71.3.4 QuaZip . . . 831
12.71.3.5 ~QuaZip . . . 831
12.71.4 Member Function Documentation . . . 832
12.71.4.1 close . . . 832
12.71.4.2 convertCaseSensitivity . . . 833
12.71.4.3 getComment . . . 834
12.71.4.4 getCommentCodec . . . 834
12.71.4.5 getCurrentFileInfo . . . 835
12.71.4.6 getCurrentFileInfo . . . 836
12.71.4.7 getCurrentFileName . . . 837
12.71.4.8 getEntriesCount . . . 838
12.71.4.9 getFileInfoList . . . 839
12.71.4.10 getFileInfoList64 . . . 840
12.71.4.11 getFileNameCodec . . . 840
12.71.4.12 getFileNameList . . . 841
12.71.4.13 getIoDevice . . . 841
12.71.4.14 getMode . . . 841
12.71.4.15 getUnzFile . . . 842
12.71.4.16 getZipError . . . 843
12.71.4.17 getZipFile . . . 844
12.71.4.18 getZipName . . . 844
12.71.4.19 goToFirstFile . . . 845
12.71.4.20 goToNextFile . . . 846
12.71.4.21 hasCurrentFile . . . 847
12.71.4.22 isAutoClose . . . 847
12.71.4.23 isDataDescriptorWritingEnabled . . . 847
12.71.4.24 isOpen . . . 848
12.71.4.25 isZip64Enabled . . . 848
12.71.4.26 open . . . 849
12.71.4.27 operator= . . . 852
12.71.4.28 setAutoClose . . . 852
12.71.4.29 setComment . . . 853
12.71.4.30 setCommentCodec . . . 853
12.71.4.31 setCommentCodec . . . 853

12.71.4.32 setCurrentFile . . . 854
12.71.4.33 setDataDescriptorWritingEnabled . . . 855
12.71.4.34 setDefaultFileNameCodec . . . 856
12.71.4.35 setDefaultFileNameCodec . . . 857
12.71.4.36 setFileNameCodec . . . 857
12.71.4.37 setFileNameCodec . . . 857
12.71.4.38 setIoDevice . . . 857
12.71.4.39 setZip64Enabled . . . 858
12.71.4.40 setZipName . . . 858
12.71.5 Friends And Related Function Documentation . . . 859
12.71.5.1 QuaZipPrivate . . . 859
12.71.6 Field Documentation . . . 859
12.71.6.1 p . . . 859
12.72 QuaZipDir Class Reference . . . 859
12.72.1 Detailed Description . . . 862
12.72.2 Constructor & Destructor Documentation . . . 862
12.72.2.1 QuaZipDir . . . 862
12.72.2.2 QuaZipDir . . . 862
12.72.2.3 ~QuaZipDir . . . 863
12.72.3 Member Function Documentation . . . 863
12.72.3.1 caseSensitivity . . . 863
12.72.3.2 cd . . . 863
12.72.3.3 cdUp . . . 865
12.72.3.4 count . . . 865
12.72.3.5 dirName . . . 866
12.72.3.6 entryInfoList . . . 866
12.72.3.7 entryInfoList . . . 867
12.72.3.8 entryInfoList64 . . . 867
12.72.3.9 entryInfoList64 . . . 868
12.72.3.10 entryList . . . 868
12.72.3.11 entryList . . . 869
12.72.3.12 exists . . . 869
12.72.3.13 exists . . . 870
12.72.3.14 filePath . . . 871
12.72.3.15 filter . . . 872
12.72.3.16 isRoot . . . 872
12.72.3.17 nameFilters . . . 872
12.72.3.18 operator!= . . . 873
12.72.3.19 operator= . . . 873
12.72.3.20 operator== . . . 873

12.72.3.21 operator[] . . . 873
12.72.3.22 path . . . 874
12.72.3.23 relativeFilePath . . . 874
12.72.3.24 setCaseSensitivity . . . 874
12.72.3.25 setFilter . . . 875
12.72.3.26 setNameFilters . . . 875
12.72.3.27 setPath . . . 875
12.72.3.28 setSorting . . . 876
12.72.3.29 sorting . . . 876
12.72.4 Field Documentation . . . 876
12.72.4.1 d . . . 876
12.73 QuaZipFile Class Reference . . . 877
12.73.1 Detailed Description . . . 879
12.73.2 Sequential or random-access? . . . 880
12.73.3 Constructor & Destructor Documentation . . . 880
12.73.3.1 QuaZipFile . . . 880
12.73.3.2 QuaZipFile . . . 880
12.73.3.3 QuaZipFile . . . 880
12.73.3.4 QuaZipFile . . . 880
12.73.3.5 QuaZipFile . . . 881
12.73.3.6 QuaZipFile . . . 881
12.73.3.7 ~QuaZipFile . . . 882
12.73.4 Member Function Documentation . . . 882
12.73.4.1 atEnd . . . 882
12.73.4.2 bytesAvailable . . . 883
12.73.4.3 close . . . 883
12.73.4.4 csize . . . 884
12.73.4.5 getActualFileName . . . 885
12.73.4.6 getCaseSensitivity . . . 886
12.73.4.7 getFileInfo . . . 886
12.73.4.8 getFileInfo . . . 887
12.73.4.9 getFileName . . . 888
12.73.4.10 getZip . . . 888
12.73.4.11 getZipError . . . 888
12.73.4.12 getZipName . . . 889
12.73.4.13 isRaw . . . 889
12.73.4.14 isSequential . . . 890
12.73.4.15 open . . . 890
12.73.4.16 open . . . 891
12.73.4.17 open . . . 891

12.73.4.18 open . . . 892
12.73.4.19 operator= . . . 894
12.73.4.20 pos . . . 894
12.73.4.21 readData . . . 895
12.73.4.22 setFileName . . . 896
12.73.4.23 setZip . . . 896
12.73.4.24 setZipName . . . 897
12.73.4.25 size . . . 897
12.73.4.26 usize . . . 898
12.73.4.27 writeData . . . 899
12.73.5 Friends And Related Function Documentation . . . 899
12.73.5.1 QuaZipFilePrivate . . . 900
12.73.6 Field Documentation . . . 900
12.73.6.1 p . . . 900
12.74 QuaZipFileInfo Struct Reference . . . 900
12.74.1 Detailed Description . . . 901
12.74.2 Member Function Documentation . . . 901
12.74.2.1 getPermissions . . . 901
12.74.3 Field Documentation . . . 902
12.74.3.1 comment . . . 902
12.74.3.2 compressedSize . . . 902
12.74.3.3 crc . . . 902
12.74.3.4 dateTime . . . 902
12.74.3.5 diskNumberStart . . . 902
12.74.3.6 externalAttr . . . 902
12.74.3.7 extra . . . 902
12.74.3.8 flags . . . 903
12.74.3.9 internalAttr . . . 903
12.74.3.10 method . . . 903
12.74.3.11 name . . . 903
12.74.3.12 uncompressedSize . . . 903
12.74.3.13 versionCreated . . . 903
12.74.3.14 versionNeeded . . . 903
12.75 QuaZipFileInfo64 Struct Reference . . . 903
12.75.1 Detailed Description . . . 905
12.75.2 Member Function Documentation . . . 905
12.75.2.1 getNTFSaTime . . . 905
12.75.2.2 getNTFScTime . . . 906
12.75.2.3 getNTFSmTime . . . 906
12.75.2.4 getPermissions . . . 907

12.75.2.5 isEncrypted . . . 908
12.75.2.6 toQuaZipFileInfo . . . 908
12.75.3 Field Documentation . . . 909
12.75.3.1 comment . . . 909
12.75.3.2 compressedSize . . . 909
12.75.3.3 crc . . . 909
12.75.3.4 dateTime . . . 909
12.75.3.5 diskNumberStart . . . 909
12.75.3.6 externalAttr . . . 910
12.75.3.7 extra . . . 910
12.75.3.8 flags . . . 910
12.75.3.9 internalAttr . . . 910
12.75.3.10 method . . . 910
12.75.3.11 name . . . 910
12.75.3.12 uncompressedSize . . . 910
12.75.3.13 versionCreated . . . 910
12.75.3.14 versionNeeded . . . 910
12.76 QuaZipFilePrivate Class Reference . . . 911
12.76.1 Detailed Description . . . 912
12.76.2 Constructor & Destructor Documentation . . . 912
12.76.2.1 QuaZipFilePrivate . . . 912
12.76.2.2 QuaZipFilePrivate . . . 912
12.76.2.3 QuaZipFilePrivate . . . 912
12.76.2.4 QuaZipFilePrivate . . . 913
12.76.2.5 ~QuaZipFilePrivate . . . 913
12.76.3 Member Function Documentation . . . 913
12.76.3.1 resetZipError . . . 913
12.76.3.2 setZipError . . . 913
12.76.4 Friends And Related Function Documentation . . . 914
12.76.4.1 QuaZipFile . . . 914
12.76.5 Field Documentation . . . 914
12.76.5.1 caseSensitivity . . . 914
12.76.5.2 crc . . . 914
12.76.5.3 fileName . . . 914
12.76.5.4 internal . . . 915
12.76.5.5 q . . . 915
12.76.5.6 raw . . . 915
12.76.5.7 uncompressedSize . . . 915
12.76.5.8 writePos . . . 915
12.76.5.9 zip . . . 915

12.76.5.10 zipError . . . 915
12.77 QuaZipNewInfo Struct Reference . . . 916
12.77.1 Detailed Description . . . 917
12.77.2 Constructor & Destructor Documentation . . . 917
12.77.2.1 QuaZipNewInfo . . . 917
12.77.2.2 QuaZipNewInfo . . . 917
12.77.2.3 QuaZipNewInfo . . . 918
12.77.2.4 QuaZipNewInfo . . . 919
12.77.3 Member Function Documentation . . . 919
12.77.3.1 setFileDateTime . . . 919
12.77.3.2 setFileNTFSaTime . . . 919
12.77.3.3 setFileNTFScTime . . . 920
12.77.3.4 setFileNTFSmTime . . . 921
12.77.3.5 setFileNTFSTimes . . . 922
12.77.3.6 setFilePermissions . . . 922
12.77.3.7 setPermissions . . . 923
12.77.4 Field Documentation . . . 923
12.77.4.1 comment . . . 923
12.77.4.2 dateTime . . . 923
12.77.4.3 externalAttr . . . 924
12.77.4.4 extraGlobal . . . 924
12.77.4.5 extraLocal . . . 924
12.77.4.6 internalAttr . . . 924
12.77.4.7 name . . . 924
12.77.4.8 uncompressedSize . . . 924
12.78 QuaZipPrivate Class Reference . . . 924
12.78.1 Detailed Description . . . 926
12.78.2 Constructor & Destructor Documentation . . . 926
12.78.2.1 QuaZipPrivate . . . 926
12.78.2.2 QuaZipPrivate . . . 927
12.78.2.3 QuaZipPrivate . . . 927
12.78.3 Member Function Documentation . . . 927
12.78.3.1 addCurrentFileToDirectoryMap . . . 927
12.78.3.2 clearDirectoryMap . . . 928
12.78.3.3 getDefaultFileNameCodec . . . 929
12.78.3.4 getFileInfoList . . . 929
12.78.3.5 goToFirstUnmappedFile . . . 930
12.78.4 Friends And Related Function Documentation . . . 931
12.78.4.1 QuaZip . . . 931
12.78.5 Field Documentation . . . 931

12.78.5.1 "@4 . . . 931
12.78.5.2 autoClose . . . 931
12.78.5.3 comment . . . 931
12.78.5.4 commentCodec . . . 931
12.78.5.5 dataDescriptorWritingEnabled . . . 932
12.78.5.6 defaultFileNameCodec . . . 932
12.78.5.7 directoryCaseInsensitive . . . 932
12.78.5.8 directoryCaseSensitive . . . 932
12.78.5.9 fileNameCodec . . . 932
12.78.5.10 hasCurrentFile_f . . . 932
12.78.5.11 ioDevice . . . 932
12.78.5.12 lastMappedDirectoryEntry . . . 932
12.78.5.13 mode . . . 932
12.78.5.14 q . . . 933
12.78.5.15 zip64 . . . 933
12.78.5.16 zipError . . . 933
12.78.5.17 zipName . . . 933
12.79 QWidget Class Reference . . . 933
12.80 RebindWidget Class Reference . . . 934
12.80.1 Detailed Description . . . 938
12.80.2 Constructor & Destructor Documentation . . . 938
12.80.2.1 RebindWidget . . . 938
12.80.2.2 ~RebindWidget . . . 939
12.80.3 Member Function Documentation . . . 939
12.80.3.1 applyChanges . . . 939
12.80.3.2 convertMacroBox . . . 941
12.80.3.3 helpStatus . . . 942
12.80.3.4 on_animBox_currentIndexChanged . . . 942
12.80.3.5 on_animButton_clicked . . . 943
12.80.3.6 on_applyButton_clicked . . . 943
12.80.3.7 on_btnClearMacro_clicked . . . 944
12.80.3.8 on_btnStartMacro_clicked . . . 944
12.80.3.9 on_btnStopMacro_clicked . . . 945
12.80.3.10 on_cancelButton_clicked . . . 945
12.80.3.11 on_dpiBox_currentIndexChanged . . . 946
12.80.3.12 on_dpiButton_clicked . . . 947
12.80.3.13 on_fnBox_currentIndexChanged . . . 947
12.80.3.14 on_fnButton_clicked . . . 947
12.80.3.15 on_lightBox_currentIndexChanged . . . 948
12.80.3.16 on_lightButton_clicked . . . 948

12.80.3.17 on_lockBox_currentIndexChanged . . . 948
12.80.3.18 on_lockButton_clicked . . . 949
12.80.3.19 on_mb2Box_currentIndexChanged . . . 949
12.80.3.20 on_mb2Button_clicked . . . 949
12.80.3.21 on_mbBox_currentIndexChanged . . . 949
12.80.3.22 on_mbButton_clicked . . . 950
12.80.3.23 on_mediaBox_currentIndexChanged . . . 950
12.80.3.24 on_mediaButton_clicked . . . 950
12.80.3.25 on_modBox_currentIndexChanged . . . 951
12.80.3.26 on_modButton_clicked . . . 951
12.80.3.27 on_modeBox_currentIndexChanged . . . 951
12.80.3.28 on_modeButton_clicked . . . 952
12.80.3.29 on_numBox_currentIndexChanged . . . 952
12.80.3.30 on_numButton_clicked . . . 952
12.80.3.31 on_programKpBox_textChanged . . . 952
12.80.3.32 on_programKpButton_clicked . . . 953
12.80.3.33 on_programKpSIBox_clicked . . . 953
12.80.3.34 on_programKrBox_textChanged . . . 953
12.80.3.35 on_programKrButton_clicked . . . 954
12.80.3.36 on_programKrSIBox_clicked . . . 954
12.80.3.37 on_pteMacroBox_textChanged . . . 954
12.80.3.38 on_resetButton_clicked . . . 955
12.80.3.39 on_typingBox_currentIndexChanged . . . 955
12.80.3.40 on_typingButton_clicked . . . 956
12.80.3.41 on_unbindButton_clicked . . . 956
12.80.3.42 on_wheelBox_currentIndexChanged . . . 956
12.80.3.43 on_wheelButton_clicked . . . 957
12.80.3.44 setBind . . . 957
12.80.3.45 setBox . . . 959
12.80.3.46 setSelection . . . 960
12.80.4 Field Documentation . . . 964
12.80.4.1 bind . . . 964
12.80.4.2 fnKeys . . . 964
12.80.4.3 macReader . . . 965
12.80.4.4 mediaKeys . . . 965
12.80.4.5 modKeys . . . 965
12.80.4.6 mouseExtKeys . . . 965
12.80.4.7 mouseKeys . . . 965
12.80.4.8 numKeys . . . 965
12.80.4.9 profile . . . 965

12.80.4.10 selection . . . 965
12.80.4.11 TAB_ANIM . . . 965
12.80.4.12 TAB_KB . . . 966
12.80.4.13 TAB_MACRO . . . 966
12.80.4.14 TAB_MOUSE . . . 966
12.80.4.15 TAB_PROGRAM . . . 966
12.80.4.16 TAB_SPECIAL . . . 966
12.80.4.17 typingKeys . . . 966
12.80.4.18 ui . . . 966
12.80.4.19 wheelKeys . . . 966
12.81 Ui::RebindWidget Class Reference . . . 967
12.81.1 Detailed Description . . . 970
12.81.2 Member Function Documentation . . . 970
12.81.2.1 retranslateUi . . . 970
12.81.2.2 setupUi . . . 972
12.81.3 Field Documentation . . . 982
12.81.3.1 actionTab . . . 982
12.81.3.2 animBox . . . 982
12.81.3.3 animButton . . . 982
12.81.3.4 animKrBox . . . 982
12.81.3.5 animOnceBox . . . 982
12.81.3.6 animTab . . . 982
12.81.3.7 applyButton . . . 983
12.81.3.8 btnClearMacro . . . 983
12.81.3.9 btnStartMacro . . . 983
12.81.3.10 btnStopMacro . . . 983
12.81.3.11 cancelButton . . . 983
12.81.3.12 dpiBox . . . 983
12.81.3.13 dpiButton . . . 983
12.81.3.14 dpiCustLabel . . . 983
12.81.3.15 dpiCustXBox . . . 984
12.81.3.16 dpiCustYBox . . . 984
12.81.3.17 dpiWarning . . . 984
12.81.3.18 fnBox . . . 984
12.81.3.19 fnButton . . . 984
12.81.3.20 gridLayout . . . 984
12.81.3.21 gridLayout_10 . . . 984
12.81.3.22 gridLayout_2 . . . 984
12.81.3.23 gridLayout_3 . . . 984
12.81.3.24 gridLayout_4 . . . 985

12.81.3.25 gridLayout_5 . . . 985
12.81.3.26 gridLayout_8 . . . 985
12.81.3.27 groupBox . . . 985
12.81.3.28 groupBox_2 . . . 985
12.81.3.29 groupBox_3 . . . 985
12.81.3.30 groupBox_4 . . . 985
12.81.3.31 horizontalLayout . . . 985
12.81.3.32 horizontalLayout_2 . . . 985
12.81.3.33 horizontalLayout_3 . . . 986
12.81.3.34 horizontalSpacer . . . 986
12.81.3.35 horizontalSpacer_10 . . . 986
12.81.3.36 horizontalSpacer_11 . . . 986
12.81.3.37 horizontalSpacer_12 . . . 986
12.81.3.38 horizontalSpacer_13 . . . 986
12.81.3.39 horizontalSpacer_14 . . . 986
12.81.3.40 horizontalSpacer_15 . . . 986
12.81.3.41 horizontalSpacer_16 . . . 986
12.81.3.42 horizontalSpacer_17 . . . 987
12.81.3.43 horizontalSpacer_18 . . . 987
12.81.3.44 horizontalSpacer_19 . . . 987
12.81.3.45 horizontalSpacer_2 . . . 987
12.81.3.46 horizontalSpacer_20 . . . 987
12.81.3.47 horizontalSpacer_21 . . . 987
12.81.3.48 horizontalSpacer_22 . . . 987
12.81.3.49 horizontalSpacer_23 . . . 987
12.81.3.50 horizontalSpacer_24 . . . 987
12.81.3.51 horizontalSpacer_25 . . . 988
12.81.3.52 horizontalSpacer_26 . . . 988
12.81.3.53 horizontalSpacer_3 . . . 988
12.81.3.54 horizontalSpacer_4 . . . 988
12.81.3.55 horizontalSpacer_5 . . . 988
12.81.3.56 horizontalSpacer_6 . . . 988
12.81.3.57 horizontalSpacer_7 . . . 988
12.81.3.58 horizontalSpacer_8 . . . 988
12.81.3.59 horizontalSpacer_9 . . . 988
12.81.3.60 keyTab . . . 989
12.81.3.61 layoutWidget . . . 989
12.81.3.62 layoutWidget1 . . . 989
12.81.3.63 layoutWidget_2 . . . 989
12.81.3.64 lbl_macro . . . 989

12.81.3.65 lightBox . . . 989
12.81.3.66 lightButton . . . 989
12.81.3.67 lightWrapBox . . . 989
12.81.3.68 lockBox . . . 989
12.81.3.69 lockButton . . . 990
12.81.3.70 macroTab . . . 990
12.81.3.71 mb2Box . . . 990
12.81.3.72 mb2Button . . . 990
12.81.3.73 mbBox . . . 990
12.81.3.74 mbButton . . . 990
12.81.3.75 mediaBox . . . 990
12.81.3.76 mediaButton . . . 991
12.81.3.77 modBox . . . 991
12.81.3.78 modButton . . . 991
12.81.3.79 modeBox . . . 991
12.81.3.80 modeButton . . . 991
12.81.3.81 modeWrapBox . . . 991
12.81.3.82 mouseTab . . . 991
12.81.3.83 numBox . . . 991
12.81.3.84 numButton . . . 992
12.81.3.85 programKpBox . . . 992
12.81.3.86 programKpButton . . . 992
12.81.3.87 programKpExtra . . . 992
12.81.3.88 programKpModeBox . . . 992
12.81.3.89 programKpSIBox . . . 992
12.81.3.90 programKrBox . . . 992
12.81.3.91 programKrButton . . . 993
12.81.3.92 programKrExtra . . . 993
12.81.3.93 programKrModeBox . . . 993
12.81.3.94 programKrSIBox . . . 993
12.81.3.95 programTab . . . 993
12.81.3.96 progTipLabel . . . 993
12.81.3.97 pteMacroBox . . . 993
12.81.3.98 pteMacroComment . . . 993
12.81.3.99 pteMacroText . . . 994
12.81.3.100 resetButton . . . 994
12.81.3.101 tabWidget . . . 994
12.81.3.102 typingBox . . . 994
12.81.3.103 typingButton . . . 994
12.81.3.104 unbindButton . . . 994

12.81.3.105 VerticalLayout . . . 994
12.81.3.106 VerticalLayout_2 . . . 994
12.81.3.107 VerticalSpacer . . . 995
12.81.3.108 VerticalSpacer_10 . . . 995
12.81.3.109 VerticalSpacer_11 . . . 995
12.81.3.110 VerticalSpacer_2 . . . 995
12.81.3.111 VerticalSpacer_3 . . . 995
12.81.3.112 VerticalSpacer_4 . . . 995
12.81.3.113 VerticalSpacer_5 . . . 995
12.81.3.114 VerticalSpacer_6 . . . 995
12.81.3.115 VerticalSpacer_7 . . . 995
12.81.3.116 VerticalSpacer_8 . . . 996
12.81.3.117 WheelBox . . . 996
12.81.3.118 WheelButton . . . 996
12.82 RListWidget Class Reference . . . 996
12.82.1 Detailed Description . . . 998
12.82.2 Constructor & Destructor Documentation . . . 998
12.82.2.1 RListWidget . . . 998
12.82.3 Member Function Documentation . . . 999
12.82.3.1 change . . . 999
12.82.3.2 enter . . . 999
12.82.3.3 orderChanged . . . 1000
12.82.3.4 rescanItems . . . 1000
12.82.3.5 timerTick . . . 1001
12.82.4 Field Documentation . . . 1002
12.82.4.1 currentData . . . 1002
12.82.4.2 DATA_ROLE . . . 1002
12.82.4.3 dragged . . . 1002
12.82.4.4 previousItems . . . 1002
12.82.4.5 reorderTimer . . . 1002
12.83 SettingsWidget Class Reference . . . 1002
12.83.1 Detailed Description . . . 1005
12.83.2 Constructor & Destructor Documentation . . . 1005
12.83.2.1 SettingsWidget . . . 1005
12.83.2.2 ~SettingsWidget . . . 1006
12.83.3 Member Function Documentation . . . 1006
12.83.3.1 on_altBox_activated . . . 1007
12.83.3.2 on_autoFWBox_clicked . . . 1007
12.83.3.3 on_capsBox_activated . . . 1007
12.83.3.4 on_ctrlBox_activated . . . 1008

12.83.3.5 on_extraButton_clicked . . . 1008
12.83.3.6 on_layoutBox_activated . . . 1008
12.83.3.7 on_loginItemBox_clicked . . . 1009
12.83.3.8 on_pushButton_clicked . . . 1009
12.83.3.9 on_shiftBox_activated . . . 1009
12.83.3.10 on_winBox_activated . . . 1010
12.83.3.11 pollUpdates . . . 1010
12.83.3.12 setStatus . . . 1010
12.83.3.13 setVersion . . . 1011
12.83.3.14 showLayoutDialog . . . 1011
12.83.3.15 updateModifiers . . . 1012
12.83.4 Friends And Related Function Documentation . . . 1013
12.83.4.1 MainWindow . . . 1013
12.83.5 Field Documentation . . . 1013
12.83.5.1 extra . . . 1013
12.83.5.2 ui . . . 1013
12.84 Ui::SettingsWidget Class Reference . . . 1014
12.84.1 Detailed Description . . . 1016
12.84.2 Member Function Documentation . . . 1016
12.84.2.1 retranslateUi . . . 1016
12.84.2.2 setupUi . . . 1017
12.84.3 Field Documentation . . . 1021
12.84.3.1 altBox . . . 1021
12.84.3.2 altLabel . . . 1021
12.84.3.3 autoFWBox . . . 1021
12.84.3.4 capsBox . . . 1021
12.84.3.5 capsLabel . . . 1022
12.84.3.6 ctrlBox . . . 1022
12.84.3.7 ctrlLabel . . . 1022
12.84.3.8 devicesLabel . . . 1022
12.84.3.9 extraButton . . . 1022
12.84.3.10 gridLayout . . . 1022
12.84.3.11 gridLayout_3 . . . 1022
12.84.3.12 gridLayout_5 . . . 1022
12.84.3.13 horizontalLayout . . . 1022
12.84.3.14 horizontalLayout_2 . . . 1023
12.84.3.15 horizontalSpacer . . . 1023
12.84.3.16 horizontalSpacer_10 . . . 1023
12.84.3.17 horizontalSpacer_2 . . . 1023
12.84.3.18 horizontalSpacer_7 . . . 1023

12.84.3.19 horizontalSpacer_9 . . . 1023
12.84.3.20 label . . . 1023
12.84.3.21 label_2 . . . 1023
12.84.3.22 label_3 . . . 1023
12.84.3.23 label_5 . . . 1024
12.84.3.24 label_6 . . . 1024
12.84.3.25 label_8 . . . 1024
12.84.3.26 layoutBox . . . 1024
12.84.3.27 line . . . 1024
12.84.3.28 line_2 . . . 1024
12.84.3.29 line_3 . . . 1024
12.84.3.30 loginItemBox . . . 1024
12.84.3.31 pushButton . . . 1024
12.84.3.32 shiftBox . . . 1025
12.84.3.33 shiftLabel . . . 1025
12.84.3.34 versionLabel . . . 1025
12.84.3.35 verticalSpacer . . . 1025
12.84.3.36 verticalSpacer_10 . . . 1025
12.84.3.37 verticalSpacer_2 . . . 1025
12.84.3.38 verticalSpacer_3 . . . 1025
12.84.3.39 verticalSpacer_4 . . . 1025
12.84.3.40 verticalSpacer_5 . . . 1025
12.84.3.41 verticalSpacer_6 . . . 1026
12.84.3.42 verticalSpacer_7 . . . 1026
12.84.3.43 verticalSpacer_8 . . . 1026
12.84.3.44 winBox . . . 1026
12.84.3.45 winLabel . . . 1026
12.85 SGroup Class Reference . . . 1026
12.85.1 Detailed Description . . . 1028
12.85.2 Constructor & Destructor Documentation . . . 1028
12.85.2.1 SGroup . . . 1028
12.85.2.2 ~SGroup . . . 1028
12.85.3 Field Documentation . . . 1028
12.85.3.1 _settings . . . 1028
12.86 Ui_AnimAddDialog Class Reference . . . 1029
12.86.1 Detailed Description . . . 1030
12.86.2 Member Function Documentation . . . 1030
12.86.2.1 retranslateUi . . . 1030
12.86.2.2 setupUi . . . 1030
12.86.3 Field Documentation . . . 1032

12.86.3.1 animBox . . . 1032
12.86.3.2 buttonBox . . . 1032
12.86.3.3 gridLayout . . . 1032
12.86.3.4 horizontalLayout . . . 1032
12.86.3.5 horizontalSpacer . . . 1032
12.86.3.6 horizontalSpacer_2 . . . 1033
12.86.3.7 label . . . 1033
12.86.3.8 label_2 . . . 1033
12.86.3.9 presetBox . . . 1033
12.86.3.10 previewBox . . . 1033
12.86.3.11 verticalSpacer_2 . . . 1033
12.86.3.12 verticalSpacer_3 . . . 1033
12.87 Ui_AnimSettingDialog Class Reference . . . 1033
12.87.1 Detailed Description . . . 1036
12.87.2 Member Function Documentation . . . 1036
12.87.2.1 retranslateUi . . . 1036
12.87.2.2 setupUi . . . 1037
12.87.3 Field Documentation . . . 1040
12.87.3.1 animName . . . 1040
12.87.3.2 buttonBox . . . 1040
12.87.3.3 delayBox . . . 1041
12.87.3.4 gridLayout . . . 1041
12.87.3.5 gridLayout_2 . . . 1041
12.87.3.6 horizontalSpacer . . . 1041
12.87.3.7 horizontalSpacer_2 . . . 1041
12.87.3.8 horizontalSpacer_3 . . . 1041
12.87.3.9 horizontalSpacer_4 . . . 1041
12.87.3.10 horizontalSpacer_5 . . . 1041
12.87.3.11 horizontalSpacer_6 . . . 1041
12.87.3.12 infoTab . . . 1042
12.87.3.13 kpDelayBox . . . 1042
12.87.3.14 kpModeStopBox . . . 1042
12.87.3.15 kpReleaseBox . . . 1042
12.87.3.16 kpRepeatBox . . . 1042
12.87.3.17 kpRepeatLabel . . . 1042
12.87.3.18 kpRepeatLabel_2 . . . 1042
12.87.3.19 label . . . 1042
12.87.3.20 label_10 . . . 1042
12.87.3.21 label_11 . . . 1043
12.87.3.22 label_12 . . . 1043

12.87.3.23 label_13 . . . 1043
12.87.3.24 label_2 . . . 1043
12.87.3.25 label_3 . . . 1043
12.87.3.26 label_4 . . . 1043
12.87.3.27 label_5 . . . 1043
12.87.3.28 label_6 . . . 1043
12.87.3.29 label_7 . . . 1043
12.87.3.30 label_8 . . . 1044
12.87.3.31 label_9 . . . 1044
12.87.3.32 line . . . 1044
12.87.3.33 line_2 . . . 1044
12.87.3.34 repeatBox . . . 1044
12.87.3.35 repeatLabel . . . 1044
12.87.3.36 repeatLabel_2 . . . 1044
12.87.3.37 sAuthorLabel . . . 1044
12.87.3.38 sDescLabel . . . 1044
12.87.3.39 settingsGrid . . . 1045
12.87.3.40 settingTab . . . 1045
12.87.3.41 sLicenseLabel . . . 1045
12.87.3.42 sNameLabel . . . 1045
12.87.3.43 sVerLabel . . . 1045
12.87.3.44 sYearLabel . . . 1045
12.87.3.45 tabWidget . . . 1045
12.87.3.46 timeGrid . . . 1045
12.87.3.47 timeTab . . . 1045
12.87.3.48 verticalSpacer . . . 1046
12.87.3.49 verticalSpacer_2 . . . 1046
12.87.3.50 verticalSpacer_3 . . . 1046
12.88 Ui_ExtraSettingsWidget Class Reference . . . 1046
12.88.1 Detailed Description . . . 1048
12.88.2 Member Function Documentation . . . 1049
12.88.2.1 retranslateUi . . . 1049
12.88.2.2 setupUi . . . 1050
12.88.3 Field Documentation . . . 1053
12.88.3.1 animCountLabel . . . 1053
12.88.3.2 animPathLabel . . . 1054
12.88.3.3 animScanButton . . . 1054
12.88.3.4 brightnessBox . . . 1054
12.88.3.5 buttonBox . . . 1054
12.88.3.6 delayBox . . . 1054

12.88.3.7 ditherBox . . . 1054
12.88.3.8 fpsBox . . . 1054
12.88.3.9 fpsWarnLabel . . . 1054
12.88.3.10 gridLayout . . . 1054
12.88.3.11 horizontalLayout . . . 1055
12.88.3.12 horizontalLayout_2 . . . 1055
12.88.3.13 horizontalSpacer . . . 1055
12.88.3.14 horizontalSpacer_2 . . . 1055
12.88.3.15 horizontalSpacer_3 . . . 1055
12.88.3.16 label . . . 1055
12.88.3.17 label_10 . . . 1055
12.88.3.18 label_11 . . . 1055
12.88.3.19 label_2 . . . 1055
12.88.3.20 label_3 . . . 1056
12.88.3.21 label_5 . . . 1056
12.88.3.22 label_6 . . . 1056
12.88.3.23 line . . . 1056
12.88.3.24 line_2 . . . 1056
12.88.3.25 line_3 . . . 1056
12.88.3.26 mAccelBox . . . 1056
12.88.3.27 osxLabel . . . 1056
12.88.3.28 osxLine . . . 1056
12.88.3.29 sAccelBox . . . 1057
12.88.3.30 sSpeedBox . . . 1057
12.88.3.31 sSpeedWidget . . . 1057
12.88.3.32 trayBox . . . 1057
12.88.3.33 verticalSpacer . . . 1057
12.88.3.34 verticalSpacer_10 . . . 1057
12.88.3.35 verticalSpacer_11 . . . 1057
12.88.3.36 verticalSpacer_2 . . . 1057
12.88.3.37 verticalSpacer_3 . . . 1057
12.88.3.38 verticalSpacer_4 . . . 1058
12.88.3.39 verticalSpacer_5 . . . 1058
12.88.3.40 verticalSpacer_6 . . . 1058
12.88.3.41 verticalSpacer_7 . . . 1058
12.88.3.42 verticalSpacer_8 . . . 1058
12.88.3.43 verticalSpacer_9 . . . 1058
12.89 Ui_FwUpgradeDialog Class Reference . . . 1058
12.89.1 Detailed Description . . . 1060
12.89.2 Member Function Documentation . . . 1060

12.89.2.1 retranslateUi . . . 1060
12.89.2.2 setupUi . . . 1061
12.89.3 Field Documentation . . . 1062
12.89.3.1 actionButton . . . 1062
12.89.3.2 cancelButton . . . 1063
12.89.3.3 curLabel . . . 1063
12.89.3.4 devLabel . . . 1063
12.89.3.5 gridLayout . . . 1063
12.89.3.6 gridLayout_2 . . . 1063
12.89.3.7 horizontalSpacer . . . 1063
12.89.3.8 horizontalSpacer_2 . . . 1063
12.89.3.9 horizontalSpacer_3 . . . 1063
12.89.3.10 horizontalSpacer_4 . . . 1063
12.89.3.11 label_2 . . . 1064
12.89.3.12 label_4 . . . 1064
12.89.3.13 newLabel . . . 1064
12.89.3.14 progressBar . . . 1064
12.89.3.15 statusLabel . . . 1064
12.90 Ui_GradientDialog Class Reference . . . 1064
12.90.1 Detailed Description . . . 1066
12.90.2 Member Function Documentation . . . 1066
12.90.2.1 retranslateUi . . . 1066
12.90.2.2 setupUi . . . 1067
12.90.3 Field Documentation . . . 1069
12.90.3.1 buttonBox . . . 1069
12.90.3.2 gridLayout . . . 1069
12.90.3.3 gridLayout_2 . . . 1069
12.90.3.4 gridLayout_3 . . . 1069
12.90.3.5 groupBox_2 . . . 1070
12.90.3.6 horizontalLayout . . . 1070
12.90.3.7 horizontalLayout_2 . . . 1070
12.90.3.8 horizontalSpacer . . . 1070
12.90.3.9 horizontalSpacer_2 . . . 1070
12.90.3.10 horizontalSpacer_3 . . . 1070
12.90.3.11 label . . . 1070
12.90.3.12 label_2 . . . 1070
12.90.3.13 presetDelete . . . 1070
12.90.3.14 presetList . . . 1071
12.90.3.15 presetName . . . 1071
12.90.3.16 presetSave . . . 1071

12.90.3.17 stopBox . . . 1071
12.90.3.18 stopColor . . . 1071
12.90.3.19 stopOpacity . . . 1071
12.90.3.20 stopPos . . . 1071
12.90.3.21 verticalSpacer . . . 1071
12.90.3.22 verticalSpacer_2 . . . 1071
12.90.3.23 widget . . . 1072
12.91 Ui_KbAnimWidget Class Reference . . . 1072
12.91.1 Detailed Description . . . 1074
12.91.2 Member Function Documentation . . . 1074
12.91.2.1 retranslateUi . . . 1074
12.91.2.2 setupUi . . . 1074
12.91.3 Field Documentation . . . 1077
12.91.3.1 aCopyLabel . . . 1077
12.91.3.2 aMissingLabel . . . 1077
12.91.3.3 aMissingPage . . . 1077
12.91.3.4 aNameLabel . . . 1077
12.91.3.5 animList . . . 1077
12.91.3.6 animPage . . . 1078
12.91.3.7 aVerLabel . . . 1078
12.91.3.8 blendBox . . . 1078
12.91.3.9 deleteButton . . . 1078
12.91.3.10 gridLayout . . . 1078
12.91.3.11 gridLayout_2 . . . 1078
12.91.3.12 gridLayout_3 . . . 1078
12.91.3.13 gridLayout_4 . . . 1078
12.91.3.14 horizontalLayout . . . 1079
12.91.3.15 horizontalSpacer . . . 1079
12.91.3.16 horizontalSpacer_2 . . . 1079
12.91.3.17 horizontalSpacer_3 . . . 1079
12.91.3.18 horizontalSpacer_4 . . . 1079
12.91.3.19 horizontalSpacer_5 . . . 1079
12.91.3.20 keyButton . . . 1079
12.91.3.21 label_5 . . . 1079
12.91.3.22 label_6 . . . 1079
12.91.3.23 label_7 . . . 1080
12.91.3.24 nameBox . . . 1080
12.91.3.25 noAnimLabel . . . 1080
12.91.3.26 noSelPage . . . 1080
12.91.3.27 opacityBox . . . 1080

12.91.3.28 propertyButton . . . 1080
12.91.3.29 selectionStack . . . 1080
12.91.3.30 verticalLayout . . . 1080
12.91.3.31 verticalSpacer . . . 1080
12.91.3.32 verticalSpacer_2 . . . 1081
12.91.3.33 verticalSpacer_3 . . . 1081
12.92 Ui_KbBindWidget Class Reference . . . 1081
12.92.1 Detailed Description . . . 1082
12.92.2 Member Function Documentation . . . 1083
12.92.2.1 retranslateUi . . . 1083
12.92.2.2 setupUi . . . 1083
12.92.3 Field Documentation . . . 1085
12.92.3.1 copyButton . . . 1085
12.92.3.2 gridLayout . . . 1085
12.92.3.3 gridLayout_2 . . . 1085
12.92.3.4 horizontalLayout_2 . . . 1086
12.92.3.5 horizontalSpacer . . . 1086
12.92.3.6 horizontalSpacer_2 . . . 1086
12.92.3.7 keyWidget . . . 1086
12.92.3.8 label . . . 1086
12.92.3.9 label_2 . . . 1086
12.92.3.10 line . . . 1086
12.92.3.11 line_2 . . . 1086
12.92.3.12 rbWidget . . . 1086
12.92.3.13 resetButton . . . 1087
12.92.3.14 selectLabel . . . 1087
12.92.3.15 verticalLayout . . . 1087
12.92.3.16 verticalSpacer . . . 1087
12.92.3.17 widget . . . 1087
12.93 Ui_KbLightWidget Class Reference . . . 1087
12.93.1 Detailed Description . . . 1089
12.93.2 Member Function Documentation . . . 1089
12.93.2.1 retranslateUi . . . 1089
12.93.2.2 setupUi . . . 1090
12.93.3 Field Documentation . . . 1092
12.93.3.1 animButton . . . 1092
12.93.3.2 animWidget . . . 1093
12.93.3.3 bgButton . . . 1093
12.93.3.4 brightnessBox . . . 1093
12.93.3.5 gridLayout . . . 1093

12.93.3.6 gridLayout_2 . . . 1093
12.93.3.7 gridLayout_4 . . . 1093
12.93.3.8 horizontalLayout . . . 1093
12.93.3.9 horizontalLayout_2 . . . 1093
12.93.3.10 horizontalLayout_3 . . . 1093
12.93.3.11 horizontalSpacer_3 . . . 1094
12.93.3.12 horizontalSpacer_4 . . . 1094
12.93.3.13 horizontalSpacer_5 . . . 1094
12.93.3.14 horizontalSpacer_6 . . . 1094
12.93.3.15 keyWidget . . . 1094
12.93.3.16 label . . . 1094
12.93.3.17 label_2 . . . 1094
12.93.3.18 label_3 . . . 1094
12.93.3.19 line . . . 1094
12.93.3.20 line_2 . . . 1095
12.93.3.21 selLabel . . . 1095
12.93.3.22 showAnimBox . . . 1095
12.93.3.23 verticalLayout . . . 1095
12.93.3.24 verticalSpacer_2 . . . 1095
12.93.3.25 verticalSpacer_3 . . . 1095
12.93.3.26 widget . . . 1095
12.94 Ui_KbProfileDialog Class Reference . . . 1095
12.94.1 Detailed Description . . . 1097
12.94.2 Member Function Documentation . . . 1097
12.94.2.1 retranslateUi . . . 1097
12.94.2.2 setupUi . . . 1097
12.94.3 Field Documentation . . . 1098
12.94.3.1 buttonBox . . . 1098
12.94.3.2 gridLayout . . . 1098
12.94.3.3 horizontalSpacer . . . 1099
12.94.3.4 horizontalSpacer_2 . . . 1099
12.94.3.5 profileList . . . 1099
12.95 Ui_KbWidget Class Reference . . . 1099
12.95.1 Detailed Description . . . 1101
12.95.2 Member Function Documentation . . . 1101
12.95.2.1 retranslateUi . . . 1101
12.95.2.2 setupUi . . . 1102
12.95.3 Field Documentation . . . 1105
12.95.3.1 bindTab . . . 1105
12.95.3.2 bindWidget . . . 1105

12.95.3.3 devTab . . . 1105
12.95.3.4 fwLabel . . . 1105
12.95.3.5 fwUpdButton . . . 1105
12.95.3.6 fwUpdLabel . . . 1106
12.95.3.7 fwUpdLayout . . . 1106
12.95.3.8 gridLayout . . . 1106
12.95.3.9 gridLayout_2 . . . 1106
12.95.3.10 gridLayout_3 . . . 1106
12.95.3.11 gridLayout_4 . . . 1106
12.95.3.12 gridLayout_5 . . . 1106
12.95.3.13 gridLayout_7 . . . 1106
12.95.3.14 horizontalSpacer_2 . . . 1106
12.95.3.15 horizontalSpacer_3 . . . 1107
12.95.3.16 hwSaveButton . . . 1107
12.95.3.17 kPerfTab . . . 1107
12.95.3.18 kPerfWidget . . . 1107
12.95.3.19 label_3 . . . 1107
12.95.3.20 label_4 . . . 1107
12.95.3.21 label_9 . . . 1107
12.95.3.22 lightTab . . . 1107
12.95.3.23 lightWidget . . . 1107
12.95.3.24 modesList . . . 1108
12.95.3.25 mPerfTab . . . 1108
12.95.3.26 mPerfWidget . . . 1108
12.95.3.27 pollLabel . . . 1108
12.95.3.28 pollLabel2 . . . 1108
12.95.3.29 profileBox . . . 1108
12.95.3.30 serialLabel . . . 1108
12.95.3.31 tabWidget . . . 1108
12.95.3.32 verticalSpacer . . . 1108
12.96 Ui_KPerfWidget Class Reference . . . 1109
12.96.1 Detailed Description . . . 1112
12.96.2 Member Function Documentation . . . 1112
12.96.2.1 retranslateUi . . . 1112
12.96.2.2 setupUi . . . 1113
12.96.3 Field Documentation . . . 1119
12.96.3.1 capsBox . . . 1119
12.96.3.2 capsColorOff . . . 1120
12.96.3.3 capsColorOn . . . 1120
12.96.3.4 copyButton . . . 1120

12.96.3.5 gridLayout . . . 1120
12.96.3.6 horizontalLayout . . . 1120
12.96.3.7 horizontalLayout_2 . . . 1120
12.96.3.8 horizontalSpacer . . . 1120
12.96.3.9 horizontalSpacer_2 . . . 1120
12.96.3.10 horizontalSpacer_3 . . . 1120
12.96.3.11 horizontalSpacer_4 . . . 1121
12.96.3.12 horizontalSpacer_5 . . . 1121
12.96.3.13 horizontalSpacer_6 . . . 1121
12.96.3.14 horizontalSpacer_7 . . . 1121
12.96.3.15 horizontalSpacer_8 . . . 1121
12.96.3.16 intensityBox . . . 1121
12.96.3.17 k95Label1 . . . 1121
12.96.3.18 k95Label2 . . . 1121
12.96.3.19 k95Label3 . . . 1121
12.96.3.20 k95Label4 . . . 1122
12.96.3.21 k95Label5 . . . 1122
12.96.3.22 k95Label6 . . . 1122
12.96.3.23 k95Line . . . 1122
12.96.3.24 k95Spacer . . . 1122
12.96.3.25 label . . . 1122
12.96.3.26 label_10 . . . 1122
12.96.3.27 label_11 . . . 1122
12.96.3.28 label_12 . . . 1122
12.96.3.29 label_14 . . . 1123
12.96.3.30 label_15 . . . 1123
12.96.3.31 label_16 . . . 1123
12.96.3.32 label_17 . . . 1123
12.96.3.33 label_18 . . . 1123
12.96.3.34 label_19 . . . 1123
12.96.3.35 label_2 . . . 1123
12.96.3.36 label_20 . . . 1123
12.96.3.37 label_21 . . . 1123
12.96.3.38 label_22 . . . 1124
12.96.3.39 label_23 . . . 1124
12.96.3.40 label_24 . . . 1124
12.96.3.41 label_3 . . . 1124
12.96.3.42 label_4 . . . 1124
12.96.3.43 label_5 . . . 1124
12.96.3.44 label_6 . . . 1124

12.96.3.45 label_7 . . . 1124
12.96.3.46 label_8 . . . 1124
12.96.3.47 lightBox . . . 1125
12.96.3.48 lightColor1 . . . 1125
12.96.3.49 lightColor2 . . . 1125
12.96.3.50 lightColor3 . . . 1125
12.96.3.51 line . . . 1125
12.96.3.52 line_2 . . . 1125
12.96.3.53 line_3 . . . 1125
12.96.3.54 lockBox . . . 1125
12.96.3.55 lockColorOff . . . 1125
12.96.3.56 lockColorOn . . . 1126
12.96.3.57 macroBox . . . 1126
12.96.3.58 macroColorOff . . . 1126
12.96.3.59 macroColorOn . . . 1126
12.96.3.60 modeBox . . . 1126
12.96.3.61 modeColorOff . . . 1126
12.96.3.62 modeColorOn . . . 1126
12.96.3.63 muteBox . . . 1126
12.96.3.64 muteColorNA . . . 1126
12.96.3.65 muteColorOff . . . 1127
12.96.3.66 muteColorOn . . . 1127
12.96.3.67 numBox . . . 1127
12.96.3.68 numColorOff . . . 1127
12.96.3.69 numColorOn . . . 1127
12.96.3.70 scrollBox . . . 1127
12.96.3.71 scrollColorOff . . . 1127
12.96.3.72 scrollColorOn . . . 1127
12.96.3.73 verticalSpacer . . . 1127
12.96.3.74 verticalSpacer_2 . . . 1128
12.96.3.75 verticalSpacer_3 . . . 1128
12.96.3.76 verticalSpacer_4 . . . 1128
12.97 Ui_LayoutDialog Class Reference . . . 1128
12.97.1 Detailed Description . . . 1130
12.97.2 Member Function Documentation . . . 1130
12.97.2.1 retranslateUi . . . 1130
12.97.2.2 setupUi . . . 1130
12.97.3 Field Documentation . . . 1132
12.97.3.1 buttonBox . . . 1132
12.97.3.2 comboBox . . . 1132

12.97.3.3 gridLayout . . . 1132
12.97.3.4 horizontalSpacer . . . 1132
12.97.3.5 horizontalSpacer_2 . . . 1132
12.97.3.6 label . . . 1133
12.97.3.7 label_2 . . . 1133
12.97.3.8 verticalSpacer . . . 1133
12.97.3.9 verticalSpacer_2 . . . 1133
12.97.3.10 verticalSpacer_3 . . . 1133
12.97.3.11 verticalSpacer_4 . . . 1133
12.98 Ui_MainWindow Class Reference . . . 1133
12.98.1 Detailed Description . . . 1135
12.98.2 Member Function Documentation . . . 1135
12.98.2.1 retranslateUi . . . 1135
12.98.2.2 setupUi . . . 1135
12.98.3 Field Documentation . . . 1136
12.98.3.1 actionAbout . . . 1136
12.98.3.2 actionExit . . . 1136
12.98.3.3 centralWidget . . . 1136
12.98.3.4 gridLayout . . . 1137
12.98.3.5 tabWidget . . . 1137
12.99 Ui_ModeSelectDialog Class Reference . . . 1137
12.99.1 Detailed Description . . . 1138
12.99.2 Member Function Documentation . . . 1138
12.99.2.1 retranslateUi . . . 1138
12.99.2.2 setupUi . . . 1139
12.99.3 Field Documentation . . . 1140
12.99.3.1 buttonBox . . . 1140
12.99.3.2 gridLayout . . . 1140
12.99.3.3 label . . . 1140
12.99.3.4 modeList . . . 1140
12.99.3.5 selAllButton . . . 1140
12.99.3.6 selNoneButton . . . 1141
12.100 Ui_MPerfWidget Class Reference . . . 1141
12.100.1 Detailed Description . . . 1143
12.100.2 Member Function Documentation . . . 1144
12.100.2.1 retranslateUi . . . 1144
12.100.2.2 setupUi . . . 1145
12.100.3 Field Documentation . . . 1152
12.100.3.1 aSnapBox . . . 1152
12.100.3.2 copyButton . . . 1152

12.100.3.3 eBox1 . . . 1152
12.100.3.4 eBox2 . . . 1152
12.100.3.5 eBox3 . . . 1152
12.100.3.6 eBox4 . . . 1153
12.100.3.7 eBox5 . . . 1153
12.100.3.8 gridLayout . . . 1153
12.100.3.9 horizontalLayout . . . 1153
12.100.3.10 horizontalLayout_2 . . . 1153
12.100.3.11 horizontalLayout_4 . . . 1153
12.100.3.12 horizontalSpacer . . . 1153
12.100.3.13 horizontalSpacer_2 . . . 1153
12.100.3.14 horizontalSpacer_3 . . . 1153
12.100.3.15 horizontalSpacer_4 . . . 1154
12.100.3.16 horizontalSpacer_5 . . . 1154
12.100.3.17 horizontalSpacer_6 . . . 1154
12.100.3.18 horizontalSpacer_7 . . . 1154
12.100.3.19 Button0 . . . 1154
12.100.3.20 Button1 . . . 1154
12.100.3.21 Button2 . . . 1154
12.100.3.22 Button3 . . . 1154
12.100.3.23 Button4 . . . 1154
12.100.3.24 Button5 . . . 1155
12.100.3.25 ButtonO . . . 1155
12.100.3.26 indicBox . . . 1155
12.100.3.27 label . . . 1155
12.100.3.28 label_11 . . . 1155
12.100.3.29 label_12 . . . 1155
12.100.3.30 label_13 . . . 1155
12.100.3.31 label_14 . . . 1155
12.100.3.32 label_15 . . . 1155
12.100.3.33 label_2 . . . 1156
12.100.3.34 label_25 . . . 1156
12.100.3.35 label_3 . . . 1156
12.100.3.36 label_4 . . . 1156
12.100.3.37 label_5 . . . 1156
12.100.3.38 label_6 . . . 1156
12.100.3.39 label_7 . . . 1156
12.100.3.40 label_8 . . . 1156
12.100.3.41 lHeightBox . . . 1156
12.100.3.42 line . . . 1157

12.100.3.43 line_2 . . . 1157
12.100.3.44 line_3 . . . 1157
12.100.3.45 spinBox . . . 1157
12.100.3.46 verticalLayout . . . 1157
12.100.3.47 verticalSpacer . . . 1157
12.100.3.48 verticalSpacer_2 . . . 1157
12.100.3.49 verticalSpacer_3 . . . 1157
12.100.3.50 xBox0 . . . 1157
12.100.3.51 xBox1 . . . 1158
12.100.3.52 xBox2 . . . 1158
12.100.3.53 xBox3 . . . 1158
12.100.3.54 xBox4 . . . 1158
12.100.3.55 xBox5 . . . 1158
12.100.3.56 xSlider0 . . . 1158
12.100.3.57 xSlider1 . . . 1158
12.100.3.58 xSlider2 . . . 1158
12.100.3.59 xSlider3 . . . 1158
12.100.3.60 xSlider4 . . . 1159
12.100.3.61 xSlider5 . . . 1159
12.100.3.62 yBox . . . 1159
12.100.3.63 yBox0 . . . 1159
12.100.3.64 yBox1 . . . 1159
12.100.3.65 yBox2 . . . 1159
12.100.3.66 yBox3 . . . 1159
12.100.3.67 yBox4 . . . 1159
12.100.3.68 yBox5 . . . 1159
12.100.3.69 ySlider0 . . . 1160
12.100.3.70 ySlider1 . . . 1160
12.100.3.71 ySlider2 . . . 1160
12.100.3.72 ySlider3 . . . 1160
12.100.3.73 ySlider4 . . . 1160
12.100.3.74 ySlider5 . . . 1160
12.101 Ui_RebindWidget Class Reference . . . 1160
12.101.1 Detailed Description . . . 1164
12.101.2 Member Function Documentation . . . 1164
12.101.2.1 retranslateUi . . . 1164
12.101.2.2 setupUi . . . 1166
12.101.3 Field Documentation . . . 1175
12.101.3.1 actionTab . . . 1175
12.101.3.2 animBox . . . 1175

12.101.3.3 animButton . . . 1175
12.101.3.4 animKrBox . . . 1175
12.101.3.5 animOnceBox . . . 1176
12.101.3.6 animTab . . . 1176
12.101.3.7 applyButton . . . 1176
12.101.3.8 btnClearMacro . . . 1176
12.101.3.9 btnStartMacro . . . 1176
12.101.3.10 btnStopMacro . . . 1176
12.101.3.11 cancelButton . . . 1176
12.101.3.12 cpiBox . . . 1176
12.101.3.13 cpiButton . . . 1176
12.101.3.14 cpiCustLabel . . . 1177
12.101.3.15 cpiCustXBox . . . 1177
12.101.3.16 cpiCustYBox . . . 1177
12.101.3.17 cpiWarning . . . 1177
12.101.3.18 dBox . . . 1177
12.101.3.19 dButton . . . 1177
12.101.3.20 gridLayout . . . 1177
12.101.3.21 gridLayout_10 . . . 1177
12.101.3.22 gridLayout_2 . . . 1178
12.101.3.23 gridLayout_3 . . . 1178
12.101.3.24 gridLayout_4 . . . 1178
12.101.3.25 gridLayout_5 . . . 1178
12.101.3.26 gridLayout_8 . . . 1178
12.101.3.27 groupBox . . . 1178
12.101.3.28 groupBox_2 . . . 1178
12.101.3.29 groupBox_3 . . . 1178
12.101.3.30 groupBox_4 . . . 1178
12.101.3.31 horizontalLayout . . . 1179
12.101.3.32 horizontalLayout_2 . . . 1179
12.101.3.33 horizontalLayout_3 . . . 1179
12.101.3.34 horizontalSpacer . . . 1179
12.101.3.35 horizontalSpacer_10 . . . 1179
12.101.3.36 horizontalSpacer_11 . . . 1179
12.101.3.37 horizontalSpacer_12 . . . 1179
12.101.3.38 horizontalSpacer_13 . . . 1179
12.101.3.39 horizontalSpacer_14 . . . 1179
12.101.3.40 horizontalSpacer_15 . . . 1180
12.101.3.41 horizontalSpacer_16 . . . 1180
12.101.3.42 horizontalSpacer_17 . . . 1180

12.101.3.43 horizontalSpacer_18 . . . 1180
12.101.3.44 horizontalSpacer_19 . . . 1180
12.101.3.45 horizontalSpacer_2 . . . 1180
12.101.3.46 horizontalSpacer_20 . . . 1180
12.101.3.47 horizontalSpacer_21 . . . 1180
12.101.3.48 horizontalSpacer_22 . . . 1180
12.101.3.49 horizontalSpacer_23 . . . 1181
12.101.3.50 horizontalSpacer_24 . . . 1181
12.101.3.51 horizontalSpacer_25 . . . 1181
12.101.3.52 horizontalSpacer_26 . . . 1181
12.101.3.53 horizontalSpacer_3 . . . 1181
12.101.3.54 horizontalSpacer_4 . . . 1181
12.101.3.55 horizontalSpacer_5 . . . 1181
12.101.3.56 horizontalSpacer_6 . . . 1181
12.101.3.57 horizontalSpacer_7 . . . 1181
12.101.3.58 horizontalSpacer_8 . . . 1182
12.101.3.59 horizontalSpacer_9 . . . 1182
12.101.3.60 keyTab . . . 1182
12.101.3.61 layoutWidget . . . 1182
12.101.3.62 layoutWidget1 . . . 1182
12.101.3.63 layoutWidget_2 . . . 1182
12.101.3.64 lil_macro . . . 1182
12.101.3.65 lightBox . . . 1182
12.101.3.66 lightButton . . . 1182
12.101.3.67 lightWrapBox . . . 1183
12.101.3.68 lockBox . . . 1183
12.101.3.69 lockButton . . . 1183
12.101.3.70 macroTab . . . 1183
12.101.3.71 mb2Box . . . 1183
12.101.3.72 mb2Button . . . 1183
12.101.3.73 mbBox . . . 1183
12.101.3.74 mbButton . . . 1183
12.101.3.75 mediaBox . . . 1184
12.101.3.76 mediaButton . . . 1184
12.101.3.77 modBox . . . 1184
12.101.3.78 modButton . . . 1184
12.101.3.79 modeBox . . . 1184
12.101.3.80 modeButton . . . 1184
12.101.3.81 modeWrapBox . . . 1184
12.101.3.82 mouseTab . . . 1184

12.101.3.83 numBox . . . 1185
12.101.3.84 numButton . . . 1185
12.101.3.85 programKpBox . . . 1185
12.101.3.86 programKpButton . . . 1185
12.101.3.87 programKpExtra . . . 1185
12.101.3.88 programKpModeBox . . . 1185
12.101.3.89 programKpSIBox . . . 1185
12.101.3.90 programKrBox . . . 1185
12.101.3.91 programKrButton . . . 1186
12.101.3.92 programKrExtra . . . 1186
12.101.3.93 programKrModeBox . . . 1186
12.101.3.94 programKrSIBox . . . 1186
12.101.3.95 programTab . . . 1186
12.101.3.96 progTipLabel . . . 1186
12.101.3.97 rateMacroBox . . . 1186
12.101.3.98 rateMacroComment . . . 1186
12.101.3.99 rateMacroText . . . 1186
12.101.3.100 resetButton . . . 1187
12.101.3.101 tabWidget . . . 1187
12.101.3.102 typingBox . . . 1187
12.101.3.103 typingButton . . . 1187
12.101.3.104 unbindButton . . . 1187
12.101.3.105 verticalLayout . . . 1187
12.101.3.106 verticalLayout_2 . . . 1187
12.101.3.107 verticalSpacer . . . 1187
12.101.3.108 verticalSpacer_10 . . . 1188
12.101.3.109 verticalSpacer_11 . . . 1188
12.101.3.110 verticalSpacer_2 . . . 1188
12.101.3.111 verticalSpacer_3 . . . 1188
12.101.3.112 verticalSpacer_4 . . . 1188
12.101.3.113 verticalSpacer_5 . . . 1188
12.101.3.114 verticalSpacer_6 . . . 1188
12.101.3.115 verticalSpacer_7 . . . 1188
12.101.3.116 verticalSpacer_8 . . . 1188
12.101.3.117 wheelBox . . . 1189
12.101.3.118 wheelButton . . . 1189
12.102 Ui_SettingsWidget Class Reference . . . 1189
12.102.1 Detailed Description . . . 1191
12.102.2 Member Function Documentation . . . 1191
12.102.2.1 retranslateUi . . . 1191

12.102.2.2 setupUi . . . 1192
12.102.3 Field Documentation . . . 1196
12.102.3.1 altBox . . . 1196
12.102.3.2 altLabel . . . 1196
12.102.3.3 autoFWBox . . . 1196
12.102.3.4 capsBox . . . 1196
12.102.3.5 capsLabel . . . 1196
12.102.3.6 ctrlBox . . . 1196
12.102.3.7 ctrlLabel . . . 1196
12.102.3.8 devicesLabel . . . 1197
12.102.3.9 extraButton . . . 1197
12.102.3.10 gridLayout . . . 1197
12.102.3.11 gridLayout_3 . . . 1197
12.102.3.12 gridLayout_5 . . . 1197
12.102.3.13 horizontalLayout . . . 1197
12.102.3.14 horizontalLayout_2 . . . 1197
12.102.3.15 horizontalSpacer . . . 1197
12.102.3.16 horizontalSpacer_10 . . . 1197
12.102.3.17 horizontalSpacer_2 . . . 1198
12.102.3.18 horizontalSpacer_7 . . . 1198
12.102.3.19 horizontalSpacer_9 . . . 1198
12.102.3.20 label . . . 1198
12.102.3.21 label_2 . . . 1198
12.102.3.22 label_3 . . . 1198
12.102.3.23 label_5 . . . 1198
12.102.3.24 label_6 . . . 1198
12.102.3.25 label_8 . . . 1198
12.102.3.26 layoutBox . . . 1199
12.102.3.27 line . . . 1199
12.102.3.28 line_2 . . . 1199
12.102.3.29 line_3 . . . 1199
12.102.3.30 loginItemBox . . . 1199
12.102.3.31 pushButton . . . 1199
12.102.3.32 shiftBox . . . 1199
12.102.3.33 shiftLabel . . . 1199
12.102.3.34 versionLabel . . . 1199
12.102.3.35 verticalSpacer . . . 1200
12.102.3.36 verticalSpacer_10 . . . 1200
12.102.3.37 verticalSpacer_2 . . . 1200
12.102.3.38 verticalSpacer_3 . . . 1200

12.102.3.39 VerticalSpacer_4 . . . 1200
12.102.3.40 VerticalSpacer_5 . . . 1200
12.102.3.41 VerticalSpacer_6 . . . 1200
12.102.3.42 VerticalSpacer_7 . . . 1200
12.102.3.43 VerticalSpacer_8 . . . 1200
12.102.3.44 winBox . . . 1201
12.102.3.45 winLabel . . . 1201
12.103 UsbId Struct Reference . . . 1201
12.103.1 Detailed Description . . . 1202
12.103.2 Constructor & Destructor Documentation . . . 1202
12.103.2.1 UsbId . . . 1202
12.103.2.2 UsbId . . . 1202
12.103.2.3 UsbId . . . 1202
12.103.3 Member Function Documentation . . . 1202
12.103.3.1 guidString . . . 1202
12.103.3.2 guidString . . . 1203
12.103.3.3 hwModifiedString . . . 1203
12.103.3.4 hwModifiedString . . . 1203
12.103.3.5 modifiedString . . . 1204
12.103.3.6 modifiedString . . . 1204
12.103.3.7 newGuid . . . 1204
12.103.3.8 newModified . . . 1205
12.103.4 Field Documentation . . . 1205
12.103.4.1 guid . . . 1205
12.103.4.2 hwModified . . . 1205
12.103.4.3 modified . . . 1205

13 File Documentation **1207**
13.1 BUILD.md File Reference . . . 1207
13.2 DAEMON.md File Reference . . . 1207
13.3 README.md File Reference . . . 1207
13.4 ROADMAP.md File Reference . . . 1207
13.5 src/ckb-daemon/command.c File Reference . . . 1207
13.5.1 Macro Definition Documentation . . . 1208
13.5.1.1 TRY_WITH_RESET . . . 1208
13.5.2 Function Documentation . . . 1208
13.5.2.1 readcmd . . . 1208
13.5.3 Variable Documentation . . . 1212
13.5.3.1 cmd_strings . . . 1212
13.6 src/ckb-daemon/command.h File Reference . . . 1212

13.6.1 Data Structure Documentation . . . 1214
13.6.1.1 union devcmd . . . 1214
13.6.2 Macro Definition Documentation . . . 1214
13.6.2.1 CMD_COUNT . . . 1214
13.6.2.2 CMD_DEV_COUNT . . . 1215
13.6.3 Typedef Documentation . . . 1215
13.6.3.1 cmdhandler . . . 1215
13.6.3.2 cmdhandler_io . . . 1215
13.6.3.3 cmdhandler_mac . . . 1215
13.6.3.4 devcmd . . . 1215
13.6.4 Enumeration Type Documentation . . . 1215
13.6.4.1 cmd . . . 1215
13.6.5 Function Documentation . . . 1217
13.6.5.1 readcmd . . . 1217
13.7 src/ckb-daemon/device.c File Reference . . . 1221
13.7.1 Function Documentation . . . 1222
13.7.1.1 _start_dev . . . 1222
13.7.1.2 start_dev . . . 1223
13.7.2 Variable Documentation . . . 1223
13.7.2.1 devlistmutex . . . 1223
13.7.2.2 devmutex . . . 1224
13.7.2.3 hwload_mode . . . 1224
13.7.2.4 inputmutex . . . 1224
13.7.2.5 keyboard . . . 1224
13.8 src/ckb-daemon/device.h File Reference . . . 1224
13.8.1 Macro Definition Documentation . . . 1225
13.8.1.1 ACT_LIGHT . . . 1225
13.8.1.2 ACT_LOCK . . . 1225
13.8.1.3 ACT_M1 . . . 1225
13.8.1.4 ACT_M2 . . . 1226
13.8.1.5 ACT_M3 . . . 1226
13.8.1.6 ACT_MR_RING . . . 1226
13.8.1.7 ACT_NEXT . . . 1226
13.8.1.8 ACT_NEXT_NOWRAP . . . 1226
13.8.1.9 DEV_MAX . . . 1226
13.8.1.10 dmutex . . . 1226
13.8.1.11 imutex . . . 1226
13.8.1.12 IN_CORSAIR . . . 1226
13.8.1.13 IN_HID . . . 1226
13.8.1.14 IS_CONNECTED . . . 1227

13.8.1.15 setactive . . . 1227
13.8.2 Function Documentation . . . 1227
13.8.2.1 cmd_active_kb . . . 1227
13.8.2.2 cmd_active_mouse . . . 1227
13.8.2.3 cmd_idle_kb . . . 1228
13.8.2.4 cmd_idle_mouse . . . 1228
13.8.2.5 cmd_pollrate . . . 1228
13.8.2.6 setactive_kb . . . 1229
13.8.2.7 setactive_mouse . . . 1230
13.8.2.8 setmodeindex_nrgb . . . 1231
13.8.2.9 start_dev . . . 1232
13.8.2.10 start_kb_nrgb . . . 1232
13.8.3 Variable Documentation . . . 1232
13.8.3.1 devmutex . . . 1232
13.8.3.2 inputmutex . . . 1233
13.8.3.3 keyboard . . . 1233
13.9 src/ckb-daemon/device_keyboard.c File Reference . . . 1233
13.9.1 Function Documentation . . . 1233
13.9.1.1 cmd_active_kb . . . 1233
13.9.1.2 cmd_idle_kb . . . 1234
13.9.1.3 setactive_kb . . . 1234
13.9.1.4 setmodeindex_nrgb . . . 1236
13.9.1.5 start_kb_nrgb . . . 1236
13.10 src/ckb-daemon/device_mouse.c File Reference . . . 1237
13.10.1 Function Documentation . . . 1237
13.10.1.1 cmd_active_mouse . . . 1237
13.10.1.2 cmd_idle_mouse . . . 1238
13.10.1.3 cmd_pollrate . . . 1238
13.10.1.4 setactive_mouse . . . 1238
13.11 src/ckb-daemon/device_vtable.c File Reference . . . 1240
13.11.1 Function Documentation . . . 1240
13.11.1.1 cmd_io_none . . . 1240
13.11.1.2 cmd_macro_none . . . 1241
13.11.1.3 cmd_none . . . 1241
13.11.1.4 int1_int_none . . . 1241
13.11.1.5 int1_void_none . . . 1241
13.11.1.6 loadprofile_none . . . 1241
13.11.2 Variable Documentation . . . 1241
13.11.2.1 vtable_keyboard . . . 1241
13.11.2.2 vtable_keyboard_nonrgb . . . 1241

13.11.2.3 vtable_mouse . . . 1242
13.12 src/ckb-daemon/devnode.c File Reference . . . 1242
13.12.1 Data Structure Documentation . . . 1243
13.12.1.1 struct _readlines_ctx . . . 1243
13.12.2 Macro Definition Documentation . . . 1243
13.12.2.1 MAX_BUFFER . . . 1243
13.12.2.2 S_GID_READ . . . 1244
13.12.3 Function Documentation . . . 1244
13.12.3.1 _mkdevpath . . . 1244
13.12.3.2 _mknotifynode . . . 1246
13.12.3.3 _rmnotifynode . . . 1247
13.12.3.4 _updateconnected . . . 1247
13.12.3.5 mkdevpath . . . 1248
13.12.3.6 mkfwnode . . . 1249
13.12.3.7 mknotifynode . . . 1249
13.12.3.8 readlines . . . 1250
13.12.3.9 readlines_ctx_free . . . 1251
13.12.3.10 readlines_ctx_init . . . 1251
13.12.3.11 rm_recursive . . . 1252
13.12.3.12 rmdevpath . . . 1252
13.12.3.13 rmnotifynode . . . 1253
13.12.3.14 updateconnected . . . 1254
13.12.4 Variable Documentation . . . 1254
13.12.4.1 devpath . . . 1254
13.12.4.2 gid . . . 1254
13.13 src/ckb-daemon/devnode.h File Reference . . . 1254
13.13.1 Macro Definition Documentation . . . 1256
13.13.1.1 S_CUSTOM . . . 1256
13.13.1.2 S_CUSTOM_R . . . 1256
13.13.1.3 S_READ . . . 1256
13.13.1.4 S_READDIR . . . 1256
13.13.1.5 S_READWRITE . . . 1256
13.13.2 Typedef Documentation . . . 1256
13.13.2.1 readlines_ctx . . . 1256
13.13.3 Function Documentation . . . 1256
13.13.3.1 mkdevpath . . . 1256
13.13.3.2 mkfwnode . . . 1257
13.13.3.3 mknotifynode . . . 1258
13.13.3.4 readlines . . . 1258
13.13.3.5 readlines_ctx_free . . . 1259

13.13.3.6 readlines_ctx_init . . . 1260
13.13.3.7 rmdevpath . . . 1260
13.13.3.8 rmnotifynode . . . 1261
13.13.3.9 updateconnected . . . 1262
13.13.4 Variable Documentation . . . 1262
13.13.4.1 devpath . . . 1262
13.13.4.2 gid . . . 1262
13.14 src/ckb-daemon/dpi.c File Reference . . . 1262
13.14.1 Function Documentation . . . 1263
13.14.1.1 cmd_dpi . . . 1263
13.14.1.2 cmd_dpisel . . . 1264
13.14.1.3 cmd_lift . . . 1264
13.14.1.4 cmd_snap . . . 1264
13.14.1.5 loaddpi . . . 1264
13.14.1.6 printdpi . . . 1265
13.14.1.7 savedpi . . . 1266
13.14.1.8 updatedpi . . . 1267
13.15 src/ckb-daemon/dpi.h File Reference . . . 1267
13.15.1 Function Documentation . . . 1268
13.15.1.1 cmd_dpi . . . 1268
13.15.1.2 cmd_dpisel . . . 1269
13.15.1.3 cmd_lift . . . 1269
13.15.1.4 cmd_snap . . . 1269
13.15.1.5 loaddpi . . . 1270
13.15.1.6 printdpi . . . 1271
13.15.1.7 savedpi . . . 1271
13.15.1.8 updatedpi . . . 1272
13.16 src/ckb-daemon/extra_mac.c File Reference . . . 1272
13.17 src/ckb-daemon/firmware.c File Reference . . . 1273
13.17.1 Macro Definition Documentation . . . 1274
13.17.1.1 FW_MAXSIZE . . . 1274
13.17.1.2 FW_NOFILE . . . 1274
13.17.1.3 FW_OK . . . 1274
13.17.1.4 FW_USBFAIL . . . 1274
13.17.1.5 FW_WRONGDEV . . . 1274
13.17.2 Function Documentation . . . 1274
13.17.2.1 cmd_fwupdate . . . 1274
13.17.2.2 fwupdate . . . 1275
13.17.2.3 getfwversion . . . 1277
13.18 src/ckb-daemon/firmware.h File Reference . . . 1278

13.18.1 Function Documentation . . . 1278
13.18.1.1 cmd_fwupdate . . . 1278
13.18.1.2 getfwversion . . . 1279
13.19 src/ckb-daemon/includes.h File Reference . . . 1280
13.19.1 Macro Definition Documentation . . . 1282
13.19.1.1 __FILE_NOPATH__ . . . 1282
13.19.1.2 ckb_err . . . 1282
13.19.1.3 ckb_err_fn . . . 1282
13.19.1.4 ckb_err_nofile . . . 1282
13.19.1.5 ckb_fatal . . . 1282
13.19.1.6 ckb_fatal_fn . . . 1282
13.19.1.7 ckb_fatal_nofile . . . 1282
13.19.1.8 ckb_info . . . 1282
13.19.1.9 ckb_info_fn . . . 1283
13.19.1.10 ckb_info_nofile . . . 1283
13.19.1.11 ckb_s_err . . . 1283
13.19.1.12 ckb_s_out . . . 1283
13.19.1.13 ckb_warn . . . 1283
13.19.1.14 ckb_warn_fn . . . 1283
13.19.1.15 ckb_warn_nofile . . . 1283
13.19.1.16 INDEX_OF . . . 1283
13.19.1.17 timespec_eq . . . 1283
13.19.1.18 timespec_ge . . . 1284
13.19.1.19 timespec_gt . . . 1284
13.19.1.20 timespec_le . . . 1284
13.19.1.21 timespec_lt . . . 1284
13.19.2 Typedef Documentation . . . 1284
13.19.2.1 uchar . . . 1284
13.19.2.2 ushort . . . 1284
13.19.3 Function Documentation . . . 1284
13.19.3.1 timespec_add . . . 1284
13.20 src/ckb-daemon/input.c File Reference . . . 1284
13.20.1 Macro Definition Documentation . . . 1285
13.20.1.1 IS_WHEEL . . . 1285
13.20.2 Function Documentation . . . 1285
13.20.2.1 _cmd_macro . . . 1285
13.20.2.2 cmd_bind . . . 1287
13.20.2.3 cmd_macro . . . 1288
13.20.2.4 cmd_rebind . . . 1288
13.20.2.5 cmd_unbind . . . 1288

13.20.2.6 freebind . . . 1289
13.20.2.7 initbind . . . 1289
13.20.2.8 inputupdate . . . 1290
13.20.2.9 inputupdate_keys . . . 1290
13.20.2.10 macromask . . . 1292
13.20.2.11 updateindicators_kb . . . 1293
13.21 src/ckb-daemon/input.h File Reference . . . 1294
13.21.1 Macro Definition Documentation . . . 1295
13.21.1.1 IS_MOD . . . 1295
13.21.2 Function Documentation . . . 1295
13.21.2.1 cmd_bind . . . 1295
13.21.2.2 cmd_macro . . . 1295
13.21.2.3 cmd_rebind . . . 1296
13.21.2.4 cmd_unbind . . . 1296
13.21.2.5 freebind . . . 1296
13.21.2.6 initbind . . . 1297
13.21.2.7 inputupdate . . . 1297
13.21.2.8 os_inputclose . . . 1298
13.21.2.9 os_inputopen . . . 1299
13.21.2.10 os_keypress . . . 1300
13.21.2.11 os_mousemove . . . 1301
13.21.2.12 os_setupindicators . . . 1301
13.21.2.13 updateindicators_kb . . . 1302
13.22 src/ckb-daemon/input_linux.c File Reference . . . 1303
13.22.1 Function Documentation . . . 1303
13.22.1.1 _ledthread . . . 1303
13.22.1.2 isync . . . 1304
13.22.1.3 os_inputclose . . . 1304
13.22.1.4 os_inputopen . . . 1305
13.22.1.5 os_keypress . . . 1306
13.22.1.6 os_mousemove . . . 1307
13.22.1.7 os_setupindicators . . . 1308
13.22.1.8 uinputopen . . . 1308
13.23 src/ckb-daemon/input_mac.c File Reference . . . 1309
13.24 src/ckb-daemon/input_mac_mouse.c File Reference . . . 1310
13.25 src/ckb-daemon/keymap.c File Reference . . . 1310
13.25.1 Macro Definition Documentation . . . 1311
13.25.1.1 BUTTON_HID_COUNT . . . 1311
13.25.2 Function Documentation . . . 1311
13.25.2.1 corsair_kbcopy . . . 1311

13.25.2.2 corsair_mousecopy . . . 1311
13.25.2.3 hid_kb_translate . . . 1312
13.25.2.4 hid_mouse_translate . . . 1313
13.25.3 Variable Documentation . . . 1314
13.25.3.1 keymap . . . 1314
13.26 src/ckb-daemon/keymap_mac.h File Reference . . . 1314
13.27 src/ckb-daemon/led.c File Reference . . . 1315
13.27.1 Function Documentation . . . 1316
13.27.1.1 cmd_iauto . . . 1316
13.27.1.2 cmd_inotify . . . 1316
13.27.1.3 cmd_ioff . . . 1317
13.27.1.4 cmd_ion . . . 1317
13.27.1.5 cmd_rgb . . . 1317
13.27.1.6 has_key . . . 1318
13.27.1.7 iselect . . . 1318
13.27.1.8 printrgb . . . 1319
13.28 src/ckb-daemon/led.h File Reference . . . 1321
13.28.1 Function Documentation . . . 1321
13.28.1.1 cmd_iauto . . . 1321
13.28.1.2 cmd_inotify . . . 1322
13.28.1.3 cmd_ioff . . . 1322
13.28.1.4 cmd_ion . . . 1323
13.28.1.5 cmd_rgb . . . 1323
13.28.1.6 loadrgb_kb . . . 1324
13.28.1.7 loadrgb_mouse . . . 1325
13.28.1.8 printrgb . . . 1326
13.28.1.9 savergb_kb . . . 1327
13.28.1.10 savergb_mouse . . . 1329
13.28.1.11 updatergb_kb . . . 1329
13.28.1.12 updatergb_mouse . . . 1331
13.29 src/ckb-daemon/led_keyboard.c File Reference . . . 1332
13.29.1 Macro Definition Documentation . . . 1355
13.29.1.1 BR1 . . . 1355
13.29.1.2 BR2 . . . 1355
13.29.1.3 BR4 . . . 1355
13.29.1.4 O0 . . . 1355
13.29.1.5 O1 . . . 1355
13.29.1.6 O2 . . . 1355
13.29.1.7 O3 . . . 1355
13.29.1.8 O4 . . . 1355

13.29.1.9 O5 . . . 1355
13.29.1.10 O6 . . . 1355
13.29.1.11 O7 . . . 1355
13.29.1.12 O8 . . . 1355
13.29.2 Function Documentation . . . 1356
13.29.2.1 loadrgb_kb . . . 1356
13.29.2.2 makergb_512 . . . 1357
13.29.2.3 makergb_full . . . 1358
13.29.2.4 ordered8to3 . . . 1359
13.29.2.5 quantize8to3 . . . 1359
13.29.2.6 rgbcmp . . . 1359
13.29.2.7 savergb_kb . . . 1360
13.29.2.8 updatergb_kb . . . 1361
13.29.3 Variable Documentation . . . 1362
13.29.3.1 bit_reverse_table . . . 1363
13.30 src/ckb-daemon/led_mouse.c File Reference . . . 1364
13.30.1 Function Documentation . . . 1364
13.30.1.1 isblack . . . 1364
13.30.1.2 loadrgb_mouse . . . 1365
13.30.1.3 rgbcmp . . . 1365
13.30.1.4 savergb_mouse . . . 1366
13.30.1.5 updatergb_mouse . . . 1366
13.31 src/ckb-daemon/main.c File Reference . . . 1367
13.31.1 Function Documentation . . . 1368
13.31.1.1 localecase . . . 1368
13.31.1.2 main . . . 1369
13.31.1.3 quit . . . 1371
13.31.1.4 quitWithLock . . . 1372
13.31.1.5 restart . . . 1373
13.31.1.6 sighandler . . . 1374
13.31.1.7 sighandler2 . . . 1375
13.31.1.8 timespec_add . . . 1375
13.31.2 Variable Documentation . . . 1376
13.31.2.1 features_mask . . . 1376
13.31.2.2 hwload_mode . . . 1376
13.31.2.3 main_ac . . . 1376
13.31.2.4 main_av . . . 1376
13.31.2.5 reset_stop . . . 1376
13.32 src/ckb-gradient/main.c File Reference . . . 1376
13.32.1 Data Structure Documentation . . . 1377

13.32.1.1 struct keyAnim . . . 1377
13.32.2 Macro Definition Documentation . . . 1378
13.32.2.1 HOLD . . . 1378
13.32.2.2 NONE . . . 1378
13.32.3 Function Documentation . . . 1378
13.32.3.1 ckb_frame . . . 1379
13.32.3.2 ckb_info . . . 1379
13.32.3.3 ckb_init . . . 1380
13.32.3.4 ckb_keypress . . . 1380
13.32.3.5 ckb_parameter . . . 1381
13.32.3.6 ckb_start . . . 1381
13.32.3.7 ckb_time . . . 1382
13.32.4 Variable Documentation . . . 1382
13.32.4.1 anim . . . 1382
13.32.4.2 animcolor . . . 1382
13.32.4.3 kphold . . . 1382
13.32.4.4 kprelease . . . 1382
13.32.4.5 randomize . . . 1382
13.33 src/ckb-heat/main.c File Reference . . . 1383
13.33.1 Data Structure Documentation . . . 1383
13.33.1.1 struct keyanim . . . 1383
13.33.2 Function Documentation . . . 1384
13.33.2.1 anim_add . . . 1384
13.33.2.2 anim_remove . . . 1385
13.33.2.3 ckb_frame . . . 1385
13.33.2.4 ckb_info . . . 1386
13.33.2.5 ckb_init . . . 1386
13.33.2.6 ckb_keypress . . . 1387
13.33.2.7 ckb_parameter . . . 1387
13.33.2.8 ckb_start . . . 1387
13.33.2.9 ckb_time . . . 1388
13.33.3 Variable Documentation . . . 1388
13.33.3.1 animcolor . . . 1388
13.33.3.2 anims . . . 1388
13.33.3.3 ffade . . . 1388
13.33.3.4 pressestofull . . . 1388
13.33.3.5 randomBright . . . 1388
13.34 src/ckb-mviz/main.c File Reference . . . 1388
13.34.1 Function Documentation . . . 1389
13.34.1.1 anim_add . . . 1389

13.34.1.2 anim_remove . . . 1390
13.34.1.3 ckb_frame . . . 1390
13.34.1.4 ckb_info . . . 1390
13.34.1.5 ckb_init . . . 1391
13.34.1.6 ckb_keypress . . . 1391
13.34.1.7 ckb_parameter . . . 1391
13.34.1.8 ckb_start . . . 1391
13.34.1.9 ckb_time . . . 1392
13.34.1.10 getFreqDec . . . 1392
13.34.1.11 max . . . 1393
13.34.1.12 min . . . 1393
13.34.2 Variable Documentation . . . 1394
13.34.2.1 animcolor . . . 1394
13.34.2.2 gcounter . . . 1394
13.34.2.3 inbuf . . . 1394
13.34.2.4 outbuf . . . 1394
13.34.2.5 pas . . . 1394
13.34.2.6 power . . . 1394
13.34.2.7 powers . . . 1394
13.35 src/ckb-pinwheel/main.c File Reference . . . 1394
13.35.1 Macro Definition Documentation . . . 1395
13.35.1.1 ANGLE . . . 1395
13.35.2 Function Documentation . . . 1396
13.35.2.1 ckb_frame . . . 1396
13.35.2.2 ckb_info . . . 1396
13.35.2.3 ckb_init . . . 1397
13.35.2.4 ckb_keypress . . . 1397
13.35.2.5 ckb_parameter . . . 1397
13.35.2.6 ckb_start . . . 1398
13.35.2.7 ckb_time . . . 1398
13.35.3 Variable Documentation . . . 1398
13.35.3.1 animcolor . . . 1398
13.35.3.2 animlength . . . 1398
13.35.3.3 counter_clock . . . 1398
13.35.3.4 frame . . . 1398
13.35.3.5 symmetric . . . 1398
13.35.3.6 x . . . 1399
13.35.3.7 x_offset . . . 1399
13.35.3.8 y . . . 1399
13.35.3.9 y_offset . . . 1399

13.36 src/ckb-rain/main.c File Reference . . . 1399
13.36.1 Macro Definition Documentation . . . 1400
13.36.1.1 DROP_MAX . . . 1400
13.36.2 Function Documentation . . . 1400
13.36.2.1 ckb_frame . . . 1400
13.36.2.2 ckb_info . . . 1401
13.36.2.3 ckb_init . . . 1402
13.36.2.4 ckb_keypress . . . 1402
13.36.2.5 ckb_parameter . . . 1402
13.36.2.6 ckb_start . . . 1403
13.36.2.7 ckb_time . . . 1403
13.36.2.8 drop_add . . . 1403
13.36.3 Variable Documentation . . . 1404
13.36.3.1 aa . . . 1404
13.36.3.2 ab . . . 1404
13.36.3.3 ag . . . 1404
13.36.3.4 ar . . . 1404
13.36.3.5 drop . . . 1404
13.36.3.6 maxsize . . . 1405
13.36.3.7 period . . . 1405
13.36.3.8 spawn . . . 1405
13.36.3.9 speed . . . 1405
13.36.3.10 tick . . . 1405
13.37 src/ckb-random/main.c File Reference . . . 1405
13.37.1 Data Structure Documentation . . . 1406
13.37.1.1 struct rgb . . . 1406
13.37.2 Function Documentation . . . 1407
13.37.2.1 ckb_frame . . . 1407
13.37.2.2 ckb_info . . . 1407
13.37.2.3 ckb_init . . . 1408
13.37.2.4 ckb_keypress . . . 1408
13.37.2.5 ckb_parameter . . . 1408
13.37.2.6 ckb_start . . . 1408
13.37.2.7 ckb_time . . . 1409
13.37.2.8 newtarget . . . 1409
13.37.3 Variable Documentation . . . 1410
13.37.3.1 current . . . 1410
13.37.3.2 fadein . . . 1410
13.37.3.3 phase . . . 1410
13.37.3.4 target . . . 1410

13.37.3.5 useopacity . . . 1410
13.38 src/ckb-ripple/main.c File Reference . . . 1410
13.38.1 Macro Definition Documentation . . . 1412
13.38.1.1 ANIM_MAX . . . 1412
13.38.2 Function Documentation . . . 1412
13.38.2.1 anim_add . . . 1412
13.38.2.2 anim_remove . . . 1412
13.38.2.3 ckb_frame . . . 1412
13.38.2.4 ckb_info . . . 1413
13.38.2.5 ckb_init . . . 1414
13.38.2.6 ckb_keypress . . . 1414
13.38.2.7 ckb_parameter . . . 1414
13.38.2.8 ckb_start . . . 1415
13.38.2.9 ckb_time . . . 1415
13.38.3 Variable Documentation . . . 1415
13.38.3.1 anim . . . 1416
13.38.3.2 animcolor . . . 1416
13.38.3.3 animlength . . . 1416
13.38.3.4 kbsize . . . 1416
13.38.3.5 kprelease . . . 1416
13.38.3.6 randomize . . . 1416
13.38.3.7 symmetric . . . 1416
13.38.3.8 x_offset . . . 1416
13.38.3.9 y_offset . . . 1416
13.39 src/ckb-wave/main.c File Reference . . . 1416
13.39.1 Macro Definition Documentation . . . 1418
13.39.1.1 ANIM_MAX . . . 1418
13.39.2 Function Documentation . . . 1418
13.39.2.1 anim_add . . . 1418
13.39.2.2 anim_remove . . . 1418
13.39.2.3 ckb_frame . . . 1418
13.39.2.4 ckb_info . . . 1419
13.39.2.5 ckb_init . . . 1420
13.39.2.6 ckb_keypress . . . 1421
13.39.2.7 ckb_parameter . . . 1421
13.39.2.8 ckb_start . . . 1422
13.39.2.9 ckb_time . . . 1423
13.39.3 Variable Documentation . . . 1424
13.39.3.1 angle . . . 1424
13.39.3.2 anim . . . 1424

13.39.3.3 animcolor . . . 1424
13.39.3.4 animlength . . . 1424
13.39.3.5 kprelease . . . 1424
13.39.3.6 left . . . 1424
13.39.3.7 symmetric . . . 1424
13.39.3.8 top . . . 1424
13.39.3.9 width . . . 1424
13.40 src/ckb-daemon/notify.c File Reference . . . 1424
13.40.1 Macro Definition Documentation . . . 1425
13.40.1.1 HW_STANDARD . . . 1425
13.40.1.2 HWMODE_OR_RETURN . . . 1426
13.40.2 Function Documentation . . . 1426
13.40.2.1 _cmd_get . . . 1426
13.40.2.2 cmd_get . . . 1428
13.40.2.3 cmd_notify . . . 1429
13.40.2.4 cmd_restart . . . 1429
13.40.2.5 nprintf . . . 1430
13.40.2.6 nprintind . . . 1431
13.40.2.7 nprintkey . . . 1431
13.40.2.8 restart . . . 1432
13.41 src/ckb-daemon/notify.h File Reference . . . 1433
13.41.1 Function Documentation . . . 1434
13.41.1.1 cmd_get . . . 1434
13.41.1.2 cmd_notify . . . 1435
13.41.1.3 cmd_restart . . . 1435
13.41.1.4 nprintf . . . 1435
13.41.1.5 nprintind . . . 1436
13.41.1.6 nprintkey . . . 1437
13.42 src/ckb-daemon/os.h File Reference . . . 1437
13.42.1 Macro Definition Documentation . . . 1438
13.42.1.1 _DEFAULT_SOURCE . . . 1438
13.42.1.2 _GNU_SOURCE . . . 1438
13.42.1.3 euid_guard_start . . . 1438
13.42.1.4 euid_guard_stop . . . 1438
13.42.1.5 UINPUT_VERSION . . . 1439
13.43 src/ckb-daemon/profile.c File Reference . . . 1439
13.43.1 Function Documentation . . . 1440
13.43.1.1 _freeprofile . . . 1440
13.43.1.2 allocprofile . . . 1440
13.43.1.3 cmd_erase . . . 1441

13.43.1.4 cmd_eraseprofile . . . 1442
13.43.1.5 cmd_id . . . 1442
13.43.1.6 cmd_name . . . 1443
13.43.1.7 cmd_profileid . . . 1443
13.43.1.8 cmd_profilename . . . 1444
13.43.1.9 freemode . . . 1444
13.43.1.10 freeprofile . . . 1445
13.43.1.11 gethwmodename . . . 1445
13.43.1.12 gethwprofilename . . . 1446
13.43.1.13 getid . . . 1447
13.43.1.14 getmodename . . . 1447
13.43.1.15 getprofilename . . . 1448
13.43.1.16 hwtonative . . . 1449
13.43.1.17 initmode . . . 1449
13.43.1.18 loadprofile . . . 1450
13.43.1.19 nativetohw . . . 1450
13.43.1.20 printname . . . 1451
13.43.1.21 setid . . . 1452
13.43.1.22 u16dec . . . 1452
13.43.1.23 u16enc . . . 1453
13.43.1.24 urldecode2 . . . 1454
13.43.1.25 urlencode2 . . . 1454
13.43.2 Variable Documentation . . . 1455
13.43.2.1 utf16to8 . . . 1455
13.43.2.2 utf8to16 . . . 1455
13.44 src/ckb-daemon/profile.h File Reference . . . 1455
13.44.1 Macro Definition Documentation . . . 1456
13.44.1.1 hwloadprofile . . . 1456
13.44.2 Function Documentation . . . 1456
13.44.2.1 allocprofile . . . 1456
13.44.2.2 cmd_erase . . . 1457
13.44.2.3 cmd_eraseprofile . . . 1458
13.44.2.4 cmd_hwload_kb . . . 1458
13.44.2.5 cmd_hwload_mouse . . . 1459
13.44.2.6 cmd_hwsave_kb . . . 1460
13.44.2.7 cmd_hwsave_mouse . . . 1461
13.44.2.8 cmd_id . . . 1462
13.44.2.9 cmd_name . . . 1462
13.44.2.10 cmd_profileid . . . 1463
13.44.2.11 cmd_profilename . . . 1463

13.44.2.12 freeprofile . . . 1464
13.44.2.13 gethwmodename . . . 1464
13.44.2.14 gethwprofilename . . . 1465
13.44.2.15 getid . . . 1466
13.44.2.16 getmodename . . . 1466
13.44.2.17 getprofilename . . . 1467
13.44.2.18 hwtonative . . . 1468
13.44.2.19 loadprofile . . . 1468
13.44.2.20 nativetohw . . . 1469
13.44.2.21 setid . . . 1469
13.45 src/ckb-daemon/profile_keyboard.c File Reference . . . 1470
13.45.1 Function Documentation . . . 1470
13.45.1.1 cmd_hwload_kb . . . 1470
13.45.1.2 cmd_hwsave_kb . . . 1471
13.45.1.3 hwloadmode . . . 1472
13.46 src/ckb-daemon/profile_mouse.c File Reference . . . 1473
13.46.1 Function Documentation . . . 1473
13.46.1.1 cmd_hwload_mouse . . . 1474
13.46.1.2 cmd_hwsave_mouse . . . 1475
13.47 src/ckb-daemon/structures.h File Reference . . . 1475
13.47.1 Data Structure Documentation . . . 1477
13.47.1.1 struct usbid . . . 1477
13.47.1.2 struct macroaction . . . 1478
13.47.1.3 struct keymacro . . . 1479
13.47.1.4 struct binding . . . 1480
13.47.1.5 struct dpiset . . . 1481
13.47.1.6 struct lighting . . . 1482
13.47.1.7 struct usbmode . . . 1483
13.47.1.8 struct usbprofile . . . 1484
13.47.1.9 struct hwprofile . . . 1485
13.47.1.10 struct usbinput . . . 1486
13.47.1.11 struct usbdevice . . . 1487
13.47.2 Macro Definition Documentation . . . 1489
13.47.2.1 CLEAR_KEYBIT . . . 1489
13.47.2.2 DPI_COUNT . . . 1489
13.47.2.3 FEAT_ADJRATE . . . 1489
13.47.2.4 FEAT_ANSI . . . 1489
13.47.2.5 FEAT_BIND . . . 1489
13.47.2.6 FEAT_COMMON . . . 1489
13.47.2.7 FEAT_FWUPDATE . . . 1489

13.47.2.8 FEAT_FWVERSION . . . 1490
13.47.2.9 FEAT_HWLOAD . . . 1490
13.47.2.10 FEAT_ISO . . . 1490
13.47.2.11 FEAT_LMASK . . . 1490
13.47.2.12 FEAT_MONOCHROME . . . 1490
13.47.2.13 FEAT_MOUSEACCEL . . . 1490
13.47.2.14 FEAT_NOTIFY . . . 1490
13.47.2.15 FEAT_POLLRATE . . . 1490
13.47.2.16 FEAT_RGB . . . 1490
13.47.2.17 FEAT_STD_NRGB . . . 1491
13.47.2.18 FEAT_STD_RGB . . . 1491
13.47.2.19 HAS_ANY_FEATURE . . . 1491
13.47.2.20 HAS_FEATURES . . . 1491
13.47.2.21 HWMODE_K70 . . . 1491
13.47.2.22 HWMODE_K95 . . . 1491
13.47.2.23 HWMODE_MAX . . . 1491
13.47.2.24 I_CAPS . . . 1491
13.47.2.25 I_NUM . . . 1491
13.47.2.26 I_SCROLL . . . 1491
13.47.2.27 IFACE_MAX . . . 1492
13.47.2.28 KB_NAME_LEN . . . 1492
13.47.2.29 LIFT_MAX . . . 1492
13.47.2.30 LIFT_MIN . . . 1492
13.47.2.31 MACRO_MAX . . . 1492
13.47.2.32 MD_NAME_LEN . . . 1492
13.47.2.33 MODE_COUNT . . . 1492
13.47.2.34 MSG_SIZE . . . 1492
13.47.2.35 NEEDS_FW_UPDATE . . . 1492
13.47.2.36 OUTFIFO_MAX . . . 1493
13.47.2.37 PR_NAME_LEN . . . 1493
13.47.2.38 SCROLL_ACCELERATED . . . 1493
13.47.2.39 SCROLL_MAX . . . 1493
13.47.2.40 SCROLL_MIN . . . 1493
13.47.2.41 SERIAL_LEN . . . 1493
13.47.2.42 SET_KEYBIT . . . 1493
13.47.3 Variable Documentation . . . 1493
13.47.3.1 vtable_keyboard . . . 1493
13.47.3.2 vtable_keyboard_nonrgb . . . 1493
13.47.3.3 vtable_mouse . . . 1494
13.48 src/ckb-daemon/usb.c File Reference . . . 1494

13.48.1 Function Documentation . . . 1495
13.48.1.1 _resetusb . . . 1495
13.48.1.2 _setupusb . . . 1495
13.48.1.3 _usbrecv . . . 1497
13.48.1.4 _usbsend . . . 1498
13.48.1.5 closeusb . . . 1499
13.48.1.6 devmain . . . 1500
13.48.1.7 get_vtable . . . 1501
13.48.1.8 product_str . . . 1501
13.48.1.9 revertusb . . . 1502
13.48.1.10 setupusb . . . 1503
13.48.1.11 usb_tryreset . . . 1503
13.48.1.12 vendor_str . . . 1504
13.48.2 Variable Documentation . . . 1504
13.48.2.1 features_mask . . . 1504
13.48.2.2 hwload_mode . . . 1504
13.48.2.3 reset_stop . . . 1505
13.48.2.4 usbmutex . . . 1505
13.49 src/ckb-daemon/usb.h File Reference . . . 1505
13.49.1 Macro Definition Documentation . . . 1507
13.49.1.1 DELAY_LONG . . . 1507
13.49.1.2 DELAY_MEDIUM . . . 1507
13.49.1.3 DELAY_SHORT . . . 1508
13.49.1.4 IS_FULLRANGE . . . 1508
13.49.1.5 IS_K65 . . . 1508
13.49.1.6 IS_K70 . . . 1508
13.49.1.7 IS_K95 . . . 1508
13.49.1.8 IS_M65 . . . 1508
13.49.1.9 IS_MONOCHROME . . . 1508
13.49.1.10 IS_MONOCHROME_DEV . . . 1508
13.49.1.11 IS_MOUSE . . . 1508
13.49.1.12 IS_MOUSE_DEV . . . 1509
13.49.1.13 IS_RGB . . . 1509
13.49.1.14 IS_RGB_DEV . . . 1509
13.49.1.15 IS_SABRE . . . 1509
13.49.1.16 IS_SCIMITAR . . . 1509
13.49.1.17 IS_STRAFE . . . 1509
13.49.1.18 NK95_HWOFF . . . 1509
13.49.1.19 NK95_HWON . . . 1509
13.49.1.20 NK95_M1 . . . 1510

13.49.1.21NK95_M2 . . . 1510
13.49.1.22NK95_M3 . . . 1510
13.49.1.23nk95cmd . . . 1510
13.49.1.24P_K65 . . . 1510
13.49.1.25P_K65_LUX . . . 1510
13.49.1.26P_K65_LUX_STR . . . 1510
13.49.1.27P_K65_NRGB . . . 1510
13.49.1.28P_K65_NRGB_STR . . . 1510
13.49.1.29P_K65_RFIRE . . . 1510
13.49.1.30P_K65_RFIRE_STR . . . 1511
13.49.1.31P_K65_STR . . . 1511
13.49.1.32P_K70 . . . 1511
13.49.1.33P_K70_LUX . . . 1511
13.49.1.34P_K70_LUX_NRGB . . . 1511
13.49.1.35P_K70_LUX_NRGB_STR . . . 1511
13.49.1.36P_K70_LUX_STR . . . 1511
13.49.1.37P_K70_NRGB . . . 1511
13.49.1.38P_K70_NRGB_STR . . . 1511
13.49.1.39P_K70_RFIRE . . . 1511
13.49.1.40P_K70_RFIRE_NRGB . . . 1512
13.49.1.41P_K70_RFIRE_NRGB_STR . . . 1512
13.49.1.42P_K70_RFIRE_STR . . . 1512
13.49.1.43P_K70_STR . . . 1512
13.49.1.44P_K95 . . . 1512
13.49.1.45P_K95_NRGB . . . 1512
13.49.1.46P_K95_NRGB_STR . . . 1512
13.49.1.47P_K95_PLATINUM . . . 1512
13.49.1.48P_K95_PLATINUM_STR . . . 1512
13.49.1.49P_K95_STR . . . 1512
13.49.1.50P_M65 . . . 1512
13.49.1.51P_M65_PRO . . . 1513
13.49.1.52P_M65_PRO_STR . . . 1513
13.49.1.53P_M65_STR . . . 1513
13.49.1.54P_SABRE_L . . . 1513
13.49.1.55P_SABRE_L_STR . . . 1513
13.49.1.56P_SABRE_N . . . 1513
13.49.1.57P_SABRE_N_STR . . . 1513
13.49.1.58P_SABRE_O . . . 1513
13.49.1.59P_SABRE_O2 . . . 1513
13.49.1.60P_SABRE_O2_STR . . . 1513

13.49.1.61 P_SABRE_O_STR . . . 1513
13.49.1.62 P_SCIMITAR . . . 1514
13.49.1.63 P_SCIMITAR_PRO . . . 1514
13.49.1.64 P_SCIMITAR_PRO_STR . . . 1514
13.49.1.65 P_SCIMITAR_STR . . . 1514
13.49.1.66 P_STRAFE . . . 1514
13.49.1.67 P_STRAFE_NRGB . . . 1514
13.49.1.68 P_STRAFE_NRGB_STR . . . 1514
13.49.1.69 P_STRAFE_STR . . . 1514
13.49.1.70 resetusb . . . 1514
13.49.1.71 USB_DELAY_DEFAULT . . . 1514
13.49.1.72 usbrecv . . . 1515
13.49.1.73 usbsend . . . 1515
13.49.1.74 V_CORSAIR . . . 1515
13.49.1.75 V_CORSAIR_STR . . . 1515
13.49.2 Function Documentation . . . 1515
13.49.2.1 _nk95cmd . . . 1515
13.49.2.2 _resetusb . . . 1515
13.49.2.3 _usbrecv . . . 1516
13.49.2.4 _usbsend . . . 1517
13.49.2.5 closeusb . . . 1517
13.49.2.6 os_closeusb . . . 1518
13.49.2.7 os_inputmain . . . 1519
13.49.2.8 os_resetusb . . . 1521
13.49.2.9 os_sendindicators . . . 1522
13.49.2.10 os_setupusb . . . 1522
13.49.2.11 os_usbrecv . . . 1523
13.49.2.12 os_usbsend . . . 1524
13.49.2.13 product_str . . . 1525
13.49.2.14 revertusb . . . 1525
13.49.2.15 setupusb . . . 1526
13.49.2.16 usb_tryreset . . . 1527
13.49.2.17 usbkill . . . 1528
13.49.2.18 usbmain . . . 1528
13.49.2.19 vendor_str . . . 1530
13.50 src/ckb-daemon/usb_linux.c File Reference . . . 1530
13.50.1 Data Structure Documentation . . . 1531
13.50.1.1 struct _model . . . 1531
13.50.2 Macro Definition Documentation . . . 1532
13.50.2.1 N_MODELS . . . 1532

13.50.2.2 TEST_RESET . . . 1532
13.50.3 Function Documentation . . . 1532
13.50.3.1 _nk95cmd . . . 1532
13.50.3.2 os_closeusb . . . 1532
13.50.3.3 os_inputmain . . . 1533
13.50.3.4 os_resetusb . . . 1535
13.50.3.5 os_sendindicators . . . 1536
13.50.3.6 os_setupusb . . . 1536
13.50.3.7 os_usbrecv . . . 1537
13.50.3.8 os_usbsend . . . 1538
13.50.3.9 strtrim . . . 1539
13.50.3.10 udev_enum . . . 1539
13.50.3.11 usb_add_device . . . 1540
13.50.3.12 usb_rm_device . . . 1541
13.50.3.13 usbadd . . . 1542
13.50.3.14 usbclaim . . . 1544
13.50.3.15 usbkill . . . 1544
13.50.3.16 usbmain . . . 1544
13.50.3.17 usbunclaim . . . 1546
13.50.4 Variable Documentation . . . 1546
13.50.4.1 kbsyspath . . . 1546
13.50.4.2 models . . . 1546
13.50.4.3 udev . . . 1547
13.50.4.4 udevthread . . . 1547
13.50.4.5 usbthread . . . 1547
13.51 src/ckb-daemon/usb_mac.c File Reference . . . 1547
13.52 src/ckb-mviz/_kiss_fft_guts.h File Reference . . . 1548
13.52.1 Data Structure Documentation . . . 1549
13.52.1.1 struct kiss_fft_state . . . 1549
13.52.2 Macro Definition Documentation . . . 1550
13.52.2.1 C_ADD . . . 1550
13.52.2.2 C_ADDTO . . . 1551
13.52.2.3 C_FIXDIV . . . 1551
13.52.2.4 C_MUL . . . 1551
13.52.2.5 C_MULBYSCALAR . . . 1551
13.52.2.6 C_SUB . . . 1551
13.52.2.7 C_SUBFROM . . . 1552
13.52.2.8 CHECK_OVERFLOW_OP . . . 1552
13.52.2.9 HALF_OF . . . 1552
13.52.2.10 kf_cexp . . . 1552

13.52.2.11 KISS_FFT_COS . . . 1552
13.52.2.12 KISS_FFT_SIN . . . 1552
13.52.2.13 KISS_FFT_TMP_ALLOC . . . 1552
13.52.2.14 KISS_FFT_TMP_FREE . . . 1552
13.52.2.15 MAXFACTORS . . . 1553
13.52.2.16 pcpx . . . 1553
13.52.2.17 S_MUL . . . 1553
13.53 src/ckb-mviz/kiss_fft.c File Reference . . . 1553
13.53.1 Function Documentation . . . 1554
13.53.1.1 kf_bfly2 . . . 1554
13.53.1.2 kf_bfly3 . . . 1554
13.53.1.3 kf_bfly4 . . . 1555
13.53.1.4 kf_bfly5 . . . 1556
13.53.1.5 kf_bfly_generic . . . 1557
13.53.1.6 kf_factor . . . 1558
13.53.1.7 kf_work . . . 1558
13.53.1.8 kiss_fft . . . 1560
13.53.1.9 kiss_fft_alloc . . . 1561
13.53.1.10 kiss_fft_cleanup . . . 1562
13.53.1.11 kiss_fft_next_fast_size . . . 1563
13.53.1.12 kiss_fft_stride . . . 1563
13.54 src/ckb-mviz/kiss_fft.h File Reference . . . 1564
13.54.1 Data Structure Documentation . . . 1566
13.54.1.1 struct kiss_fft_cpx . . . 1566
13.54.2 Macro Definition Documentation . . . 1566
13.54.2.1 KISS_FFT_FREE . . . 1566
13.54.2.2 kiss_fft_free . . . 1566
13.54.2.3 KISS_FFT_MALLOC . . . 1566
13.54.2.4 kiss_fft_scalar . . . 1567
13.54.2.5 kiss_fftr_next_fast_size_real . . . 1567
13.54.3 Typedef Documentation . . . 1567
13.54.3.1 kiss_fft_cfg . . . 1567
13.54.4 Function Documentation . . . 1567
13.54.4.1 kiss_fft . . . 1567
13.54.4.2 kiss_fft_alloc . . . 1568
13.54.4.3 kiss_fft_cleanup . . . 1569
13.54.4.4 kiss_fft_next_fast_size . . . 1569
13.54.4.5 kiss_fft_stride . . . 1570
13.55 src/ckb-mviz/kiss_fftr.c File Reference . . . 1571
13.55.1 Data Structure Documentation . . . 1572

13.55.1.1 struct kiss_fftr_state . . . 1572
13.55.2 Function Documentation . . . 1573
13.55.2.1 kiss_fftr . . . 1573
13.55.2.2 kiss_fftr_alloc . . . 1574
13.55.2.3 kiss_fftri . . . 1575
13.56 src/ckb-mviz/kiss_fftr.h File Reference . . . 1576
13.56.1 Macro Definition Documentation . . . 1577
13.56.1.1 kiss_fftr_free . . . 1577
13.56.2 Typedef Documentation . . . 1577
13.56.2.1 kiss_fftr_cfg . . . 1577
13.56.3 Function Documentation . . . 1577
13.56.3.1 kiss_fftr . . . 1577
13.56.3.2 kiss_fftr_alloc . . . 1579
13.56.3.3 kiss_fftri . . . 1579
13.57 src/ckb/animadddialog.cpp File Reference . . . 1580
13.58 src/ckb/animadddialog.h File Reference . . . 1581
13.59 src/ckb/animscript.cpp File Reference . . . 1581
13.59.1 Function Documentation . . . 1582
13.59.1.1 urlParam . . . 1582
13.59.2 Variable Documentation . . . 1582
13.59.2.1 ONE_DAY . . . 1582
13.60 src/ckb/animscript.h File Reference . . . 1583
13.60.1 Data Structure Documentation . . . 1583
13.60.1.1 struct AnimScript::Param . . . 1583
13.61 src/ckb/animsettingdialog.cpp File Reference . . . 1584
13.61.1 Function Documentation . . . 1585
13.61.1.1 angleFlip . . . 1585
13.62 src/ckb/animsettingdialog.h File Reference . . . 1586
13.63 src/ckb/autorun.cpp File Reference . . . 1587
13.63.1 Variable Documentation . . . 1587
13.63.1.1 settingPath . . . 1587
13.64 src/ckb/autorun.h File Reference . . . 1588
13.65 src/ckb/ckb-anim.h File Reference . . . 1588
13.65.1 Data Structure Documentation . . . 1591
13.65.1.1 struct ckb_key . . . 1591
13.65.1.2 struct ckb_runctx . . . 1592
13.65.1.3 struct ckb_gradient . . . 1593
13.65.2 Macro Definition Documentation . . . 1593
13.65.2.1 CKB_CONTAINER . . . 1593
13.65.2.2 CKB_COPYRIGHT . . . 1593

13.65.2.3 CKB_DESCRIPTION 1594
13.65.2.4 CKB_DOWN 1594
13.65.2.5 CKB_GRAD_MAX 1594
13.65.2.6 CKB_GUID 1594
13.65.2.7 CKB_KEYCLEAR 1594
13.65.2.8 CKB_KEYNAME_MAX 1594
13.65.2.9 CKB_KP_NAME 1594
13.65.2.10 CKB_KP_NONE 1594
13.65.2.11 CKB_KP_POSITION 1594
13.65.2.12 CKB_KPMODE 1595
13.65.2.13 CKB_LICENSE 1595
13.65.2.14 CKB_LIVEPARAMS 1595
13.65.2.15 CKB_MAX_WORD 1595
13.65.2.16 CKB_NAME 1595
13.65.2.17 CKB_PARAM 1595
13.65.2.18 CKB_PARAM_AGRADIENT 1595
13.65.2.19 CKB_PARAM_ANGLE 1595
13.65.2.20 CKB_PARAM_ARGB 1595
13.65.2.21 CKB_PARAM_BOOL 1596
13.65.2.22 CKB_PARAM_DOUBLE 1596
13.65.2.23 CKB_PARAM_GRADIENT 1596
13.65.2.24 CKB_PARAM_LABEL 1596
13.65.2.25 CKB_PARAM_LONG 1596
13.65.2.26 CKB_PARAM_RGB 1596
13.65.2.27 CKB_PARAM_STRING 1596
13.65.2.28 CKB_PARSE_AGRADIENT 1596
13.65.2.29 CKB_PARSE_ANGLE 1596
13.65.2.30 CKB_PARSE_ARGB 1597
13.65.2.31 CKB_PARSE_BOOL 1597
13.65.2.32 CKB_PARSE_DOUBLE 1597
13.65.2.33 CKB_PARSE_GRADIENT 1597
13.65.2.34 CKB_PARSE_LONG 1597
13.65.2.35 CKB_PARSE_RGB 1597
13.65.2.36 CKB_PARSE_STRING 1597
13.65.2.37 CKB_PREEMPT 1597
13.65.2.38 CKB_PRESET_END 1597
13.65.2.39 CKB_PRESET_PARAM 1598
13.65.2.40 CKB_PRESET_START 1598
13.65.2.41 CKB_REAL_ANGLE 1598
13.65.2.42 CKB_REPEAT 1598

13.65.2.43 CKB_TIME_ABSOLUTE . . . 1598
13.65.2.44 CKB_TIME_DURATION . . . 1598
13.65.2.45 CKB_TIMEMODE . . . 1598
13.65.2.46 CKB_UP . . . 1598
13.65.2.47 CKB_VERSION . . . 1598
13.65.2.48 FALSE . . . 1599
13.65.2.49 M_PI . . . 1599
13.65.2.50 TRUE . . . 1599
13.65.3 Function Documentation . . . 1599
13.65.3.1 ckb_alpha_blend . . . 1599
13.65.3.2 ckb_frame . . . 1599
13.65.3.3 ckb_getline . . . 1600
13.65.3.4 ckb_grad_color . . . 1601
13.65.3.5 ckb_info . . . 1602
13.65.3.6 ckb_init . . . 1603
13.65.3.7 ckb_keypress . . . 1603
13.65.3.8 ckb_parameter . . . 1605
13.65.3.9 ckb_read_params . . . 1605
13.65.3.10 ckb_scan_grad . . . 1606
13.65.3.11 ckb_start . . . 1607
13.65.3.12 ckb_time . . . 1608
13.65.3.13 main . . . 1608
13.65.3.14 printurl . . . 1611
13.65.3.15 urldecode . . . 1611
13.66 src/ckb/ckbsettings.cpp File Reference . . . 1612
13.66.1 Macro Definition Documentation . . . 1613
13.66.1.1 lockMutex . . . 1613
13.66.1.2 lockMutexCache . . . 1613
13.66.1.3 lockMutexStatic . . . 1613
13.66.1.4 lockMutexStatic2 . . . 1613
13.66.2 Function Documentation . . . 1613
13.66.2.1 cacheWritesInProgress . . . 1613
13.66.2.2 globalSettings . . . 1613
13.66.2.3 settingsCacheMutex . . . 1614
13.66.2.4 settingsMutex . . . 1614
13.66.3 Variable Documentation . . . 1614
13.66.3.1 _globalSettings . . . 1614
13.66.3.2 globalCache . . . 1614
13.66.3.3 globalThread . . . 1614
13.67 src/ckb/ckbsettings.h File Reference . . . 1615

13.68 src/ckb/ckbsettingswriter.cpp File Reference . . . 1615
13.68.1 Macro Definition Documentation . . . 1616
13.68.1.1 lockMutex . . . 1616
13.68.1.2 lockMutexCache . . . 1616
13.68.1.3 lockMutexStatic . . . 1616
13.68.1.4 lockMutexStatic2 . . . 1616
13.68.2 Variable Documentation . . . 1617
13.68.2.1 cacheWritesInProgress . . . 1617
13.68.2.2 settingsCacheMutex . . . 1617
13.68.2.3 settingsMutex . . . 1617
13.69 src/ckb/ckbsettingswriter.h File Reference . . . 1617
13.70 src/ckb/colorbutton.cpp File Reference . . . 1617
13.71 src/ckb/colorbutton.h File Reference . . . 1618
13.72 src/ckb/colormap.cpp File Reference . . . 1619
13.72.1 Function Documentation . . . 1619
13.72.1.1 qs_strcmp . . . 1619
13.73 src/ckb/colormap.h File Reference . . . 1620
13.73.1 Typedef Documentation . . . 1621
13.73.1.1 QColorMap . . . 1621
13.73.1.2 QColorMapIterator . . . 1621
13.73.1.3 QMutableColorMapIterator . . . 1621
13.74 src/ckb/extrasettingswidget.cpp File Reference . . . 1621
13.74.1 Variable Documentation . . . 1621
13.74.1.1 lastSharedDimming . . . 1621
13.75 src/ckb/extrasettingswidget.h File Reference . . . 1622
13.76 src/ckb/fwupgradedialog.cpp File Reference . . . 1622
13.76.1 Data Structure Documentation . . . 1623
13.76.1.1 struct KbId . . . 1623
13.76.2 Function Documentation . . . 1624
13.76.2.1 DIALOG_HEIGHT_MAX . . . 1624
13.76.2.2 verifyFw . . . 1624
13.76.3 Variable Documentation . . . 1625
13.76.3.1 DIALOG_HEIGHT_MIN . . . 1625
13.76.3.2 DIALOG_WIDTH . . . 1625
13.76.3.3 ids . . . 1625
13.77 src/ckb/fwupgradedialog.h File Reference . . . 1625
13.78 src/ckb/gradientbutton.cpp File Reference . . . 1626
13.79 src/ckb/gradientbutton.h File Reference . . . 1627
13.80 src/ckb/gradientdialog.cpp File Reference . . . 1628
13.80.1 Variable Documentation . . . 1628

13.80.1.1 prefsPath . . . 1628
13.81 src/ckb/gradientdialog.h File Reference . . . 1628
13.82 src/ckb/gradientdialogwidget.cpp File Reference . . . 1629
13.83 src/ckb/gradientdialogwidget.h File Reference . . . 1629
13.84 src/ckb/kb.cpp File Reference . . . 1630
13.84.1 Variable Documentation . . . 1631
13.84.1.1 activeDevices . . . 1631
13.84.1.2 notifyPathMutex . . . 1631
13.84.1.3 notifyPaths . . . 1631
13.85 src/ckb/kb.h File Reference . . . 1631
13.86 src/ckb/kbanim.cpp File Reference . . . 1632
13.86.1 Typedef Documentation . . . 1633
13.86.1.1 blendFunc . . . 1633
13.86.2 Function Documentation . . . 1633
13.86.2.1 blendAdd . . . 1633
13.86.2.2 blendDivide . . . 1633
13.86.2.3 blendMultiply . . . 1633
13.86.2.4 blendNormal . . . 1634
13.86.2.5 blendSubtract . . . 1634
13.86.3 Variable Documentation . . . 1634
13.86.3.1 functions . . . 1634
13.87 src/ckb/kbanim.h File Reference . . . 1634
13.88 src/ckb/kbanimwidget.cpp File Reference . . . 1635
13.89 src/ckb/kbanimwidget.h File Reference . . . 1635
13.90 src/ckb/kbbind.cpp File Reference . . . 1636
13.91 src/ckb/kbbind.h File Reference . . . 1637
13.92 src/ckb/kbbindwidget.cpp File Reference . . . 1638
13.93 src/ckb/kbbindwidget.h File Reference . . . 1638
13.94 src/ckb/kbfirmware.cpp File Reference . . . 1639
13.94.1 Function Documentation . . . 1640
13.94.1.1 tableName . . . 1640
13.94.2 Variable Documentation . . . 1640
13.94.2.1 AUTO_CHECK_TIME . . . 1640
13.95 src/ckb/kbfirmware.h File Reference . . . 1640
13.96 src/ckb/kblight.cpp File Reference . . . 1641
13.96.1 Function Documentation . . . 1642
13.96.1.1 lToS . . . 1642
13.96.1.2 monoRgb . . . 1643
13.96.1.3 sToL . . . 1643
13.96.2 Variable Documentation . . . 1644

13.96.2.1 _shareDimming . . . 1644
13.96.2.2 activeLights . . . 1644
13.97 src/ckb/kblight.h File Reference . . . 1644
13.98 src/ckb/kblightwidget.cpp File Reference . . . 1645
13.99 src/ckb/kblightwidget.h File Reference . . . 1645
13.100 src/ckb/kbmanager.cpp File Reference . . . 1646
13.100.1 Variable Documentation . . . 1647
13.100.1.1 devpath . . . 1647
13.101 src/ckb/kbmanager.h File Reference . . . 1647
13.101.1 Macro Definition Documentation . . . 1648
13.101.1.1 DAEMON_UNAVAILABLE_STR . . . 1648
13.102 src/ckb/kbmode.cpp File Reference . . . 1648
13.103 src/ckb/kbmode.h File Reference . . . 1648
13.104 src/ckb/kbperf.cpp File Reference . . . 1649
13.104.1 Macro Definition Documentation . . . 1649
13.104.1.1 map_last . . . 1649
13.105 src/ckb/kbperf.h File Reference . . . 1649
13.106 src/ckb/kbprofile.cpp File Reference . . . 1650
13.107 src/ckb/kbprofile.h File Reference . . . 1651
13.108 src/ckb/kbprofiledialog.cpp File Reference . . . 1651
13.109 src/ckb/kbprofiledialog.h File Reference . . . 1652
13.110 src/ckb/kbwidget.cpp File Reference . . . 1653
13.111 src/ckb/kbwidget.h File Reference . . . 1653
13.112 src/ckb/keyaction.cpp File Reference . . . 1654
13.112.1 Variable Documentation . . . 1655
13.112.1.1 ANIM_KRSTOP . . . 1655
13.112.1.2 ANIM_ONCE . . . 1655
13.113 src/ckb/keyaction.h File Reference . . . 1655
13.114 src/ckb/keymap.cpp File Reference . . . 1656
13.114.1 Data Structure Documentation . . . 1657
13.114.1.1 struct KeyPatch . . . 1657
13.114.2 Macro Definition Documentation . . . 1658
13.114.2.1 ANSI_ENTER_H . . . 1658
13.114.2.2 ANSI_ENTER_W . . . 1658
13.114.2.3 ANSI_ENTER_X . . . 1658
13.114.2.4 ANSI_ENTER_Y . . . 1658
13.114.2.5 ANSI_LSHIFT_W . . . 1659
13.114.2.6 ANSI_LSHIFT_X . . . 1659
13.114.2.7 K65_HEIGHT . . . 1659
13.114.2.8 K65_TOP_COUNT . . . 1659

13.114.2.9 K65_WIDTH . . . 1659
13.114.2.10 K70_HEIGHT . . . 1659
13.114.2.11 K70_WIDTH . . . 1659
13.114.2.12 K70_X_START . . . 1659
13.114.2.13 K95_HEIGHT . . . 1659
13.114.2.14 K95_WIDTH . . . 1659
13.114.2.15 KEYCOUNT_K95 . . . 1660
13.114.2.16 KEYCOUNT_M65 . . . 1660
13.114.2.17 KEYCOUNT_SABRE . . . 1660
13.114.2.18 KEYCOUNT_SCIM . . . 1660
13.114.2.19 KSTRAFE_HEIGHT . . . 1660
13.114.2.20 KSTRAFE_WIDTH . . . 1660
13.114.2.21 KSTRAFE_X_START . . . 1660
13.114.2.22 M65_HEIGHT . . . 1660
13.114.2.23 M65_WIDTH . . . 1660
13.114.2.24 N_LAYOUTS . . . 1661
13.114.2.25 N_MODELS . . . 1661
13.114.2.26 NS . . . 1661
13.114.2.27 patch . . . 1661
13.114.2.28 PATCH_COUNT . . . 1661
13.114.2.29 SABRE_HEIGHT . . . 1661
13.114.2.30 SABRE_WIDTH . . . 1661
13.114.2.31 SCIM_HEIGHT . . . 1661
13.114.2.32 SCIM_WIDTH . . . 1661
13.114.3 Function Documentation . . . 1661
13.114.3.1 _patch . . . 1661
13.114.3.2 getMap . . . 1662
13.114.3.3 patchANSI . . . 1664
13.114.3.4 patchISO . . . 1665
13.114.4 Variable Documentation . . . 1665
13.114.4.1 K65TopRow . . . 1665
13.114.4.2 K95BaseMap . . . 1665
13.114.4.3 K95Keys . . . 1666
13.114.4.4 KStrafeKeys . . . 1666
13.114.4.5 M65Keys . . . 1667
13.114.4.6 patchDE . . . 1667
13.114.4.7 patchDK . . . 1667
13.114.4.8 patchDvorak . . . 1667
13.114.4.9 patchES . . . 1668
13.114.4.10 patchEU . . . 1668

13.114.4.12 patchFR . . . 1668
13.114.4.13 patchIT . . . 1668
13.114.4.14 patchMX . . . 1668
13.114.4.15 patchNO . . . 1669
13.114.4.16 patchSE . . . 1669
13.114.4.17 sabreKeys . . . 1669
13.114.4.18 scimKeys . . . 1669
13.114.4.19 standardMaps . . . 1670
13.115 src/ckb/keymap.h File Reference . . . 1670
13.116 src/ckb-daemon/keymap.h File Reference . . . 1670
13.116.1 Data Structure Documentation . . . 1672
13.116.1.1 struct key . . . 1672
13.116.2 Macro Definition Documentation . . . 1673
13.116.2.1 BTN_WHEELDOWN . . . 1673
13.116.2.2 BTN_WHEELUP . . . 1673
13.116.2.3 KEY_BACKSLASH_ISO . . . 1673
13.116.2.4 KEY_CORSAIR . . . 1673
13.116.2.5 KEY_NONE . . . 1673
13.116.2.6 KEY_UNBOUND . . . 1673
13.116.2.7 LED_DPI . . . 1673
13.116.2.8 LED_MOUSE . . . 1673
13.116.2.9 MOUSE_BUTTON_FIRST . . . 1674
13.116.2.10 MOUSE_EXTRA_FIRST . . . 1674
13.116.2.11 N_BUTTONS_EXTENDED . . . 1674
13.116.2.12 N_BUTTONS_HW . . . 1674
13.116.2.13 N_KEY_ZONES . . . 1674
13.116.2.14 N_KEYBYTES_EXTENDED . . . 1674
13.116.2.15 N_KEYBYTES_HW . . . 1674
13.116.2.16 N_KEYBYTES_INPUT . . . 1674
13.116.2.17 N_KEYS_EXTENDED . . . 1674
13.116.2.18 N_KEYS_EXTRA . . . 1674
13.116.2.19 N_KEYS_HW . . . 1675
13.116.2.20 N_KEYS_INPUT . . . 1675
13.116.2.21 N_MOUSE_ZONES . . . 1675
13.116.2.22 N_MOUSE_ZONES_EXTENDED . . . 1675
13.116.2.23 SCAN_KBD . . . 1675
13.116.2.24 SCAN_MOUSE . . . 1675
13.116.2.25 SCAN_SILENT . . . 1675
13.116.3 Function Documentation . . . 1675
13.116.3.1 corsair_kbcopy . . . 1675

13.116.3.2 corsair_mousecopy . . . 1676
13.116.3.3 hid_kb_translate . . . 1676
13.116.3.4 hid_mouse_translate . . . 1678
13.116.4 Variable Documentation . . . 1679
13.116.4.1 keymap . . . 1679
13.117 src/ckb/keywidget.cpp File Reference . . . 1679
13.117.1 Function Documentation . . . 1680
13.117.1.1 monoRgb . . . 1680
13.117.2 Variable Documentation . . . 1680
13.117.2.1 KEY_SIZE . . . 1680
13.117.2.2 m65Overlay . . . 1681
13.117.2.3 sabOverlay . . . 1681
13.117.2.4 scimOverlay . . . 1681
13.118 src/ckb/keywidget.h File Reference . . . 1681
13.119 src/ckb/kperfwidget.cpp File Reference . . . 1682
13.120 src/ckb/kperfwidget.h File Reference . . . 1682
13.120.1 Data Structure Documentation . . . 1683
13.120.1.1 struct KPerfWidget::IndicatorUi . . . 1683
13.121 src/ckb/layoutdialog.cpp File Reference . . . 1684
13.122 src/ckb/layoutdialog.h File Reference . . . 1685
13.123 src/ckb/macroreader.cpp File Reference . . . 1686
13.124 src/ckb/macroreader.h File Reference . . . 1686
13.125 src/ckb/main.cpp File Reference . . . 1687
13.125.1 Macro Definition Documentation . . . 1688
13.125.1.1 SHMEM_SIZE . . . 1688
13.125.1.2 SHMEM_SIZE_V015 . . . 1688
13.125.2 Enumeration Type Documentation . . . 1688
13.125.2.1 CommandLineParseResults . . . 1688
13.125.3 Function Documentation . . . 1689
13.125.3.1 appShare . . . 1689
13.125.3.2 isRunning . . . 1689
13.125.3.3 main . . . 1690
13.125.3.4 parseCommandLine . . . 1691
13.125.3.5 pidActive . . . 1693
13.126 src/ckb/mainwindow.cpp File Reference . . . 1693
13.126.1 Variable Documentation . . . 1694
13.126.1.1 appShare . . . 1694
13.126.1.2 configLabel . . . 1694
13.127 src/ckb/mainwindow.h File Reference . . . 1694
13.128 src/ckb/media.h File Reference . . . 1695

13.128.1 Macro Definition Documentation . . . 1696
13.128.1.1 ENUM_C . . . 1696
13.128.1.2 ENUM_END_C . . . 1696
13.128.1.3 EXTERN_C . . . 1696
13.128.2 Enumeration Type Documentation . . . 1696
13.128.2.1 muteState . . . 1696
13.128.3 Function Documentation . . . 1696
13.128.3.1 getMuteState . . . 1696
13.129 src/ckb/media_linux.cpp File Reference . . . 1697
13.129.1 Function Documentation . . . 1697
13.129.1.1 getMuteState . . . 1697
13.129.2 Variable Documentation . . . 1698
13.129.2.1 muteProcess . . . 1698
13.130 src/ckb/media_mac.m File Reference . . . 1698
13.130.1 Function Documentation . . . 1698
13.130.1.1 disableAppNap . . . 1699
13.130.1.2 getMuteState . . . 1699
13.131 src/ckb/modeselectdialog.cpp File Reference . . . 1700
13.132 src/ckb/modeselectdialog.h File Reference . . . 1700
13.133 src/ckb/mperfwidget.cpp File Reference . . . 1701
13.133.1 Macro Definition Documentation . . . 1702
13.133.1.1 SET_END . . . 1702
13.133.1.2 SET_START . . . 1702
13.133.2 Function Documentation . . . 1702
13.133.2.1 dpiExp . . . 1702
13.133.2.2 dpiLog . . . 1703
13.133.2.3 dpiRound . . . 1703
13.133.3 Variable Documentation . . . 1703
13.133.3.1 DPI_BASE . . . 1703
13.133.3.2 xyLinkPath . . . 1704
13.134 src/ckb/mperfwidget.h File Reference . . . 1704
13.134.1 Data Structure Documentation . . . 1705
13.134.1.1 struct MPerfWidget::DpiUi . . . 1705
13.135 src/ckb/quazip/crypt.h File Reference . . . 1706
13.135.1 Macro Definition Documentation . . . 1707
13.135.1.1 CRC32 . . . 1707
13.135.1.2 zdecode . . . 1707
13.135.1.3 zencode . . . 1707
13.135.2 Function Documentation . . . 1707
13.135.2.1 decrypt_byte . . . 1707

13.135.2.2 init_keys . . . 1707
13.135.2.3 update_keys . . . 1708
13.136 src/ckb/quazip/ioapi.h File Reference . . . 1709
13.136.1 Data Structure Documentation . . . 1711
13.136.1.1 struct zlib_filefunc_def_s . . . 1711
13.136.1.2 struct zlib_filefunc64_def_s . . . 1711
13.136.1.3 struct zlib_filefunc64_32_def_s . . . 1712
13.136.2 Macro Definition Documentation . . . 1712
13.136.2.1 __USE_FILE_OFFSET64 . . . 1712
13.136.2.2 __USE_LARGEFILE64 . . . 1712
13.136.2.3 _FILE_OFFSET_BIT . . . 1713
13.136.2.4 _LARGEFILE64_SOURCE . . . 1713
13.136.2.5 ZOF . . . 1713
13.136.2.6 ZCALLBACK . . . 1713
13.136.2.7 ZCLOSE64 . . . 1713
13.136.2.8 ZERROR64 . . . 1713
13.136.2.9 ZFAKECLOSE64 . . . 1713
13.136.2.10 ZLIB_FILEFUNC_MODE_CREATE . . . 1713
13.136.2.11 ZLIB_FILEFUNC_MODE_EXISTING . . . 1713
13.136.2.12 ZLIB_FILEFUNC_MODE_READ . . . 1713
13.136.2.13 ZLIB_FILEFUNC_MODE_READWRITEFILTER . . . 1714
13.136.2.14 ZLIB_FILEFUNC_MODE_WRITE . . . 1714
13.136.2.15 ZLIB_FILEFUNC_SEEK_CUR . . . 1714
13.136.2.16 ZLIB_FILEFUNC_SEEK_END . . . 1714
13.136.2.17 ZLIB_FILEFUNC_SEEK_SET . . . 1714
13.136.2.18 ZOPEN64 . . . 1714
13.136.2.19 ZREAD64 . . . 1714
13.136.2.20 ZSEEK64 . . . 1714
13.136.2.21 ZTELL64 . . . 1715
13.136.2.22 ZWRITE64 . . . 1715
13.136.3 Typedef Documentation . . . 1715
13.136.3.1 _Z_OF . . . 1715
13.136.3.2 zlib_filefunc64_32_def . . . 1715
13.136.3.3 zlib_filefunc64_def . . . 1715
13.136.3.4 zlib_filefunc_def . . . 1715
13.136.3.5 ZPOS64_T . . . 1715
13.136.4 Function Documentation . . . 1715
13.136.4.1 _Z_OF . . . 1715
13.136.4.2 _Z_OF . . . 1715
13.136.4.3 _Z_OF . . . 1715

13.136.4.4 Z_OF . . . 1715
13.136.4.5 Z_OF . . . 1715
13.136.4.6 fill_zlib_filefunc64_32_def_from_filefunc32 . . . 1716
13.137 src/ckb/quazip/JlCompress.cpp File Reference . . . 1716
13.137.1 Function Documentation . . . 1717
13.137.1.1 copyData . . . 1717
13.138 src/ckb/quazip/JlCompress.h File Reference . . . 1718
13.139 src/ckb/quazip/qioapi.cpp File Reference . . . 1718
13.139.1 Macro Definition Documentation . . . 1720
13.139.1.1 SEEK_CUR . . . 1720
13.139.1.2 SEEK_END . . . 1720
13.139.1.3 SEEK_SET . . . 1720
13.139.2 Function Documentation . . . 1720
13.139.2.1 call_zopen64 . . . 1720
13.139.2.2 call_zseek64 . . . 1720
13.139.2.3 call_ztell64 . . . 1720
13.139.2.4 fill_qiodevice64_filefunc . . . 1721
13.139.2.5 fill_qiodevice_filefunc . . . 1722
13.139.2.6 fill_zlib_filefunc64_32_def_from_filefunc32 . . . 1723
13.139.2.7 qiodevice64_seek_file_func . . . 1724
13.139.2.8 qiodevice64_tell_file_func . . . 1725
13.139.2.9 qiodevice_close_file_func . . . 1725
13.139.2.10 qiodevice_error_file_func . . . 1726
13.139.2.11 qiodevice_fakeclose_file_func . . . 1726
13.139.2.12 qiodevice_open_file_func . . . 1727
13.139.2.13 qiodevice_read_file_func . . . 1728
13.139.2.14 qiodevice_seek_file_func . . . 1728
13.139.2.15 qiodevice_tell_file_func . . . 1729
13.139.2.16 qiodevice_write_file_func . . . 1730
13.140 src/ckb/quazip/quaadler32.cpp File Reference . . . 1730
13.141 src/ckb/quazip/quaadler32.h File Reference . . . 1731
13.142 src/ckb/quazip/quachecksum32.h File Reference . . . 1732
13.143 src/ckb/quazip/quacrc32.cpp File Reference . . . 1733
13.144 src/ckb/quazip/quacrc32.h File Reference . . . 1734
13.145 src/ckb/quazip/quagzipfile.cpp File Reference . . . 1735
13.146 src/ckb/quazip/quagzipfile.h File Reference . . . 1736
13.147 src/ckb/quazip/quaziodevice.cpp File Reference . . . 1737
13.147.1 Macro Definition Documentation . . . 1738
13.147.1.1 QUAZIO_INBUFSIZE . . . 1738
13.147.1.2 QUAZIO_OUTBUFSIZE . . . 1738

13.148 src/ckb/quazip/quaziodevice.h File Reference . . . 1738
13.149 src/ckb/quazip/quazip.cpp File Reference . . . 1739
13.149.1 Function Documentation . . . 1740
13.149.1.1 QuaZip_getFileInfo . . . 1740
13.149.1.2 QuaZip_getFileInfo . . . 1740
13.149.1.3 QuaZip_getFileInfo . . . 1741
13.149.1.4 QuaZip_getFileInfo . . . 1741
13.150 src/ckb/quazip/quazip.h File Reference . . . 1741
13.150.1 Macro Definition Documentation . . . 1742
13.150.1.1 UNZ_OPENERROR . . . 1742
13.151 src/ckb/quazip/quazip_global.h File Reference . . . 1742
13.151.1 Macro Definition Documentation . . . 1743
13.151.1.1 QUAZIP_EXPORT . . . 1743
13.151.1.2 QUAZIP_EXTRA_NTFS_MAGIC . . . 1743
13.151.1.3 QUAZIP_EXTRA_NTFS_TIME_MAGIC . . . 1743
13.151.1.4 UNUSED . . . 1744
13.152 src/ckb/quazip/quazipdir.cpp File Reference . . . 1744
13.152.1 Function Documentation . . . 1744
13.152.1.1 QuaZipDir_convertInfoList . . . 1744
13.152.1.2 QuaZipDir_convertInfoList . . . 1744
13.152.1.3 QuaZipDir_convertInfoList . . . 1745
13.152.1.4 QuaZipDir_getFileInfo . . . 1745
13.153 src/ckb/quazip/quazipdir.h File Reference . . . 1746
13.154 src/ckb/quazip/quazipfile.cpp File Reference . . . 1746
13.155 src/ckb/quazip/quazipfile.h File Reference . . . 1747
13.156 src/ckb/quazip/quazipfileinfo.cpp File Reference . . . 1748
13.156.1 Function Documentation . . . 1748
13.156.1.1 getNTFSTime . . . 1749
13.156.1.2 permissionsFromExternalAttr . . . 1750
13.157 src/ckb/quazip/quazipfileinfo.h File Reference . . . 1750
13.158 src/ckb/quazip/quazipnewinfo.cpp File Reference . . . 1751
13.158.1 Function Documentation . . . 1752
13.158.1.1 QuaZipNewInfo_init . . . 1752
13.158.1.2 QuaZipNewInfo_setPermissions . . . 1753
13.158.1.3 setNTFSTime . . . 1753
13.159 src/ckb/quazip/quazipnewinfo.h File Reference . . . 1755
13.160 src/ckb/quazip/unzip.c File Reference . . . 1756
13.160.1 Data Structure Documentation . . . 1759
13.160.1.1 struct unz_file_info64_internal_s . . . 1759
13.160.1.2 struct file_in_zip64_read_info_s . . . 1760

13.160.1.3 struct unz64_s . . . 1760
13.160.2 Macro Definition Documentation . . . 1761
13.160.2.1 ALLOC . . . 1761
13.160.2.2 BUFREADCOMMENT . . . 1762
13.160.2.3 CASESENSITIVITYDEFAULT_NO . . . 1762
13.160.2.4 CASESENSITIVITYDEFAULTVALUE . . . 1762
13.160.2.5 local . . . 1762
13.160.2.6 SIZECENTRALDIRITEM . . . 1762
13.160.2.7 SIZEZIPLOCALHEADER . . . 1762
13.160.2.8 STRCMPCASENOSENTIVEFUNCTION . . . 1762
13.160.2.9 TRYFREE . . . 1762
13.160.2.10 UNZ_BUFSIZE . . . 1762
13.160.2.11 UNZ_MAXFILENAMEINZIP . . . 1763
13.160.3 Typedef Documentation . . . 1763
13.160.3.1 unz_file_info64_internal . . . 1763
13.160.3.2 z_crc_t . . . 1763
13.160.4 Function Documentation . . . 1763
13.160.4.1 _Z_OF . . . 1763
13.160.4.2 _Z_OF . . . 1763
13.160.4.3 _Z_OF . . . 1763
13.160.4.4 _Z_OF . . . 1763
13.160.4.5 _Z_OF . . . 1763
13.160.4.6 strcmpcasenosensitive_internal . . . 1763
13.160.4.7 unz64local_CheckCurrentFileCoherencyHeader . . . 1763
13.160.4.8 unz64local_DosDateToTmuDate . . . 1765
13.160.4.9 unz64local_getByte . . . 1766
13.160.4.10 unz64local_GetCurrentFileInfoInternal . . . 1767
13.160.4.11 unz64local_getLong . . . 1770
13.160.4.12 unz64local_getLong64 . . . 1771
13.160.4.13 unz64local_getShort . . . 1773
13.160.4.14 unz64local_SearchCentralDir . . . 1774
13.160.4.15 unz64local_SearchCentralDir64 . . . 1775
13.160.4.16 unzClearFlags . . . 1776
13.160.4.17 unzClose . . . 1777
13.160.4.18 unzCloseCurrentFile . . . 1778
13.160.4.19 unzeof . . . 1779
13.160.4.20 unzGetCurrentFileInfo . . . 1779
13.160.4.21 unzGetCurrentFileInfo64 . . . 1780
13.160.4.22 unzGetCurrentFileZStreamPos64 . . . 1781
13.160.4.23 unzGetFilePos . . . 1781

13.160.4.24 unzGetFilePos64 . . . 1782
13.160.4.25 unzGetGlobalComment . . . 1782
13.160.4.26 unzGetGlobalInfo . . . 1783
13.160.4.27 unzGetGlobalInfo64 . . . 1783
13.160.4.28 unzGetLocalExtrafield . . . 1784
13.160.4.29 unzGetOffset . . . 1785
13.160.4.30 unzGetOffset64 . . . 1785
13.160.4.31 unzGoToFilePos . . . 1786
13.160.4.32 unzGoToFilePos64 . . . 1786
13.160.4.33 unzGoToFirstFile . . . 1787
13.160.4.34 unzGoToNextFile . . . 1788
13.160.4.35 unzLocateFile . . . 1789
13.160.4.36 unzOpen . . . 1790
13.160.4.37 unzOpen2 . . . 1790
13.160.4.38 unzOpen2_64 . . . 1791
13.160.4.39 unzOpen64 . . . 1792
13.160.4.40 unzOpenCurrentFile . . . 1793
13.160.4.41 unzOpenCurrentFile2 . . . 1793
13.160.4.42 unzOpenCurrentFile3 . . . 1793
13.160.4.43 unzOpenCurrentFilePassword . . . 1796
13.160.4.44 unzOpenInternal . . . 1797
13.160.4.45 unzReadCurrentFile . . . 1800
13.160.4.46 unzSetFlags . . . 1803
13.160.4.47 unzSetOffset . . . 1804
13.160.4.48 unzSetOffset64 . . . 1804
13.160.4.49 unzStringFileNameCompare . . . 1805
13.160.4.50 unztell . . . 1805
13.160.4.51 unztell64 . . . 1806
13.160.5 Variable Documentation . . . 1806
13.160.5.1 unz_copyright . . . 1806
13.161 src/ckb/quazip/unzip.h File Reference . . . 1807
13.161.1 Data Structure Documentation . . . 1809
13.161.1.1 struct tm_unz_s . . . 1809
13.161.1.2 struct unz_global_info64_s . . . 1809
13.161.1.3 struct unz_global_info_s . . . 1810
13.161.1.4 struct unz_file_info64_s . . . 1811
13.161.1.5 struct unz_file_info_s . . . 1812
13.161.1.6 struct unz_file_pos_s . . . 1814
13.161.1.7 struct unz64_file_pos_s . . . 1815
13.161.2 Macro Definition Documentation . . . 1815

13.161.2.1 UNZ_AUTO_CLOSE . . . 1815
13.161.2.2 UNZ_BADZIPFILE . . . 1815
13.161.2.3 UNZ_CRCERROR . . . 1815
13.161.2.4 UNZ_DEFAULT_FLAGS . . . 1816
13.161.2.5 UNZ_END_OF_LIST_OF_FILE . . . 1816
13.161.2.6 UNZ_EOF . . . 1816
13.161.2.7 UNZ_ERRNO . . . 1816
13.161.2.8 UNZ_INTERNALERROR . . . 1816
13.161.2.9 UNZ_OK . . . 1816
13.161.2.10 UNZ_PARAMERROR . . . 1816
13.161.2.11 Z_BZIP2ED . . . 1817
13.161.3 Typedef Documentation . . . 1817
13.161.3.1 tm_unz . . . 1817
13.161.3.2 unz64_file_pos . . . 1817
13.161.3.3 unz_file_info . . . 1817
13.161.3.4 unz_file_info64 . . . 1817
13.161.3.5 unz_file_pos . . . 1817
13.161.3.6 unz_global_info . . . 1817
13.161.3.7 unz_global_info64 . . . 1817
13.161.3.8 unzFile . . . 1817
13.161.4 Function Documentation . . . 1817
13.161.4.1 _Z_OF . . . 1817
13.161.4.2 _Z_OF . . . 1817
13.161.4.3 _Z_OF . . . 1817
13.161.4.4 _Z_OF . . . 1817
13.161.4.5 _Z_OF . . . 1817
13.161.4.6 _Z_OF . . . 1817
13.161.4.7 _Z_OF . . . 1817
13.161.4.8 _Z_OF . . . 1817
13.161.4.9 _Z_OF . . . 1817
13.161.4.10 _Z_OF . . . 1817
13.161.4.11 _Z_OF . . . 1818
13.161.4.12 _Z_OF . . . 1818
13.161.4.13 _Z_OF . . . 1818
13.161.4.14 _Z_OF . . . 1818
13.161.4.15 _Z_OF . . . 1818
13.161.4.16 unzClearFlags . . . 1818
13.161.4.17 unzGetFilePos . . . 1818
13.161.4.18 unzGetFilePos64 . . . 1819
13.161.4.19 unzGetOffset . . . 1819

13.161.4.20 unzGetOffset64 . . . 1820
13.161.4.21 unzGoToFilePos . . . 1820
13.161.4.22 unzGoToFilePos64 . . . 1821
13.161.4.23 unzOpenInternal . . . 1822
13.161.4.24 unzSetFlags . . . 1825
13.161.4.25 unzSetOffset . . . 1826
13.161.4.26 unzSetOffset64 . . . 1826
13.162 src/ckb/quazip/zip.c File Reference . . . 1827
13.162.1 Data Structure Documentation . . . 1830
13.162.1.1 struct linkedlist_datablock_internal_s . . . 1830
13.162.1.2 struct linkedlist_data_s . . . 1831
13.162.1.3 struct curfile64_info . . . 1832
13.162.1.4 struct zip64_internal . . . 1833
13.162.2 Macro Definition Documentation . . . 1833
13.162.2.1 ALLOC . . . 1834
13.162.2.2 BUFREADCOMMENT . . . 1834
13.162.2.3 CENTRALHEADERMAGIC . . . 1834
13.162.2.4 CRC_LOCALHEADER_OFFSET . . . 1834
13.162.2.5 DESCRIPTORHEADERMAGIC . . . 1834
13.162.2.6 ENDHEADERMAGIC . . . 1834
13.162.2.7 FLAG_LOCALHEADER_OFFSET . . . 1834
13.162.2.8 INCLUDECRYPTINGCODE_IFCRYPTALLOWED . . . 1834
13.162.2.9 local . . . 1834
13.162.2.10 LOCALHEADERMAGIC . . . 1834
13.162.2.11 MAKEULONG64 . . . 1835
13.162.2.12 SEEK_CUR . . . 1835
13.162.2.13 SEEK_END . . . 1835
13.162.2.14 SEEK_SET . . . 1835
13.162.2.15 SIZECENTRALHEADER . . . 1835
13.162.2.16 SIZEDATA_INDATABLOCK . . . 1835
13.162.2.17 TRYFREE . . . 1835
13.162.2.18 VERSIONMADEBY . . . 1835
13.162.2.19 Z_BUFSIZE . . . 1835
13.162.2.20 Z_MAXFILENAMEINZIP . . . 1835
13.162.2.21 ZIP64ENDHEADERMAGIC . . . 1836
13.162.2.22 ZIP64ENDLOCHEADERMAGIC . . . 1836
13.162.3 Typedef Documentation . . . 1836
13.162.3.1 linkedlist_data . . . 1836
13.162.3.2 linkedlist_datablock_internal . . . 1836
13.162.3.3 z_crc_t . . . 1836

13.162.4 Function Documentation . . . 1836
13.162.4.1 _Z_OF . . . 1836
13.162.4.2 _Z_OF . . . 1836
13.162.4.3 _Z_OF . . . 1836
13.162.4.4 _Z_OF . . . 1836
13.162.4.5 _Z_OF . . . 1836
13.162.4.6 _Z_OF . . . 1836
13.162.4.7 add_data_in_datablock . . . 1836
13.162.4.8 allocate_new_datablock . . . 1838
13.162.4.9 free_datablock . . . 1838
13.162.4.10 free_linkedlist . . . 1839
13.162.4.11 init_linkedlist . . . 1839
13.162.4.12 loadCentralDirectoryRecord . . . 1840
13.162.4.13 Write_EndOfCentralDirectoryRecord . . . 1843
13.162.4.14 Write_GlobalComment . . . 1845
13.162.4.15 Write_LocalFileHeader . . . 1845
13.162.4.16 Write_Zip64EndOfCentralDirectoryLocator . . . 1847
13.162.4.17 Write_Zip64EndOfCentralDirectoryRecord . . . 1848
13.162.4.18 zip64FlushWriteBuffer . . . 1850
13.162.4.19 zip64local_getByte . . . 1850
13.162.4.20 zip64local_getLong . . . 1851
13.162.4.21 zip64local_getLong64 . . . 1852
13.162.4.22 zip64local_getShort . . . 1853
13.162.4.23 zip64local_putValue . . . 1854
13.162.4.24 zip64local_putValue_inmemory . . . 1855
13.162.4.25 zip64local_SearchCentralDir . . . 1855
13.162.4.26 zip64local_SearchCentralDir64 . . . 1856
13.162.4.27 zip64local_TmzDateToDosDate . . . 1858
13.162.4.28 zipClearFlags . . . 1859
13.162.4.29 zipClose . . . 1859
13.162.4.30 zipCloseFileInZip . . . 1861
13.162.4.31 zipCloseFileInZipRaw . . . 1862
13.162.4.32 zipCloseFileInZipRaw64 . . . 1863
13.162.4.33 zipOpen . . . 1867
13.162.4.34 zipOpen2 . . . 1867
13.162.4.35 zipOpen2_64 . . . 1868
13.162.4.36 zipOpen3 . . . 1869
13.162.4.37 zipOpen64 . . . 1871
13.162.4.38 zipOpenNewFileInZip . . . 1872
13.162.4.39 zipOpenNewFileInZip2 . . . 1872

13.162.4.40 zipOpenNewFileInZip2_64 . . . 1873
13.162.4.41 zipOpenNewFileInZip3 . . . 1873
13.162.4.42 zipOpenNewFileInZip3_64 . . . 1874
13.162.4.43 zipOpenNewFileInZip4 . . . 1874
13.162.4.44 zipOpenNewFileInZip4_64 . . . 1875
13.162.4.45 zipOpenNewFileInZip64 . . . 1879
13.162.4.46 zipRemoveExtraInfoBlock . . . 1879
13.162.4.47 zipSetFlags . . . 1880
13.162.4.48 zipWriteInFileInZip . . . 1881
13.162.5 Variable Documentation . . . 1883
13.162.5.1 zip_copyright . . . 1883
13.163 src/ckb/quazip/zip.h File Reference . . . 1883
13.163.1 Data Structure Documentation . . . 1885
13.163.1.1 struct tm_zip_s . . . 1885
13.163.1.2 struct zip_fileinfo . . . 1886
13.163.2 Macro Definition Documentation . . . 1887
13.163.2.1 APPEND_STATUS_ADDINZIP . . . 1887
13.163.2.2 APPEND_STATUS_CREATE . . . 1887
13.163.2.3 APPEND_STATUS_CREATEAFTER . . . 1888
13.163.2.4 DEF_MEM_LEVEL . . . 1888
13.163.2.5 Z_BZIP2ED . . . 1888
13.163.2.6 ZIP_AUTO_CLOSE . . . 1888
13.163.2.7 ZIP_BADZIPFILE . . . 1888
13.163.2.8 ZIP_DEFAULT_FLAGS . . . 1888
13.163.2.9 ZIP_EOF . . . 1888
13.163.2.10 ZIP_ERRNO . . . 1888
13.163.2.11 ZIP_INTERNALERROR . . . 1888
13.163.2.12 ZIP_OK . . . 1889
13.163.2.13 ZIP_PARAMERROR . . . 1889
13.163.2.14 ZIP_SEQUENTIAL . . . 1889
13.163.2.15 ZIP_WRITE_DATA_DESCRIPTOR . . . 1889
13.163.3 Typedef Documentation . . . 1889
13.163.3.1 tm_zip . . . 1889
13.163.3.2 zipcharpc . . . 1889
13.163.3.3 zipFile . . . 1889
13.163.4 Function Documentation . . . 1889
13.163.4.1 _Z_OF . . . 1889
13.163.4.2 _Z_OF . . . 1889
13.163.4.3 _Z_OF . . . 1889
13.163.4.4 _Z_OF . . . 1890

13.163.4.5 _Z_OF . . . 1890
13.163.4.6 _Z_OF . . . 1890
13.163.4.7 _Z_OF . . . 1890
13.163.4.8 _Z_OF . . . 1890
13.163.4.9 _Z_OF . . . 1890
13.163.4.10 _Z_OF . . . 1890
13.163.4.11 _Z_OF . . . 1890
13.163.4.12 _Z_OF . . . 1890
13.163.4.13 _Z_OF . . . 1890
13.163.4.14 _Z_OF . . . 1890
13.163.4.15 _Z_OF . . . 1890
13.163.4.16 _Z_OF . . . 1890
13.163.4.17 _Z_OF . . . 1890
13.163.4.18 _pClearFlags . . . 1890
13.163.4.19 _pOpen3 . . . 1891
13.163.4.20 _pSetFlags . . . 1893
13.164 src/ckb/rebindwidget.cpp File Reference . . . 1894
13.164.1 Variable Documentation . . . 1894
13.164.1.1 DPI_CUST_IDX . . . 1894
13.164.1.2 DPI_OFFSET . . . 1894
13.165 src/ckb/rebindwidget.h File Reference . . . 1894
13.166 src/ckb/release/moc_animadddialog.cpp File Reference . . . 1895
13.166.1 Data Structure Documentation . . . 1896
13.166.1.1 struct qt_meta_stringdata_AnimAddDialog_t . . . 1896
13.166.2 Macro Definition Documentation . . . 1897
13.166.2.1 QT_MOC_LITERAL . . . 1897
13.166.3 Variable Documentation . . . 1897
13.166.3.1 qt_meta_data_AnimAddDialog . . . 1897
13.166.3.2 qt_meta_stringdata_AnimAddDialog . . . 1898
13.167 src/ckb/release/moc_animscript.cpp File Reference . . . 1898
13.167.1 Data Structure Documentation . . . 1899
13.167.1.1 struct qt_meta_stringdata_AnimScript_t . . . 1899
13.167.2 Macro Definition Documentation . . . 1900
13.167.2.1 QT_MOC_LITERAL . . . 1900
13.167.3 Variable Documentation . . . 1900
13.167.3.1 qt_meta_data_AnimScript . . . 1900
13.167.3.2 qt_meta_stringdata_AnimScript . . . 1901
13.168 src/ckb/release/moc_animsettingdialog.cpp File Reference . . . 1901
13.168.1 Data Structure Documentation . . . 1902
13.168.1.1 struct qt_meta_stringdata_AnimSettingDialog_t . . . 1902

13.168.2 Macro Definition Documentation . . . 1902
13.168.2.1 QT_MOC_LITERAL . . . 1902
13.168.3 Variable Documentation . . . 1903
13.168.3.1 qt_meta_data_AnimSettingDialog . . . 1903
13.168.3.2 qt_meta_stringdata_AnimSettingDialog . . . 1903
13.169 src/ckb/release/moc_ckbsettingswriter.cpp File Reference . . . 1904
13.169.1 Data Structure Documentation . . . 1904
13.169.1.1 struct qt_meta_stringdata_CkbSettingsWriter_t . . . 1904
13.169.2 Macro Definition Documentation . . . 1905
13.169.2.1 QT_MOC_LITERAL . . . 1905
13.169.3 Variable Documentation . . . 1905
13.169.3.1 qt_meta_data_CkbSettingsWriter . . . 1905
13.169.3.2 qt_meta_stringdata_CkbSettingsWriter . . . 1906
13.170 src/ckb/release/moc_colorbutton.cpp File Reference . . . 1906
13.170.1 Data Structure Documentation . . . 1907
13.170.1.1 struct qt_meta_stringdata_ColorButton_t . . . 1907
13.170.2 Macro Definition Documentation . . . 1907
13.170.2.1 QT_MOC_LITERAL . . . 1907
13.170.3 Variable Documentation . . . 1908
13.170.3.1 qt_meta_data_ColorButton . . . 1908
13.170.3.2 qt_meta_stringdata_ColorButton . . . 1908
13.171 src/ckb/release/moc_extrasettingswidget.cpp File Reference . . . 1908
13.171.1 Data Structure Documentation . . . 1909
13.171.1.1 struct qt_meta_stringdata_ExtraSettingsWidget_t . . . 1909
13.171.2 Macro Definition Documentation . . . 1910
13.171.2.1 QT_MOC_LITERAL . . . 1910
13.171.3 Variable Documentation . . . 1910
13.171.3.1 qt_meta_data_ExtraSettingsWidget . . . 1910
13.171.3.2 qt_meta_stringdata_ExtraSettingsWidget . . . 1910
13.172 src/ckb/release/moc_fwupgradedialog.cpp File Reference . . . 1911
13.172.1 Data Structure Documentation . . . 1912
13.172.1.1 struct qt_meta_stringdata_FwUpgradeDialog_t . . . 1912
13.172.2 Macro Definition Documentation . . . 1913
13.172.2.1 QT_MOC_LITERAL . . . 1913
13.172.3 Variable Documentation . . . 1913
13.172.3.1 qt_meta_data_FwUpgradeDialog . . . 1913
13.172.3.2 qt_meta_stringdata_FwUpgradeDialog . . . 1914
13.173 src/ckb/release/moc_gradientbutton.cpp File Reference . . . 1914
13.173.1 Data Structure Documentation . . . 1915
13.173.1.1 struct qt_meta_stringdata_GradientButton_t . . . 1915

13.173.2 Macro Definition Documentation . . . 1916
13.173.2.1 QT_MOC_LITERAL . . . 1916
13.173.3 Variable Documentation . . . 1916
13.173.3.1 qt_meta_data_GradientButton . . . 1916
13.173.3.2 qt_meta_stringdata_GradientButton . . . 1917
13.174 src/ckb/release/moc_gradientdialog.cpp File Reference . . . 1917
13.174.1 Data Structure Documentation . . . 1918
13.174.1.1 struct qt_meta_stringdata_GradientDialog_t . . . 1918
13.174.2 Macro Definition Documentation . . . 1918
13.174.2.1 QT_MOC_LITERAL . . . 1918
13.174.3 Variable Documentation . . . 1919
13.174.3.1 qt_meta_data_GradientDialog . . . 1919
13.174.3.2 qt_meta_stringdata_GradientDialog . . . 1919
13.175 src/ckb/release/moc_gradientdialogwidget.cpp File Reference . . . 1920
13.175.1 Data Structure Documentation . . . 1920
13.175.1.1 struct qt_meta_stringdata_GradientDialogWidget_t . . . 1920
13.175.2 Macro Definition Documentation . . . 1921
13.175.2.1 QT_MOC_LITERAL . . . 1921
13.175.3 Variable Documentation . . . 1921
13.175.3.1 qt_meta_data_GradientDialogWidget . . . 1921
13.175.3.2 qt_meta_stringdata_GradientDialogWidget . . . 1922
13.176 src/ckb/release/moc_kb.cpp File Reference . . . 1922
13.176.1 Data Structure Documentation . . . 1923
13.176.1.1 struct qt_meta_stringdata_Kb_t . . . 1923
13.176.2 Macro Definition Documentation . . . 1924
13.176.2.1 QT_MOC_LITERAL . . . 1924
13.176.3 Variable Documentation . . . 1924
13.176.3.1 qt_meta_data_Kb . . . 1924
13.176.3.2 qt_meta_stringdata_Kb . . . 1924
13.177 src/ckb/release/moc_kbanim.cpp File Reference . . . 1925
13.177.1 Data Structure Documentation . . . 1925
13.177.1.1 struct qt_meta_stringdata_KbAnim_t . . . 1925
13.177.2 Macro Definition Documentation . . . 1926
13.177.2.1 QT_MOC_LITERAL . . . 1926
13.177.3 Variable Documentation . . . 1926
13.177.3.1 qt_meta_data_KbAnim . . . 1926
13.177.3.2 qt_meta_stringdata_KbAnim . . . 1927
13.178 src/ckb/release/moc_kbanimwidget.cpp File Reference . . . 1927
13.178.1 Data Structure Documentation . . . 1928
13.178.1.1 struct qt_meta_stringdata_KbAnimWidget_t . . . 1928

13.178.2 Macro Definition Documentation . . . 1929
13.178.2.1 QT_MOC_LITERAL . . . 1929
13.178.3 Variable Documentation . . . 1929
13.178.3.1 qt_meta_data_KbAnimWidget . . . 1929
13.178.3.2 qt_meta_stringdata_KbAnimWidget . . . 1929
13.179 src/ckb/release/moc_kbbind.cpp File Reference . . . 1930
13.179.1 Data Structure Documentation . . . 1930
13.179.1.1 struct qt_meta_stringdata_KbBind_t . . . 1930
13.179.2 Macro Definition Documentation . . . 1931
13.179.2.1 QT_MOC_LITERAL . . . 1931
13.179.3 Variable Documentation . . . 1931
13.179.3.1 qt_meta_data_KbBind . . . 1931
13.179.3.2 qt_meta_stringdata_KbBind . . . 1931
13.180 src/ckb/release/moc_kbbindwidget.cpp File Reference . . . 1932
13.180.1 Data Structure Documentation . . . 1933
13.180.1.1 struct qt_meta_stringdata_KbBindWidget_t . . . 1933
13.180.2 Macro Definition Documentation . . . 1933
13.180.2.1 QT_MOC_LITERAL . . . 1933
13.180.3 Variable Documentation . . . 1934
13.180.3.1 qt_meta_data_KbBindWidget . . . 1934
13.180.3.2 qt_meta_stringdata_KbBindWidget . . . 1934
13.181 src/ckb/release/moc_kbfirmware.cpp File Reference . . . 1934
13.181.1 Data Structure Documentation . . . 1935
13.181.1.1 struct qt_meta_stringdata_KbFirmware_t . . . 1935
13.181.2 Macro Definition Documentation . . . 1936
13.181.2.1 QT_MOC_LITERAL . . . 1936
13.181.3 Variable Documentation . . . 1936
13.181.3.1 qt_meta_data_KbFirmware . . . 1936
13.181.3.2 qt_meta_stringdata_KbFirmware . . . 1937
13.182 src/ckb/release/moc_kblight.cpp File Reference . . . 1937
13.182.1 Data Structure Documentation . . . 1938
13.182.1.1 struct qt_meta_stringdata_KbLight_t . . . 1938
13.182.2 Macro Definition Documentation . . . 1939
13.182.2.1 QT_MOC_LITERAL . . . 1939
13.182.3 Variable Documentation . . . 1939
13.182.3.1 qt_meta_data_KbLight . . . 1939
13.182.3.2 qt_meta_stringdata_KbLight . . . 1940
13.183 src/ckb/release/moc_kblightwidget.cpp File Reference . . . 1940
13.183.1 Data Structure Documentation . . . 1941
13.183.1.1 struct qt_meta_stringdata_KbLightWidget_t . . . 1941

13.183.2 Macro Definition Documentation . . . 1942
13.183.2.1 QT_MOC_LITERAL . . . 1942
13.183.3 Variable Documentation . . . 1942
13.183.3.1 qt_meta_data_KbLightWidget . . . 1942
13.183.3.2 qt_meta_stringdata_KbLightWidget . . . 1942
13.184 src/ckb/release/moc_kbmanager.cpp File Reference . . . 1943
13.184.1 Data Structure Documentation . . . 1943
13.184.1.1 struct qt_meta_stringdata_KbManager_t . . . 1943
13.184.2 Macro Definition Documentation . . . 1944
13.184.2.1 QT_MOC_LITERAL . . . 1944
13.184.3 Variable Documentation . . . 1944
13.184.3.1 qt_meta_data_KbManager . . . 1944
13.184.3.2 qt_meta_stringdata_KbManager . . . 1944
13.185 src/ckb/release/moc_kbmode.cpp File Reference . . . 1945
13.185.1 Data Structure Documentation . . . 1946
13.185.1.1 struct qt_meta_stringdata_KbMode_t . . . 1946
13.185.2 Macro Definition Documentation . . . 1946
13.185.2.1 QT_MOC_LITERAL . . . 1946
13.185.3 Variable Documentation . . . 1947
13.185.3.1 qt_meta_data_KbMode . . . 1947
13.185.3.2 qt_meta_stringdata_KbMode . . . 1947
13.186 src/ckb/release/moc_kbperf.cpp File Reference . . . 1947
13.186.1 Data Structure Documentation . . . 1948
13.186.1.1 struct qt_meta_stringdata_KbPerf_t . . . 1948
13.186.2 Macro Definition Documentation . . . 1949
13.186.2.1 QT_MOC_LITERAL . . . 1949
13.186.3 Variable Documentation . . . 1949
13.186.3.1 qt_meta_data_KbPerf . . . 1949
13.186.3.2 qt_meta_stringdata_KbPerf . . . 1950
13.187 src/ckb/release/moc_kbprofile.cpp File Reference . . . 1950
13.187.1 Data Structure Documentation . . . 1951
13.187.1.1 struct qt_meta_stringdata_KbProfile_t . . . 1951
13.187.2 Macro Definition Documentation . . . 1951
13.187.2.1 QT_MOC_LITERAL . . . 1951
13.187.3 Variable Documentation . . . 1952
13.187.3.1 qt_meta_data_KbProfile . . . 1952
13.187.3.2 qt_meta_stringdata_KbProfile . . . 1952
13.188 src/ckb/release/moc_kbprofiledialog.cpp File Reference . . . 1952
13.188.1 Data Structure Documentation . . . 1953
13.188.1.1 struct qt_meta_stringdata_KbProfileDialog_t . . . 1953

13.188.2 Macro Definition Documentation . . . 1954
13.188.2.1 QT_MOC_LITERAL . . . 1954
13.188.3 Variable Documentation . . . 1954
13.188.3.1 qt_meta_data_KbProfileDialog . . . 1954
13.188.3.2 qt_meta_stringdata_KbProfileDialog . . . 1955
13.189 src/ckb/release/moc_kbwidget.cpp File Reference . . . 1956
13.189.1 Data Structure Documentation . . . 1956
13.189.1.1 struct qt_meta_stringdata_KbWidget_t . . . 1956
13.189.2 Macro Definition Documentation . . . 1957
13.189.2.1 QT_MOC_LITERAL . . . 1957
13.189.3 Variable Documentation . . . 1957
13.189.3.1 qt_meta_data_KbWidget . . . 1957
13.189.3.2 qt_meta_stringdata_KbWidget . . . 1957
13.190 src/ckb/release/moc_keyaction.cpp File Reference . . . 1958
13.190.1 Data Structure Documentation . . . 1958
13.190.1.1 struct qt_meta_stringdata_KeyAction_t . . . 1958
13.190.2 Macro Definition Documentation . . . 1959
13.190.2.1 QT_MOC_LITERAL . . . 1959
13.190.3 Variable Documentation . . . 1959
13.190.3.1 qt_meta_data_KeyAction . . . 1959
13.190.3.2 qt_meta_stringdata_KeyAction . . . 1960
13.191 src/ckb/release/moc_keywidget.cpp File Reference . . . 1960
13.191.1 Data Structure Documentation . . . 1961
13.191.1.1 struct qt_meta_stringdata_KeyWidget_t . . . 1961
13.191.2 Macro Definition Documentation . . . 1961
13.191.2.1 QT_MOC_LITERAL . . . 1961
13.191.3 Variable Documentation . . . 1962
13.191.3.1 qt_meta_data_KeyWidget . . . 1962
13.191.3.2 qt_meta_stringdata_KeyWidget . . . 1962
13.192 src/ckb/release/moc_kperfwidget.cpp File Reference . . . 1962
13.192.1 Data Structure Documentation . . . 1963
13.192.1.1 struct qt_meta_stringdata_KPerfWidget_t . . . 1963
13.192.2 Macro Definition Documentation . . . 1964
13.192.2.1 QT_MOC_LITERAL . . . 1964
13.192.3 Variable Documentation . . . 1964
13.192.3.1 qt_meta_data_KPerfWidget . . . 1964
13.192.3.2 qt_meta_stringdata_KPerfWidget . . . 1965
13.193 src/ckb/release/moc_layoutdialog.cpp File Reference . . . 1965
13.193.1 Data Structure Documentation . . . 1966
13.193.1.1 struct qt_meta_stringdata_LayoutDialog_t . . . 1966

13.193.2 Macro Definition Documentation . . . 1967
13.193.2.1 QT_MOC_LITERAL . . . 1967
13.193.3 Variable Documentation . . . 1967
13.193.3.1 qt_meta_data_LayoutDialog . . . 1967
13.193.3.2 qt_meta_stringdata_LayoutDialog . . . 1968
13.194 src/ckb/release/moc_macroreader.cpp File Reference . . . 1968
13.194.1 Data Structure Documentation . . . 1969
13.194.1.1 struct qt_meta_stringdata_MacroReaderThread_t . . . 1969
13.194.1.2 struct qt_meta_stringdata_MacroReader_t . . . 1969
13.194.2 Macro Definition Documentation . . . 1970
13.194.2.1 QT_MOC_LITERAL . . . 1970
13.194.2.2 QT_MOC_LITERAL . . . 1970
13.194.3 Variable Documentation . . . 1970
13.194.3.1 qt_meta_data_MacroReader . . . 1971
13.194.3.2 qt_meta_data_MacroReaderThread . . . 1971
13.194.3.3 qt_meta_stringdata_MacroReader . . . 1971
13.194.3.4 qt_meta_stringdata_MacroReaderThread . . . 1971
13.195 src/ckb/release/moc_mainwindow.cpp File Reference . . . 1972
13.195.1 Data Structure Documentation . . . 1973
13.195.1.1 struct qt_meta_stringdata_MainWindow_t . . . 1973
13.195.2 Macro Definition Documentation . . . 1973
13.195.2.1 QT_MOC_LITERAL . . . 1973
13.195.3 Variable Documentation . . . 1973
13.195.3.1 qt_meta_data_MainWindow . . . 1973
13.195.3.2 qt_meta_stringdata_MainWindow . . . 1974
13.196 src/ckb/release/moc_modeselectdialog.cpp File Reference . . . 1974
13.196.1 Data Structure Documentation . . . 1974
13.196.1.1 struct qt_meta_stringdata_ModeSelectDialog_t . . . 1974
13.196.2 Macro Definition Documentation . . . 1975
13.196.2.1 QT_MOC_LITERAL . . . 1975
13.196.3 Variable Documentation . . . 1975
13.196.3.1 qt_meta_data_ModeSelectDialog . . . 1975
13.196.3.2 qt_meta_stringdata_ModeSelectDialog . . . 1976
13.197 src/ckb/release/moc_mperfwidget.cpp File Reference . . . 1976
13.197.1 Data Structure Documentation . . . 1977
13.197.1.1 struct qt_meta_stringdata_MPerfWidget_t . . . 1977
13.197.2 Macro Definition Documentation . . . 1977
13.197.2.1 QT_MOC_LITERAL . . . 1977
13.197.3 Variable Documentation . . . 1978
13.197.3.1 qt_meta_data_MPerfWidget . . . 1978

13.197.3.2 qt_meta_stringdata_MPerfWidget . . . 1978
13.198 src/ckb/release/moc_quagzipfile.cpp File Reference . . . 1979
13.198.1 Data Structure Documentation . . . 1979
13.198.1.1 struct qt_meta_stringdata_QuaGzipFile_t . . . 1979
13.198.2 Macro Definition Documentation . . . 1980
13.198.2.1 QT_MOC_LITERAL . . . 1980
13.198.3 Variable Documentation . . . 1980
13.198.3.1 qt_meta_data_QuaGzipFile . . . 1980
13.198.3.2 qt_meta_stringdata_QuaGzipFile . . . 1981
13.199 src/ckb/release/moc_quaziodevice.cpp File Reference . . . 1981
13.199.1 Data Structure Documentation . . . 1982
13.199.1.1 struct qt_meta_stringdata_QuaZIODevice_t . . . 1982
13.199.2 Macro Definition Documentation . . . 1982
13.199.2.1 QT_MOC_LITERAL . . . 1982
13.199.3 Variable Documentation . . . 1983
13.199.3.1 qt_meta_data_QuaZIODevice . . . 1983
13.199.3.2 qt_meta_stringdata_QuaZIODevice . . . 1983
13.200 src/ckb/release/moc_quazipfile.cpp File Reference . . . 1983
13.200.1 Data Structure Documentation . . . 1984
13.200.1.1 struct qt_meta_stringdata_QuaZipFile_t . . . 1984
13.200.2 Macro Definition Documentation . . . 1984
13.200.2.1 QT_MOC_LITERAL . . . 1984
13.200.3 Variable Documentation . . . 1985
13.200.3.1 qt_meta_data_QuaZipFile . . . 1985
13.200.3.2 qt_meta_stringdata_QuaZipFile . . . 1985
13.201 src/ckb/release/moc_rebindwidget.cpp File Reference . . . 1985
13.201.1 Data Structure Documentation . . . 1986
13.201.1.1 struct qt_meta_stringdata_RebindWidget_t . . . 1986
13.201.2 Macro Definition Documentation . . . 1987
13.201.2.1 QT_MOC_LITERAL . . . 1987
13.201.3 Variable Documentation . . . 1987
13.201.3.1 qt_meta_data_RebindWidget . . . 1987
13.201.3.2 qt_meta_stringdata_RebindWidget . . . 1987
13.202 src/ckb/release/moc_rlistwidget.cpp File Reference . . . 1988
13.202.1 Data Structure Documentation . . . 1988
13.202.1.1 struct qt_meta_stringdata_RListWidget_t . . . 1988
13.202.2 Macro Definition Documentation . . . 1989
13.202.2.1 QT_MOC_LITERAL . . . 1989
13.202.3 Variable Documentation . . . 1989
13.202.3.1 qt_meta_data_RListWidget . . . 1989

13.202.3.2 qt_meta_stringdata_RListWidget . . . 1989
13.203 src/ckb/release/moc_settingswidget.cpp File Reference . . . 1990
13.203.1 Data Structure Documentation . . . 1991
13.203.1.1 struct qt_meta_stringdata_SettingsWidget_t . . . 1991
13.203.2 Macro Definition Documentation . . . 1991
13.203.2.1 QT_MOC_LITERAL . . . 1991
13.203.3 Variable Documentation . . . 1992
13.203.3.1 qt_meta_data_SettingsWidget . . . 1992
13.203.3.2 qt_meta_stringdata_SettingsWidget . . . 1992
13.204 src/ckb/release/qrc_binary.cpp File Reference . . . 1992
13.204.1 Macro Definition Documentation . . . 1993
13.204.1.1 QT_RCC_MANGLE_NAMESPACE . . . 1993
13.204.1.2 QT_RCC_PREPEND_NAMESPACE . . . 1993
13.204.2 Function Documentation . . . 1993
13.204.2.1 qCleanupResources_binary . . . 1993
13.204.2.2 qInitResources_binary . . . 1994
13.204.2.3 qRegisterResourceData . . . 1994
13.204.2.4 qUnregisterResourceData . . . 1994
13.204.3 Variable Documentation . . . 1995
13.204.3.1 qt_resource_data . . . 1995
13.204.3.2 qt_resource_name . . . 1995
13.204.3.3 qt_resource_struct . . . 1995
13.205 src/ckb/release/qrc_image.cpp File Reference . . . 1995
13.205.1 Macro Definition Documentation . . . 1996
13.205.1.1 QT_RCC_MANGLE_NAMESPACE . . . 1996
13.205.1.2 QT_RCC_PREPEND_NAMESPACE . . . 1996
13.205.2 Function Documentation . . . 1996
13.205.2.1 qCleanupResources_image . . . 1996
13.205.2.2 qInitResources_image . . . 1996
13.205.2.3 qRegisterResourceData . . . 1997
13.205.2.4 qUnregisterResourceData . . . 1997
13.205.3 Variable Documentation . . . 1997
13.205.3.1 qt_resource_data . . . 1997
13.205.3.2 qt_resource_name . . . 1997
13.205.3.3 qt_resource_struct . . . 1998
13.206 src/ckb/release/qrc_text.cpp File Reference . . . 1998
13.206.1 Macro Definition Documentation . . . 1998
13.206.1.1 QT_RCC_MANGLE_NAMESPACE . . . 1998
13.206.1.2 QT_RCC_PREPEND_NAMESPACE . . . 1998
13.206.2 Function Documentation . . . 1998

13.206.2.1 qCleanupResources_text . . . 1998
13.206.2.2 qInitResources_text . . . 1999
13.206.2.3 qRegisterResourceData . . . 1999
13.206.2.4 qUnregisterResourceData . . . 2000
13.206.3 Variable Documentation . . . 2000
13.206.3.1 qt_resource_data . . . 2000
13.206.3.2 qt_resource_name . . . 2000
13.206.3.3 qt_resource_struct . . . 2000
13.207 src/ckb/rlistwidget.cpp File Reference . . . 2001
13.208 src/ckb/rlistwidget.h File Reference . . . 2001
13.209 src/ckb/settingswidget.cpp File Reference . . . 2002
13.209.1 Function Documentation . . . 2003
13.209.1.1 right . . . 2003
13.209.2 Variable Documentation . . . 2003
13.209.2.1 devpath . . . 2003
13.209.2.2 modKeys . . . 2003
13.209.2.3 modNames . . . 2004
13.210 src/ckb/settingswidget.h File Reference . . . 2004
13.211 src/ckb/ui_animadddialog.h File Reference . . . 2005
13.212 src/ckb/ui_animsettingdialog.h File Reference . . . 2005
13.213 src/ckb/ui_extrasettingswidget.h File Reference . . . 2006
13.214 src/ckb/ui_fwupgradedialog.h File Reference . . . 2007
13.215 src/ckb/ui_gradientdialog.h File Reference . . . 2008
13.216 src/ckb/ui_kbanimwidget.h File Reference . . . 2009
13.217 src/ckb/ui_kbbindwidget.h File Reference . . . 2010
13.218 src/ckb/ui_kblightwidget.h File Reference . . . 2011
13.219 src/ckb/ui_kbprofiledialog.h File Reference . . . 2012
13.220 src/ckb/ui_kbwidget.h File Reference . . . 2013
13.221 src/ckb/ui_kperfwidget.h File Reference . . . 2014
13.222 src/ckb/ui_layoutdialog.h File Reference . . . 2015
13.223 src/ckb/ui_mainwindow.h File Reference . . . 2016
13.224 src/ckb/ui_modeselectdialog.h File Reference . . . 2017
13.225 src/ckb/ui_mperfwidget.h File Reference . . . 2018
13.226 src/ckb/ui_rebindwidget.h File Reference . . . 2019
13.227 src/ckb/ui_settingswidget.h File Reference . . . 2020

Index **2022**

Chapter 1

ckb-next: RGB Driver for Linux and OS X

ckb-next is an open-source driver for Corsair keyboards and mice. It aims to bring the features of their proprietary CUE software to the Linux and Mac operating systems. This project is currently a work in progress, but it already supports much of the same functionality, including full RGB animations. More features are coming soon. Testing and bug reports are appreciated!

Disclaimer: ckb-next is not an official Corsair product. It is licensed under the GNU General Public License (version 2) in the hope that it will be useful, but with NO WARRANTY of any kind.

- Device Support
  - Keyboards
  - Mice
- Linux Installation
  - Pre-made packages
  - Preparation
  - Installing
  - Upgrading
  - Uninstalling
- OS X/macOS Installation
  - Binary download
  - Building from source
  - Upgrading (binary)
  - Upgrading (source)
  - Uninstalling
- Usage
  - Major features
  - Roadmap
- Troubleshooting
  - Linux
  - OS X/macOS
  - General
  - Reporting issues
- Known issues

- Contributing
- Contact us
- What happened to the original ckb

See also:

- https://github.com/mattanger/ckb-next/blob/master/DAEMON.md "Manual for the driver daemon"
- ckb testing repository (updated more frequently, but may be unstable)

Device Support

Keyboards

- K65 RGB
- K70
- K70 RGB
- K70 LUX RGB
- K95*
- K95 RGB
- Strafe
- Strafe RGB
- = hardware playback not supported. Settings will be saved to software only.

Mice

- M65 RGB
- M65 PRO RGB
- Sabre RGB
- Scimitar RGB

Linux Installation

Pre-made packages

- Fedora 24/25, CentOS/RHEL 7 (maintained by):
  - `johanh/ckb` - based on `master` branch
- Arch Linux (maintained by ,):
  - `aur/ckb-next-git` - based on `master` branch (more stable)
  - `aur/ckb-next-latest-git` - based on `testing` branch (less stable but fresher)

If you are a package maintainer or want to discuss something with package maintainers let us know in #5, so we can have an accountable and centralized communication about this. *If you would like to maintain a package for your favorite distro/OS, please let us know as well.*

Preparation

ckb-next requires Qt5 (Qt 5.8 is recommended), libudev, zlib, gcc, g++, and glibc.

- Ubuntu: `sudo apt-get install build-essential libudev-dev qt5-default zlib1g-dev libappindicator-dev`
- Fedora: `sudo dnf install zlib-devel qt5-qtbase-devel libgudev-devel libappindicator-de systemd-devel gcc-c++`
- Arch: `sudo pacman -S base-devel qt5-base zlib`
- Other distros: Look for `qt5` or `libqt5*-devel`

Note: If you build your own kernels, ckb-next requires the `CONFIG_INPUT_UINPUT` flag to be enabled. It is located in `Device Drivers -> Input Device Support -> Miscellaneous devices -> User level driver support`. If you don't know what this means, you can ignore this.

Installing

You can download ckb-next using the "Download zip" option on the right or clone it using `git clone`. Extract it and open the ckb-master directory in a terminal. Run `./quickinstall`. It will attempt to build ckb and then ask if you'd like to install/run the application. If the build doesn't succeed, or if you'd like to hand-tune the compilation of ckb, see https://github.com/mattanger/ckb-next/blob/master/BUILD.md "'BUILD.md'" for instructions.

Upgrading

To install a new version of ckb, or to reinstall the same version, first delete the ckb-master directory and the zip file from your previous download. Then download the source code again and re-run `./quickinstall`. The script will automatically replace the previous installation. You may need to reboot afterward.

Uninstalling

First, stop the ckb-daemon service and remove the service file.

- If you have systemd (Ubuntu versions starting with 15.04): "' sudo systemctl stop ckb-daemon sudo rm -f /usr/lib/systemd/system/ckb-daemon.service "'
- If you have Upstart (Ubuntu versions earlier than 15.04): "' sudo service ckb-daemon stop sudo rm -f /etc/init/ckb-daemon.conf "'
- If you have OpenRC: "' sudo rc-service ckb-daemon stop sudo rc-update del ckb-daemon default sudo rm -f /etc/init.d/ckb-daemon "
- `If you're not sure, re-run the`quickinstall`script and proceed to the service installation. The script will say`System service: Upstart detected`or`System service: systemd detected'. Please be aware that OpenRC is currently not detected automatically.

Afterward, remove the applications and related files: "' sudo rm -f /usr/bin/ckb /usr/bin/ckb-daemon /usr/share/applications/ckb.desktop /usr/share/icons/hicolor/512x512/apps/ckb.png sudo rm -rf /usr/lib/ckb-animations "'

Before `https://github.com/mattanger/ckb-next/commit/f347e60df211c60452f95084b6c46dc4ec5f42` animations were located elsewhere, try removing them as well: "' sudo rm -rf /usr/bin/ckb-animations "'

OS X/macOS Installation

Binary download

macOS `pkg` can be downloaded from `GitHub Releases`. It is always built with the last available stable Qt version and tagrets 10.10 SDK. If you run 10.9.x, you'll need to build the project from source and comment out `src/ckb-heat` (and the backslash above it) inside `ckb.pro`.

Building from source

Install the latest version of Xcode from the App Store. While it's downloading, open the Terminal and execute `xcode-select --install` to install Command Line Tools. Then open Xcode, accept the license agreement and wait for it to install any additional components (if necessary). When you see the "Welcome to Xcode" screen, from the top bar choose `Xcode -> Preferences -> Locations -> Command Line Tools` and select an SDK version. Afterwards install Qt5 from here: `http://www.qt.io/download-open-source/`

The easiest way to build the driver is with the `quickinstall` script, which is present in the ckb-master folder. Double-click on `quickinstall` and it will compile the app for you, then ask if you'd like to install it system-wide. If the build fails for any reason, or if you'd like to compile and install manually, see https://github.com/ccMS-C/ckb/blob/master/BUILD.md "'BUILD.md'".

Upgrading (binary)

Download the latest `ckb.pkg`, run the installer, and reboot. The newly-installed driver will replace the old one.

Upgrading (source)

Remove the existing ckb-master directory and zip file. Re-download the source code and run the `quickinstall` script again. The script will automatically replace the previous installation. You may need to reboot afterward.

Uninstalling

Drag `ckb.app` into the trash. Then stop and remove the agent:

"'sh sudo unload /Library/LaunchDaemons/com.ckb.daemon.plist sudo rm /Library/LaunchDaemons/com.ckb.-daemon.plist "'

Usage

The user interface is still a work in progress.

Major features

- Control multiple devices independently
- United States and European keyboard layouts
- Customizable key bindings
- Per-key lighting and animation
- Reactive lighting
- Multiple profiles/modes with hardware save function
- Adjustable mouse DPI with ability to change DPI on button press

Closing ckb will actually minimize it to the system tray. Use the Quit option from the tray icon or the settings screen to exit the application.

Roadmap

- **v0.3 release:**
- Ability to store profiles separately from devices, import/export them
- More functions for the Win Lock key
- Key macros
- **v0.4 release:**
- Ability to import CUE profiles
- Ability to tie profiles to which application has focus
- **v0.5 release:**
- Key combos
- Timers?
- **v1.0 release:**
- OSD? (Not sure if this can actually be done)
- Extra settings?
- ????

Troubleshooting

Linux

If you have problems connecting the device to your system (device doesn't respond, ckb-daemon doesn't recognize or can't connect it) and/or you experience long boot times when using the keyboard, try adding the following to your kernel's `cmdline`:

- K65 RGB: `usbhid.quirks=0x1B1C:0x1B17:0x20000408`
- K70: `usbhid.quirks=0x1B1C:0x1B09:0x20000408`
- K70 LUX: `usbhid.quirks=0x1B1C:0x1B36:0x20000408`
- K70 RGB: `usbhid.quirks=0x1B1C:0x1B13:0x20000408`
- K95: `usbhid.quirks=0x1B1C:0x1B08:0x20000408`
- K95 RGB: `usbhid.quirks=0x1B1C:0x1B11:0x20000408`
- Strafe: `usbhid.quirks=0x1B1C:0x1B15:0x20000408`
- Strafe RGB: `usbhid.quirks=0x1B1C:0x1B20:0x20000408`
- M65 RGB: `usbhid.quirks=0x1B1C:0x1B12:0x20000408`
- Sabre RGB Optical: `usbhid.quirks=0x1B1C:0x1B14:0x20000408`
- Sabre RGB Laser: `usbhid.quirks=0x1B1C:0x1B19:0x20000408`
- Scimitar RGB: `usbhid.quirks=0x1B1C:0x1B1E:0x20000408`

For instructions on adding `cmdline` parameters in Ubuntu, see https://wiki.ubuntu.com/Kernel/-KernelBootParameters

If you have multiple devices, combine them with commas, starting after the =. For instance, for K70 RGB + M65 RGB: `usbhid.quirks=0x1B1C:0x1B13:0x20000408,0x1B1C:0x1B12:0x20000408`

If it still doesn't work, try replacing `0x20000408` with `0x4`. Note that this will cause the kernel driver to ignore the device(s) completely, so you need to ensure ckb-daemon is running at boot or else you'll have no input. This will not work if you are using full-disk encryption.

If you see **GLib** critical errors like "' GLib-GObject-CRITICAL **: g_type_add_interface_static: assertion 'G_TYPE-_IS_INSTANTIATABLE (instance_type)' failed "' read this Arch Linux thread and try different combinations from it. If it doesn't help, you might want get support from your distribution community and tell them you cannot solve the problem in this thread.

If you're using **Unity** and the tray icon doesn't appear correctly, run `sudo apt-get install libappindicator-dev`. Then reinstall ckb.

OS X/macOS

- **"ckb.pkg" can't be opened because it is from an unidentified developer** Open `System Preferences > Security & Privacy > General` and click `Open Anyway`.
- **Modifier keys (Shift, Ctrl, etc.) are not rebound correctly** ckb does not recognize modifier keys rebound from System Preferences. You can rebind them again within the application.
- **~ key prints §± Check your keyboard layout on ckb's Settings screen. Choose the layout that matches your physical keyboard.
- **Compile problems** Can usually be resolved by rebooting your computer and/or reinstalling Qt. Make sure that Xcode works on its own. If a compile fails, delete the `ckb-master` directory as well as any automatically generated `build-ckb` folders and try again from a new download.
- **Scroll wheel does not scroll** As of #c3474d2 it's now possible to **disable scroll acceleration** from the GUI. You can access it under "OSX tweaks" in the "More settings" screen. Once disabled, the scroll wheel should behave consistently.

General

Please ensure your keyboard firmware is up to date. If you've just bought the keyboard, connect it to a Windows computer first and update the firmware from Corsair's official utility.

Before reporting an issue, connect your keyboard to a Windows computer and see if the problem still occurs. If it does, contact Corsair. Additionally, please check the Corsair user forums to see if your issue has been reported by other users. If so, try their solutions first.

Common issues:

- **Problem:** ckb says "No devices connected" or "Driver inactive"
- **Solution:** Try rebooting the computer and/or reinstalling ckb. Try removing the keyboard and plugging it back in. If the error doesn't go away, try the following:
- **Problem:** Keyboard doesn't work in BIOS, doesn't work at boot
- **Solution:** Some BIOSes have trouble communicating with the keyboard. They may prevent the keyboard from working correctly in the operating system as well. First, try booting the OS *without* the keyboard attached, and plug the keyboard in after logging in. If the keyboard works after the computer is running but does not work at boot, you may need to use the keyboard's BIOS mode option.
- BIOS mode can be activated using the poll rate switch at the back of the keyboard. Slide it all the way to the position marked "BIOS". You should see the scroll lock light blinking to indicate that it is on. (Note: Unfortunately, this has its own problems - see Known Issues. You may need to activate BIOS mode when booting the computer and deactivate it after logging in).

- **Problem:** Keyboard isn't detected when plugged in, even if driver is already running
- **Solution:** Try moving to a different USB port. Be sure to follow `Corsair's USB connection requirements`. Note that the keyboard does not work with some USB3 controllers - if you have problems with USB3 ports, try USB2 instead. If you have any USB hubs on hand, try those as well. You may also have success sliding the poll switch back and forth a few times.

Reporting issues

If you have a problem that you can't solve (and it isn't mentioned in the Known Issues section below), you can report it on `the GitHub issue tracker`. Before opening a new issue, please check to see if someone else has reported your problem already - if so, feel free to leave a comment there.

Known issues

- Using the keyboard in BIOS mode prevents the media keys (including mute and volume wheel), as well as the K95's G-keys from working. This is a hardware limitation.
- The tray icon doesn't appear in some desktop environments. This is a known Qt bug. If you can't see the icon, reopen ckb to bring the window back.
- When starting the driver manually, the Terminal window sometimes gets spammed with enter keys. You can stop it by unplugging and replugging the keyboard or by moving the poll rate switch.
- When stopping the driver manually, the keyboard sometimes stops working completely. You can reconnect it by moving the poll rate switch.
- On newer versions of macOS (i.e. 10.12 and up) CMD/Shift+select does not work, yet. Stopping the daemon and GUI for `ckb` will fix this issue temporarily.

Contributing

You can contribute to the project by `opening a pull request`. It's best if you base your changes off of the `testing` branch as opposed to the `master`, because the pull request will be merged there first. If you'd like to contribute but don't know what you can do, take a look at `the issue tracker` and see if any features/problems are still unresolved. Feel free to ask if you'd like some ideas.

Contact us

There are multiple ways you can get in touch with us:

- `join` `ckb-next` mailing list
- `open` a GitHub Issue
- hop on `#ckb-next` to chat

What happened to the original ckb

Due to time restrictions, the original author of **ckb** `ccMSC` hasn't been able to further develop the software. So the community around it decided to take the project over and continue its development. That's how **ckb-next** was created. Currently it's not rock solid and not very easy to set up on newer systems but we are actively working on this. Nevertheless the project already incorporates a notable amount of fixes and patches in comparison to the original ckb.

Chapter 2

Building ckb

Linux

You can build the project by running `./qmake-auto && make` in a Terminal inside the ckb-master directory. The binaries will be placed in a new `bin` directory assuming they compile successfully. If you get a `No suitable qmake found` error, make sure Qt5 is installed and up to date. You may have to invoke qmake manually, then run `make` on its own. If you have Qt Creator installed, you can open `ckb.pro` (when asked to configure the project, make sure "Desktop" is checked) and use `Build > Build Project "ckb" (Ctrl+B)` to build the application instead.

Running as a service:

First copy the binary and the service files to their system directories:

- Upstart (Ubuntu, prior to 15.04): `sudo cp -R bin/* /usr/bin && sudo cp service/upstart/ckb-daemon conf /etc/init`
- Systemd (Ubuntu 15.04 and later): `sudo cp -R bin/* /usr/bin && sudo cp service/systemd/ckb-daem service /usr/lib/systemd/system`
- OpenRC: `sudo cp -R bin/* /usr/bin && sudo cp service/openrc/ckb-daemon /etc/init.d/`

To launch the driver and enable it at start-up:

- Upstart: `sudo service ckb-daemon start`
- Systemd: `sudo systemctl start ckb-daemon && sudo systemctl enable ckb-daemon`
- OpenRC: `sudo rc-service ckb-daemon start && sudo rc-update add ckb-daemon default`

Open the `bin` directory and double-click on `ckb` to launch the user interface. If you want to run it at login, add `ckb --background` to your Startup Applications.

Running manually:

Open the `bin` directory in a Terminal and run `sudo ./ckb-daemon` to start the driver. To start the user interface, run `./ckb`. Running the driver manually may be useful for testing/debugging purposes, but you must leave the terminal window open and you'll have to re-run it at every reboot, so installing it as a service is the best long-term solution.

OSX

Open ckb.pro in Qt Creator. You should be prompted to configure the project (make sure the "Desktop" configuration is selected and not iOS). Once it's finished loading, press `Cmd+B` or select `Build > Build Project "ckb"` from the menu bar. When it's done, you should see a newly-created `ckb.app` in the project directory. Exit Qt Creator.

Alternatively, open a Terminal in the ckb-master directory and run `./qmake-auto && make`. It will detect Qt automatically if you installed it to one of the standard locations. You should see a newly created `ckb.app` if the build is successful.

Running as a service:

Copy `ckb.app` to your Applications folder. Copy the file `'service/launchd/com.ckb.daemon.plist'` to your computer's `/Library/LaunchDaemons` folder (you can get to it by pressing `Cmd+Shift+G` in Finder and typing the location). Then open a Terminal and run the following commands to launch the driver:

"' sudo chown root:wheel /Library/LaunchDaemons/com.ckb.daemon.plist sudo chmod 0700 /Library/Launch-Daemons/com.ckb.daemon.plist sudo launchctl load /Library/LaunchDaemons/com.ckb.daemon.plist "'

After you're done, open `ckb.app` to launch the user interface.

Running manually:

Open a Terminal in the ckb directory and run `sudo ckb.app/Contents/Resources/ckb-daemon` to start the driver. Open `ckb.app` to start the user interface. Note that you must leave the terminal window open and must re-launch the driver at every boot if you choose this; installing as a service is the better long term solution.

Chapter 3

cbk Improvements Roadmap

Short term plan

- merge existing PR submitted to original ckb repo
- Contact other developers interested in collaboration on a new and improved version of ckb
- Figure out the issues relating to MacOS Sierra and other version
- Device support:
  - Determine which will need support other than just USB id additions
- Address existing bugs. Not help requests.

Chapter 4

DAEMON

The daemon provides devices at `/dev/input/ckb*`, where `*` is the device number, starting at 1. Up to 9 devices may be connected at once and controlled independently. The daemon additionally provides `/dev/input/ckb0`, which stores driver information.

Mac note: The devices on OSX are located at `/var/run/ckb*` and not `/dev/input/ckb*`. So wherever you see `/dev/input` in this document, replace it with `/var/run`.

`/dev/input/ckb0` contains the following files:

- `connected`: A list of all connected devices, one per line. Each line contains a device path followed by the device's serial number and its description.
- `pid`: The process identifier of the daemon.
- `version`: The daemon version.

Other `ckb*` devices contain the following:

- `cmd`: Keyboard controller.
- `notify0`: Keyboard notifications.
- `features`: Device features.
- `fwversion`: Device firmware version (not present on all devices).
- `model`: Device description/model.
- `pollrate`: Poll rate in milliseconds (not present on all devices).
- `serial`: Device serial number. `model` and `serial` will match the info found in `ckb0/connected`

Commands

The `/dev/input/ckb*/cmd` nodes accept input in the form of text commands. They are normally accessible to all users on the system (see Security section). Commands should be given in the following format: `[mode <n>] command1 [paramter1] [command2] [parameter2] [command3] [parameter3] ...`

In a terminal shell, you can do this like `echo mycommand > /dev/input/ckb1/cmd`. Programmatically, you can open and write them as regular files. When programming, you must append a newline character and flush the output before your command(s) will actually be read.

The `mode` parameter is used to group settings. Most (but not all) settings are mode-specific; that is, changing mode 1 will not affect mode 2. By default, all commands affect the current mode. Use `mode <n> switch` to change the current mode.

When plugged in, all devices start in hardware-controlled mode (also known as idle mode) and will not respond to commands. Before issuing any other commands, write `active` to the command node, like `echo active > /dev/input/ckb1/cmd`. To put the device back into hardware mode, issue the `idle` command.

Features

The `features` node describes features supported by the device, which may not be present on all devices. The first two words in the `features` node are always `<vendor> <model>`, like `corsair k70`. After that, any of the following features may appear:

- `adjrate`: Device supports adjustable poll rate.
- `bind`: Device supports key rebinding.
- `fwupdate`: Device supports firmware updates.
- `fwversion`: Device has a detectable firmware version (stored in the `fwversion` node).
- `notify`: Device supports key notifications.
- `pollrate`: Device has a detectable poll rate (stored in the `pollrate` node).
- `rgb`: Device supports RGB lighting.

Keyboard layout

The driver has no concept of keyboard layouts; all keys are referred to by their English names regardless of the underlying hardware. This means that, for instance, in an AZERTY layout the `q` key in ckb-daemon corresponds to A on the physical keyboard. Note that on UK/european (ISO) layouts, the backslash key (beside left shift) is called `bslash_iso`, while `bslash` refers to the backslash on the US keyboard. The key next to Enter on the ISO keyboard is known as `hash`. See `src/ckb-daemon/keymap.c` for the full table of supported keys.

For technical reasons, the OSX driver may swap the `bslash_iso` and `grave` keys if the keyboard layout is not set correctly. To compensate for this, write `layout iso` or `layout ansi` to the command node.

Poll rate

A device's current poll rate can be read from its `pollrate` node, assuming it has one. Keyboards have a hardware switch to control poll rate and cannot be adjusted via software. However, mice have a software-controlled poll rate. You can change it by issuing `pollrate <interval>` to the command node, where `interval` is the time in milliseconds. Valid poll rates are `1`, `2`, `4`, and `8`.

Profiles and modes

Each mode has its own independent binding and lighting setup. When the daemon starts or a keyboard is plugged in, the profile will be loaded from the hardware. By default, all commands will update the currently selected mode. The `mode <n>` command may be used to change the settings for a different mode. Up to 6 modes are available. Each keyboard has one profile, which may be given a name. Mode 1 may be saved to the device hardware, or modes 1-3 in the case of the K95. Modes 4 through 6 are software-only. Profile management commands are as follows:

- `profilename <name>` sets the profile's name. The name must be written without spaces; to add a space, use `%20`.
- `name <name>` sets the current mode's name. Use `mode <n> name <name>` to set a different mode's name.

- `profileid <guid> [<modification>]` sets a profile's ID. The GUID must be written in registry format, like `{12345678-ABCD-EF01-2345-6789ABCDEF01}`. The optional modification number must be written with 8 hex digits, like `ABCDEF01`.
- `id <guid> [<modification>]` sets a mode's ID.
- `mode <n> switch` switches the keyboard to mode N. If the mode does not exist, it will be created with a blank ID, black lighting, and default bindings.
- `hwload` loads the RGB profile from the hardware. Key bindings and non-hardware RGB modes are unaffected.
- `hwsave` saves the RGB profile to the hardware.
- `erase` erases the current mode, resetting its lighting and bindings. Use `mode <n> erase` to erase a different mode.
- `eraseprofile` erases the entire profile, deleting its name, ID, and all of its modes.

Examples:

- `profilename My%20Profile mode 1 name Mode%201 mode 2 name Mode%202 mode 3 name Mode%203` will name the profile "My Profile" and name modes 1-3 "Mode 1", "Mode 2", and "Mode 3".
- `eraseprofile hwload` resets the entire profile to its hardware settings.

LED commands

The backlighting is controlled by the `rgb` commands.

- `rgb <RRGGBB>` sets the entire keyboard to the color specified by the hex constant RRGGBB.
- `rgb <key>:<RRGGBB>` sets the specified key to the specified hex color.

Examples:

- `rgb ffffff` makes the whole keyboard white.
- `rgb 000000` makes the whole keyboard black.
- `rgb esc:ff0000` sets the Esc key red but leaves the rest of the keyboard unchanged.

Multiple keys may be changed to one color when separated with commas, for instance:

- `rgb w,a,s,d:0000ff` sets the WASD keys to blue.

Additionally, multiple commands may be combined into one, for instance:

- `rgb ffffff esc:ff0000 w,a,s,d:0000ff` sets the Esc key red, the WASD keys blue, and the rest of the keyboard white (note the lack of a key name before `ffffff`, implying the whole keyboard is to be set).

By default, the controller runs at 30 FPS, meaning that attempts to animate the LEDs faster than that will be ignored. If you wish to change it, send the command `fps <n>`. The maximum frame rate is 60.

For devices running in 512-color mode, color dithering can be enabled by sending the command `dither 1`. The command `dither 0` disables dithering.

Indicators

The indicator LEDs (Num Lock, Caps Lock, Scroll Lock) are controlled with the `i` commands.

- `ioff <led>` turns an indicator off permanently. Valid LED names are `num`, `caps`, and `scroll`.
- `ion <led>` turns an indicator on permanently.
- `iauto <led>` turns an indicator off or on automatically (default behavior).

Binding keys

Keys may be rebound through use of the `bind` commands. Binding is a 1-to-1 operation that translates one keypress to a different keypress regardless of circumstance.

- `bind <key1>:<key2>` remaps key1 to key2.
- `unbind <key>` unbinds a key, causing it to lose all function.
- `rebind <key>` resets a key, returning it to its default binding.

Examples:

- `bind g1:esc` makes G1 become an alternate Esc key (the actual Esc key is not changed).
- `bind caps:tab tab:caps` switches the functions of the Tab and Caps Lock keys.
- `unbind lwin rwin` disables both Windows keys, even without using the keyboard's Windows Lock function.
- `rebind all` resets the whole keyboard to its default bindings.

Key macros

Macros are a more advanced form of key binding, controlled with the `macro` command.

- `macro <keys>:<command>` binds a key combination to a command, where the command is a series of key presses. To combine keys, separate them with `+`; for instance, `lctrl+a` binds a macro to (left) Ctrl+A. In the command field, enter `+<key>` to trigger a key down or `-<key>` to trigger a key up. To simulate a key press, use `+<key>,-<key>`.
- `macro <keys>:clear` clears commands associated with a key combination. Only one macro may be assigned per combination; assigning a second one will overwrite the first.
- `macro clear` clears all macros.

Examples:

- `macro g1:+lctrl,+a,-a,-lctrl` triggers a Ctrl+A when G1 is pressed.
- `macro g2+g3:+lalt,+f4,-f4,-lalt` triggers an Alt+F4 when G2 and G3 are pressed simultaneously.

Assigning a macro to a key will cause its binding to be ignored; for instance, `macro a:+b,-b` will cause A to generate a B character regardless of its binding. However, `macro lctrl+a:+b,-b` will cause A to generate a B only when Ctrl is also held down.

DPI and mouse settings

DPI settings are stored in a bank. They are controlled with the `dpi` command.

- `dpi <stage>:<x>,<y>` sets the DPI for a given `stage` to `x` by `y`. Valid stages are `0` through `5`. In hardware, `1` is the first (lowest) stage and `5` is the highest. Stage `0` is used for Sniper mode.
- `dpi <stage>:<xy>` sets both X and Y.
- `dpi <stage>:off` disables a DPI stage.
- `dpisel <stage>` sets the current stage selection.

In order to change the mouse's current DPI, first update one of the stages with the value you want, then select that stage. For instance:

- `dpi 1:1000 dpisel 1` sets the current DPI to 1000x1000.

Additional mouse settings:

- `lift <height>` sets the lift height, from `1` (lowest) to `5` (highest)
- `snap <on|off>` enables or disables Angle Snap.

Notifications

The keyboard can be configured to generate user-readable notifications on keypress events. These are controlled with the `notify` commands. In order to see events, read from `/dev/input/ckb*/notify0`. In a terminal, you can do this like `cat /dev/input/ckb1/notify0`. Programmatically, you can open it for reading like a regular file.

Note that the file can only reliably be read by one application: if you try to open it in two different programs, they may both fail to get data. Data will be buffered as long as no programs are reading, so you will receive all unread notifications as soon as you open the file. If you'd like to read notifications from two separate applications, send the command `notifyon <n>` to the keyboard you wish to receive notifications from, where N is a number between 1 and 9. If `/dev/input/ckb*/notify<n>` does not already exist, it will be created, and you can read notifications from there without disrupting any other program. To close a notification node, send `notifyoff <n>`.

`notify0` is always open and will not be affected by `notifyon`/`notifyoff` commands. By default, all notifications are printed to `notify0`. To print output to a different node, prefix your command with `@<node>`.

Notifications are printed with one notification per line. Commands are as follows:

- `notify <key>:on` or simply `notify <key>` enables notifications for a key. Each key will generate two notifications: `key +<key>` when the key is pressed, and `key -<key>` when it is released.
- `notify <key>:off` turns notifications off for a key.

Examples:

- `notify w a s d` sends notifications whenever W, A, S, or D is pressed.
- `notify g1 g2 g3 g4 g5 g6 g7 g8 g9 g10 g11 g12 g13 g14 g15 g16 g17 g18 mr m1 m2 m3 light lock` prints a notification whenever a non-standard key is pressed.
- `notify all:off` turns all key notifications off.
- `@5 notify esc` prints Esc key notifications to `notify5`.

Note: Key notifications are *not* affected by bindings. For instance, if you run `echo bind a:b notify a > /dev/input/ckb1/cmd` and then press the A key, the notifications will read `key +a key -a`, despite the fact that the character printed on screen will be `b`. Likewise, unbinding a key or assigning a macro to a key does not affect the notifications.

Indicator notifications

You can also choose to receive notifications for the indicator LEDs by using the `inotify` command. For instance, `inotify caps:on` or simply `inotify caps` will print notifications whenever the Caps Lock LED is toggled. The notifications will read `i +caps` when the light is turned on and `i -caps` when it is turned off. It is also possible to toggle all indicators at once using `inotify all` or `inotify all:off`.

Like key notifications, indicator notifications are not affected by bindings, nor by the `ion`, `ioff`, or `iauto` commands. The notifications will reflect the state of the LEDs as seen be the event device.

Getting parameters

Parameters can be retrieved using the `get` command. The data will be sent out as a notification. Generally, the syntax to get the data associated with a command is `get :<command>` (note the colon), and the associated data will be returned in the form of `<command> <data>`. The following data may be gotten:

- `get :mode` returns the current mode in the form of a `switch` command. (Note: Do not use this in a line containing a `mode` command or it will return the mode that you selected, rather than the keyboard's current mode.)
- `get :name` returns the current mode's name in the form of `mode <n> name <name>`. To see the name of another mode, use `mode <n> get :name`. The name is URL-encoded; spaces are written as %20. The name may be truncated, so `name <some long string> get :name` may return something shorter than what was entered.
- `get :profilename` returns the profile's name, in the form of `profilename <name>`. As above, it is URL-encoded and may be truncated.
- `get :hwname` and `get :hwprofilename` return the same thing except taken from the current hardware profile instead of the in-memory profile. The output is identical but will read `hwname` instead of `name` and `hwprofilename` instead of `profilename`.
- `get :id` returns the current mode's ID and modification number in the form of `mode <n> id <guid> <modification>`.
- `get :profileid` returns the current profile's ID and modification number in the form of `profileid <guid> <modification>`.
- `get :hwid` and `get :hwprofileid` return the same thing except from the current hardware profile/mode. As before, the ouput will be the same but with `hwid` and `hwprofileid` instead of `id` and `profileid`.
- `get :rgb` returns an `rgb` command equivalent to the current RGB state.
- `get :hwrgb` does the same thing, but retrieves the colors currently stored in the hardware profile. The output will say `hwrgb` instead of `rgb`.
- `get :dpi` returns a `dpi` command equivalent to the current DPI bank.
- `get :dpisel` returns a `dpisel` command for the currently-selected DPI stage.
- `get :lift` returns a `lift` command for the current lift height.
- `get :snap` returns the current angle snap status.
- `get :hwdpi`, `get :hwdpisel`, `get :hwlift`, and `get :hwsnap` return the same properties, but for the current hardware profile.
- `get :keys` and `get :i` return the current keypress status and indicator status, respectively. They will indicate all currently pressed keys and all currently active indicators, like `key +enter` and `i +num`.

Like `notify`, you must prefix your command with `@<node>` to get data printed to a node other than `notify0`.

Firmware updates

WARNING: Improper use of `fwupdate` may brick your device; use this command *at your own risk*. I accept no responsibility for broken keyboards.

The latest firmware versions and their URLs can be found in the `FIRMWARE` document. To update your keyboard's firmware, first extract the contents of the zip file and then issue the command `fwupdate /path/to/fw/file.bin` to the keyboard you wish to update. The path name must be absolute and must not include spaces. If it succeeded, you should see `fwupdate <path> ok` logged to the keyboard's notification node and then the device will disconnect and reconnect. If you see `fwupdate <path> invalid` it means that the firmware file was not valid for the device; more info may be available in the daemon's `stdout`. If you see `fwupdate <path> fail` it means that the file was valid but the update failed at a hardware level. The keyboard may disconnect/reconnect anyway or it may remain in operation.

When the device reconnects you should see the new firmware version in its `fwversion` node; if you see `0000` instead it means that the keyboard did not update successfully and will need another `fwupdate` command in order to function again. If the update fails repeatedly, try connecting the keyboard to a Windows PC and using the official firmware update in CUE.

Restart

Because sometimes the communication between the daemon and the keyboard is corrupted after resuming from standby or suspend, a restart function is implemented. It first calls the quit() funtion, then it calls main() again with the original parameter list.

There are two ways to restart the daemon:

- send the string "restart some-description-as-one-word" to the cmd-pipe (normally /dev/input/ckb1/cmd or /dev/input/ckb2/cmd, depending on what device gets which ID.
- send SIGUSR1 to the daemon process (as root).

Later on, there may be a user interface in the client for the first method.

Security

By default, all of the `ckb*` nodes may be accessed by any user. For most single-user systems this should not present any security issues, since only one person will have access to the computer anyway. However, if you'd like to restrict the users that can write to the `cmd` nodes or read from the `notify` nodes, you can specify the `--gid=<group>` option at start up. For instance, on most systems you could run `ckb-daemon --gid=1000` to make them accessible only by the system's primary user. `ckb-daemon` must still be run as root, regardless of which `gid` you specify. The `gid` option may be set only at startup and cannot be changed while the daemon is running.

The daemon additionally supports a `--nonotify` option to disable key notifications, to prevent unauthorized programs from logging key input. Note that this will interfere with some of `ckb`'s abilities. It is also highly unlikely to increase security unless you are using the program in a stripped down terminal environment without Xorg. For most use cases there are many other (more likely) ways that a keylogger program could compromise your system. Nevertheless, the option is provided for the sake of paranoia. If you'd like to disable key rebinding as well, launch the daemon with `--nobind`. `--nobind` implies `--nonotify`, so notifications will also be disabled. As with `--gid`, these options must be set at startup and cannot be changed while the daemon is running.

Chapter 5

Todo List

Global Kb::Kb (QObject *parent, const QString &path)

Is adding notify2 to the notifypaths neccessary?

Global Kb::~Kb ()

I don't think, that notifypaths is used somewhere. So why do we have it? If we do not need it, searching for an ununsed notify channel can easy be refactored to a private member function.

Chapter 6

Deprecated List

Class QuaZipFileInfo

Use QuaZipFileInfo64 instead. Not only it supports large files, but also more convenience methods as well.

Chapter 7

Namespace Index

7.1 Namespace List

Here is a list of all namespaces with brief descriptions:

Ui 41

Chapter 8

Hierarchical Index

8.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

_model . . . 1530
_readlines_ctx . . . 1242
AutoRun . . . 120
binding . . . 1475
ckb_gradient . . . 1588
ckb_key . . . 1588
ckb_runctx . . . 1588
CkbSettings . . . 124
ColorMap . . . 151
curfile64_info . . . 1827
devcmd . . . 1212
devcmd.__unnamed__ . . . 160
dpiset . . . 1475
MPerfWidget::DpiUi . . . 775
file_in_zip64_read_info_s . . . 1756
KbFirmware::FW . . . 183
hwprofile . . . 1475
KPerfWidget::IndicatorUi . . . 699
JlCompress . . . 243
KbId . . . 1622
Key . . . 600
key . . . 1670
keyanim . . . 1383
keyAnim . . . 1376
keymacro . . . 1475
KeyMap . . . 633
KeyPatch . . . 1656
kiss_fft_cpx . . . 1564
kiss_fft_state . . . 1548
kiss_fftr_state . . . 1571
lighting . . . 1475
linkedlist_data_s . . . 1827
linkedlist_datablock_internal_s . . . 1827
macroaction . . . 1475
AnimScript::Param . . . 54
GradientDialog::Preset . . . 793
QDialog . . . 795
  AnimAddDialog . . . 48

AnimSettingDialog . . . 99
ExtraSettingsWidget . . . 175
FwUpgradeDialog . . . 184
GradientDialog . . . 214
KbProfileDialog . . . 554
LayoutDialog . . . 717
ModeSelectDialog . . . 751
QIODevice . . . 796
QuaGzipFile . . . 812
QuaZIODevice . . . 819
QuaZipFile . . . 877
QIODevice_descriptor . . . 797
QListWidget . . . 798
RListWidget . . . 996
QMainWindow . . . 799
MainWindow . . . 732
QObject . . . 800
AnimScript . . . 54
CkbSettingsWriter . . . 139
KbAnim . . . 311
KbBind . . . 366
KbFirmware . . . 413
KbLight . . . 425
KbManager . . . 476
KbMode . . . 488
KbPerf . . . 502
KbProfile . . . 536
KeyAction . . . 603
QPushButton . . . 801
ColorButton . . . 141
GradientButton . . . 200
qt_meta_stringdata_AnimAddDialog_t . . . 1895
qt_meta_stringdata_AnimScript_t . . . 1898
qt_meta_stringdata_AnimSettingDialog_t . . . 1901
qt_meta_stringdata_CkbSettingsWriter_t . . . 1904
qt_meta_stringdata_ColorButton_t . . . 1906
qt_meta_stringdata_ExtraSettingsWidget_t . . . 1908
qt_meta_stringdata_FwUpgradeDialog_t . . . 1911
qt_meta_stringdata_GradientButton_t . . . 1914
qt_meta_stringdata_GradientDialog_t . . . 1917
qt_meta_stringdata_GradientDialogWidget_t . . . 1920
qt_meta_stringdata_Kb_t . . . 1922
qt_meta_stringdata_KbAnim_t . . . 1925
qt_meta_stringdata_KbAnimWidget_t . . . 1927
qt_meta_stringdata_KbBind_t . . . 1930
qt_meta_stringdata_KbBindWidget_t . . . 1932
qt_meta_stringdata_KbFirmware_t . . . 1934
qt_meta_stringdata_KbLight_t . . . 1937
qt_meta_stringdata_KbLightWidget_t . . . 1940
qt_meta_stringdata_KbManager_t . . . 1943
qt_meta_stringdata_KbMode_t . . . 1945
qt_meta_stringdata_KbPerf_t . . . 1947
qt_meta_stringdata_KbProfile_t . . . 1950
qt_meta_stringdata_KbProfileDialog_t . . . 1952
qt_meta_stringdata_KbWidget_t . . . 1956
qt_meta_stringdata_KeyAction_t . . . 1958
qt_meta_stringdata_KeyWidget_t . . . 1960

qt_meta_stringdata_KPerfWidget_t . . . 1962
qt_meta_stringdata_LayoutDialog_t . . . 1965
qt_meta_stringdata_MacroReader_t . . . 1968
qt_meta_stringdata_MacroReaderThread_t . . . 1968
qt_meta_stringdata_MainWindow_t . . . 1972
qt_meta_stringdata_ModeSelectDialog_t . . . 1974
qt_meta_stringdata_MPerfWidget_t . . . 1976
qt_meta_stringdata_QuaGzipFile_t . . . 1979
qt_meta_stringdata_QuaZIODevice_t . . . 1981
qt_meta_stringdata_QuaZipFile_t . . . 1983
qt_meta_stringdata_RebindWidget_t . . . 1985
qt_meta_stringdata_RListWidget_t . . . 1988
qt_meta_stringdata_SettingsWidget_t . . . 1990
QThread . . . 802
  Kb . . . 261
  MacroReader . . . 720
  MacroReaderThread . . . 724
QuaChecksum32 . . . 806
  QuaAdler32 . . . 803
  QuaCrc32 . . . 809
QuaZip . . . 827
QuaZipDir . . . 859
QuaZipFileInfo . . . 900
QuaZipFileInfo64 . . . 903
QuaZipFilePrivate . . . 911
QuaZipNewInfo . . . 916
QuaZipPrivate . . . 924
QWidget . . . 933
  GradientDialogWidget . . . 227
  KbAnimWidget . . . 348
  KbBindWidget . . . 402
  KbLightWidget . . . 463
  KbWidget . . . 568
  KeyWidget . . . 656
  KPerfWidget . . . 699
  MPerfWidget . . . 775
  RebindWidget . . . 934
  SettingsWidget . . . 1002
rgb . . . 1405
SGroup . . . 1026
tm_unz_s . . . 1807
tm_zip_s . . . 1883
Ui_AnimAddDialog . . . 1029
  Ui::AnimAddDialog . . . 43
Ui_AnimSettingDialog . . . 1033
  Ui::AnimSettingDialog . . . 86
Ui_ExtraSettingsWidget . . . 1046
  Ui::ExtraSettingsWidget . . . 162
Ui_FwUpgradeDialog . . . 1058
  Ui::FwUpgradeDialog . . . 193
Ui_GradientDialog . . . 1064
  Ui::GradientDialog . . . 206
Ui_KbAnimWidget . . . 1072
  Ui::KbAnimWidget . . . 338
Ui_KbBindWidget . . . 1081
  Ui::KbBindWidget . . . 395

Ui_KbLightWidget . . . 1087
Ui::KbLightWidget . . . 454
Ui_KbProfileDialog . . . 1095
Ui::KbProfileDialog . . . 563
Ui_KbWidget . . . 1099
Ui::KbWidget . . . 590
Ui_KPerfWidget . . . 1109
Ui::KPerfWidget . . . 679
Ui_LayoutDialog . . . 1128
Ui::LayoutDialog . . . 712
Ui_MainWindow . . . 1133
Ui::MainWindow . . . 728
Ui_ModeSelectDialog . . . 1137
Ui::ModeSelectDialog . . . 747
Ui_MPerfWidget . . . 1141
Ui::MPerfWidget . . . 755
Ui_RebindWidget . . . 1160
Ui::RebindWidget . . . 967
Ui_SettingsWidget . . . 1189
Ui::SettingsWidget . . . 1014
unz64_file_pos_s . . . 1807
unz64_s . . . 1756
unz_file_info64_internal_s . . . 1756
unz_file_info64_s . . . 1807
unz_file_info_s . . . 1807
unz_file_pos_s . . . 1807
unz_global_info64_s . . . 1807
unz_global_info_s . . . 1807
usbdevice . . . 1475
usbid . . . 1475
UsbId . . . 1201
usbinput . . . 1475
usbmode . . . 1475
usbprofile . . . 1475
zip64_internal . . . 1827
zip_fileinfo . . . 1883
zlib_filefunc64_32_def_s . . . 1709
zlib_filefunc64_def_s . . . 1709
zlib_filefunc_def_s . . . 1709

Chapter 9

Data Structure Index

9.1 Data Structures

Here are the data structures with brief descriptions:

Ui::AnimAddDialog . . . 43
AnimAddDialog . . . 48
AnimScript . . . 54
Ui::AnimSettingDialog . . . 86
AnimSettingDialog . . . 99
AutoRun . . . 120
CkbSettings . . . 124
CkbSettingsWriter . . . 139
ColorButton . . . 141
ColorMap . . . 151
devcmd.__unnamed__ . . . 160
Ui::ExtraSettingsWidget . . . 162
ExtraSettingsWidget . . . 175
KbFirmware::FW . . . 183
FwUpgradeDialog . . . 184
Ui::FwUpgradeDialog . . . 193
GradientButton . . . 200
Ui::GradientDialog . . . 206
GradientDialog . . . 214
GradientDialogWidget . . . 227
JlCompress
Utility class for typical operations . . . 243
Kb . . . 261
KbAnim . . . 311
Ui::KbAnimWidget . . . 338
KbAnimWidget . . . 348
KbBind . . . 366
Ui::KbBindWidget . . . 395
KbBindWidget . . . 402
KbFirmware . . . 413
KbLight . . . 425
Ui::KbLightWidget . . . 454
KbLightWidget . . . 463
KbManager . . . 476
KbMode . . . 488
KbPerf . . . 502
KbProfile . . . 536
KbProfileDialog . . . 554

Ui::KbProfileDialog . . . 563
KbWidget . . . 568
Ui::KbWidget . . . 590
Key . . . 600
KeyAction . . . 603
KeyMap . . . 633
KeyWidget . . . 656
Ui::KPerfWidget . . . 679
KPerfWidget . . . 699
Ui::LayoutDialog . . . 712
LayoutDialog . . . 717
MacroReader
Creates a worker thread object. It does a connect do delayed deletion of thread local variables in the case the worker thread terminates . . . 720
MacroReaderThread
Responsible for reading Macro Key Values. It is created as a separate thread (worker thread) for reading macro commands from an fresh opened notify channel. Standard notify channel for macro definitions is number 2 . . . 724
Ui::MainWindow . . . 728
MainWindow . . . 732
Ui::ModeSelectDialog . . . 747
ModeSelectDialog . . . 751
Ui::MPerfWidget . . . 755
MPerfWidget . . . 775
GradientDialog::Preset . . . 793
QDialog . . . 795
QIODevice . . . 796
QIODevice_descriptor . . . 797
QListWidget . . . 798
QMainWindow . . . 799
QObject . . . 800
QPushButton . . . 801
QThread . . . 802
QuaAdler32
Adler32 checksum . . . 803
QuaChecksum32
Checksum interface . . . 806
QuaCrc32
CRC32 checksum . . . 809
QuaGzipFile
GZIP file . . . 812
QuaZIODevice
A class to compress/decompress QIODevice . . . 819
QuaZip
ZIP archive . . . 827
QuaZipDir
Provides ZIP archive navigation . . . 859
QuaZipFile
A file inside ZIP archive . . . 877
QuaZipFileInfo
Information about a file inside archive . . . 900
QuaZipFileInfo64
Information about a file inside archive (with zip64 support) . . . 903
QuaZipFilePrivate
The implementation class for QuaZip . . . 911
QuaZipNewInfo
Information about a file to be created . . . 916

QuaZipPrivate
All the internal stuff for the QuaZip class . . . 924
QWidget . . . 933
RebindWidget . . . 934
Ui::RebindWidget . . . 967
RListWidget . . . 996
SettingsWidget . . . 1002
Ui::SettingsWidget . . . 1014
SGroup . . . 1026
Ui_AnimAddDialog . . . 1029
Ui_AnimSettingDialog . . . 1033
Ui_ExtraSettingsWidget . . . 1046
Ui_FwUpgradeDialog . . . 1058
Ui_GradientDialog . . . 1064
Ui_KbAnimWidget . . . 1072
Ui_KbBindWidget . . . 1081
Ui_KbLightWidget . . . 1087
Ui_KbProfileDialog . . . 1095
Ui_KbWidget . . . 1099
Ui_KPerfWidget . . . 1109
Ui_LayoutDialog . . . 1128
Ui_MainWindow . . . 1133
Ui_ModeSelectDialog . . . 1137
Ui_MPerfWidget . . . 1141
Ui_RebindWidget . . . 1160
Ui_SettingsWidget . . . 1189
UsbId . . . 1201

Chapter 10

File Index

10.1 File List

Here is a list of all files with brief descriptions:

src/ckb-daemon/command.c . . . 1207
src/ckb-daemon/command.h . . . 1212
src/ckb-daemon/device.c . . . 1221
src/ckb-daemon/device.h . . . 1224
src/ckb-daemon/device_keyboard.c . . . 1233
src/ckb-daemon/device_mouse.c . . . 1237
src/ckb-daemon/device_vtable.c . . . 1240
src/ckb-daemon/devnode.c . . . 1242
src/ckb-daemon/devnode.h . . . 1254
src/ckb-daemon/dpi.c . . . 1262
src/ckb-daemon/dpi.h . . . 1267
src/ckb-daemon/extra_mac.c . . . 1272
src/ckb-daemon/firmware.c . . . 1273
src/ckb-daemon/firmware.h . . . 1278
src/ckb-daemon/includes.h . . . 1280
src/ckb-daemon/input.c . . . 1284
src/ckb-daemon/input.h . . . 1294
src/ckb-daemon/input_linux.c . . . 1303
src/ckb-daemon/input_mac.c . . . 1309
src/ckb-daemon/input_mac_mouse.c . . . 1310
src/ckb-daemon/keymap.c . . . 1310
src/ckb-daemon/keymap.h . . . 1670
src/ckb-daemon/keymap_mac.h . . . 1314
src/ckb-daemon/led.c . . . 1315
src/ckb-daemon/led.h . . . 1321
src/ckb-daemon/led_keyboard.c . . . 1332
src/ckb-daemon/led_mouse.c . . . 1364
src/ckb-daemon/main.c . . . 1367
src/ckb-daemon/notify.c . . . 1424
src/ckb-daemon/notify.h . . . 1433
src/ckb-daemon/os.h . . . 1437
src/ckb-daemon/profile.c . . . 1439
src/ckb-daemon/profile.h . . . 1455
src/ckb-daemon/profile_keyboard.c . . . 1470
src/ckb-daemon/profile_mouse.c . . . 1473
src/ckb-daemon/structures.h . . . 1475
src/ckb-daemon/usb.c . . . 1494
src/ckb-daemon/usb.h . . . 1505

src/ckb-daemon/usb_linux.c . . . 1530
src/ckb-daemon/usb_mac.c . . . 1547
src/ckb-gradient/main.c . . . 1376
src/ckb-heat/main.c . . . 1383
src/ckb-mviz/_kiss_fft_guts.h . . . 1548
src/ckb-mviz/kiss_fft.c . . . 1553
src/ckb-mviz/kiss_fft.h . . . 1564
src/ckb-mviz/kiss_fftr.c . . . 1571
src/ckb-mviz/kiss_fftr.h . . . 1576
src/ckb-mviz/main.c . . . 1388
src/ckb-pinwheel/main.c . . . 1394
src/ckb-rain/main.c . . . 1399
src/ckb-random/main.c . . . 1405
src/ckb-ripple/main.c . . . 1410
src/ckb-wave/main.c . . . 1416
src/ckb/animadddialog.cpp . . . 1580
src/ckb/animadddialog.h . . . 1581
src/ckb/animscript.cpp . . . 1581
src/ckb/animscript.h . . . 1583
src/ckb/animsettingdialog.cpp . . . 1584
src/ckb/animsettingdialog.h . . . 1586
src/ckb/autorun.cpp . . . 1587
src/ckb/autorun.h . . . 1588
src/ckb/ckb-anim.h . . . 1588
src/ckb/ckbsettings.cpp . . . 1612
src/ckb/ckbsettings.h . . . 1615
src/ckb/ckbsettingswriter.cpp . . . 1615
src/ckb/ckbsettingswriter.h . . . 1617
src/ckb/colorbutton.cpp . . . 1617
src/ckb/colorbutton.h . . . 1618
src/ckb/colormap.cpp . . . 1619
src/ckb/colormap.h . . . 1620
src/ckb/extrasettingswidget.cpp . . . 1621
src/ckb/extrasettingswidget.h . . . 1622
src/ckb/fwupgradedialog.cpp . . . 1622
src/ckb/fwupgradedialog.h . . . 1625
src/ckb/gradientbutton.cpp . . . 1626
src/ckb/gradientbutton.h . . . 1627
src/ckb/gradientdialog.cpp . . . 1628
src/ckb/gradientdialog.h . . . 1628
src/ckb/gradientdialogwidget.cpp . . . 1629
src/ckb/gradientdialogwidget.h . . . 1629
src/ckb/kb.cpp . . . 1630
src/ckb/kb.h . . . 1631
src/ckb/kbanim.cpp . . . 1632
src/ckb/kbanim.h . . . 1634
src/ckb/kbanimwidget.cpp . . . 1635
src/ckb/kbanimwidget.h . . . 1635
src/ckb/kbbind.cpp . . . 1636
src/ckb/kbbind.h . . . 1637
src/ckb/kbbindwidget.cpp . . . 1638
src/ckb/kbbindwidget.h . . . 1638
src/ckb/kbfirmware.cpp . . . 1639
src/ckb/kbfirmware.h . . . 1640
src/ckb/kblight.cpp . . . 1641
src/ckb/kblight.h . . . 1644
src/ckb/kblightwidget.cpp . . . 1645
src/ckb/kblightwidget.h . . . 1645

src/ckb/kbmanager.cpp . . . 1646
src/ckb/kbmanager.h . . . 1647
src/ckb/kbmode.cpp . . . 1648
src/ckb/kbmode.h . . . 1648
src/ckb/kbperf.cpp . . . 1649
src/ckb/kbperf.h . . . 1649
src/ckb/kbprofile.cpp . . . 1650
src/ckb/kbprofile.h . . . 1651
src/ckb/kbprofiledialog.cpp . . . 1651
src/ckb/kbprofiledialog.h . . . 1652
src/ckb/kbwidget.cpp . . . 1653
src/ckb/kbwidget.h . . . 1653
src/ckb/keyaction.cpp . . . 1654
src/ckb/keyaction.h . . . 1655
src/ckb/keymap.cpp . . . 1656
src/ckb/keymap.h . . . 1670
src/ckb/keywidget.cpp . . . 1679
src/ckb/keywidget.h . . . 1681
src/ckb/kperfwidget.cpp . . . 1682
src/ckb/kperfwidget.h . . . 1682
src/ckb/layoutdialog.cpp . . . 1684
src/ckb/layoutdialog.h . . . 1685
src/ckb/macroreader.cpp . . . 1686
src/ckb/macroreader.h . . . 1686
src/ckb/main.cpp . . . 1687
src/ckb/mainwindow.cpp . . . 1693
src/ckb/mainwindow.h . . . 1694
src/ckb/media.h . . . 1695
src/ckb/media_linux.cpp . . . 1697
src/ckb/media_mac.m . . . 1698
src/ckb/modeselectdialog.cpp . . . 1700
src/ckb/modeselectdialog.h . . . 1700
src/ckb/mperfwidget.cpp . . . 1701
src/ckb/mperfwidget.h . . . 1704
src/ckb/rebindwidget.cpp . . . 1894
src/ckb/rebindwidget.h . . . 1894
src/ckb/rlistwidget.cpp . . . 2001
src/ckb/rlistwidget.h . . . 2001
src/ckb/settingswidget.cpp . . . 2002
src/ckb/settingswidget.h . . . 2004
src/ckb/ui_animadddialog.h . . . 2005
src/ckb/ui_animsettingdialog.h . . . 2005
src/ckb/ui_extrasettingswidget.h . . . 2006
src/ckb/ui_fwupgradedialog.h . . . 2007
src/ckb/ui_gradientdialog.h . . . 2008
src/ckb/ui_kbanimwidget.h . . . 2009
src/ckb/ui_kbbindwidget.h . . . 2010
src/ckb/ui_kblightwidget.h . . . 2011
src/ckb/ui_kbprofiledialog.h . . . 2012
src/ckb/ui_kbwidget.h . . . 2013
src/ckb/ui_kperfwidget.h . . . 2014
src/ckb/ui_layoutdialog.h . . . 2015
src/ckb/ui_mainwindow.h . . . 2016
src/ckb/ui_modeselectdialog.h . . . 2017
src/ckb/ui_mperfwidget.h . . . 2018
src/ckb/ui_rebindwidget.h . . . 2019
src/ckb/ui_settingswidget.h . . . 2020
src/ckb/quazip/crypt.h . . . 1706

src/ckb/quazip/ioapi.h . . . 1709
src/ckb/quazip/JlCompress.cpp . . . 1716
src/ckb/quazip/JlCompress.h . . . 1718
src/ckb/quazip/qioapi.cpp . . . 1718
src/ckb/quazip/quaadler32.cpp . . . 1730
src/ckb/quazip/quaadler32.h . . . 1731
src/ckb/quazip/quachecksum32.h . . . 1732
src/ckb/quazip/quacrc32.cpp . . . 1733
src/ckb/quazip/quacrc32.h . . . 1734
src/ckb/quazip/quagzipfile.cpp . . . 1735
src/ckb/quazip/quagzipfile.h . . . 1736
src/ckb/quazip/quaziodevice.cpp . . . 1737
src/ckb/quazip/quaziodevice.h . . . 1738
src/ckb/quazip/quazip.cpp . . . 1739
src/ckb/quazip/quazip.h . . . 1741
src/ckb/quazip/quazip_global.h . . . 1742
src/ckb/quazip/quazipdir.cpp . . . 1744
src/ckb/quazip/quazipdir.h . . . 1746
src/ckb/quazip/quazipfile.cpp . . . 1746
src/ckb/quazip/quazipfile.h . . . 1747
src/ckb/quazip/quazipfileinfo.cpp . . . 1748
src/ckb/quazip/quazipfileinfo.h . . . 1750
src/ckb/quazip/quazipnewinfo.cpp . . . 1751
src/ckb/quazip/quazipnewinfo.h . . . 1755
src/ckb/quazip/unzip.c . . . 1756
src/ckb/quazip/unzip.h . . . 1807
src/ckb/quazip/zip.c . . . 1827
src/ckb/quazip/zip.h . . . 1883
src/ckb/release/moc_animadddialog.cpp . . . 1895
src/ckb/release/moc_animscript.cpp . . . 1898
src/ckb/release/moc_animsettingdialog.cpp . . . 1901
src/ckb/release/moc_ckbsettingswriter.cpp . . . 1904
src/ckb/release/moc_colorbutton.cpp . . . 1906
src/ckb/release/moc_extrasettingswidget.cpp . . . 1908
src/ckb/release/moc_fwupgradedialog.cpp . . . 1911
src/ckb/release/moc_gradientbutton.cpp . . . 1914
src/ckb/release/moc_gradientdialog.cpp . . . 1917
src/ckb/release/moc_gradientdialogwidget.cpp . . . 1920
src/ckb/release/moc_kb.cpp . . . 1922
src/ckb/release/moc_kbanim.cpp . . . 1925
src/ckb/release/moc_kbanimwidget.cpp . . . 1927
src/ckb/release/moc_kbbind.cpp . . . 1930
src/ckb/release/moc_kbbindwidget.cpp . . . 1932
src/ckb/release/moc_kbfirmware.cpp . . . 1934
src/ckb/release/moc_kblight.cpp . . . 1937
src/ckb/release/moc_kblightwidget.cpp . . . 1940
src/ckb/release/moc_kbmanager.cpp . . . 1943
src/ckb/release/moc_kbmode.cpp . . . 1945
src/ckb/release/moc_kbperf.cpp . . . 1947
src/ckb/release/moc_kbprofile.cpp . . . 1950
src/ckb/release/moc_kbprofiledialog.cpp . . . 1952
src/ckb/release/moc_kbwidget.cpp . . . 1956
src/ckb/release/moc_keyaction.cpp . . . 1958
src/ckb/release/moc_keywidget.cpp . . . 1960
src/ckb/release/moc_kperfwidget.cpp . . . 1962
src/ckb/release/moc_layoutdialog.cpp . . . 1965
src/ckb/release/moc_macroreader.cpp . . . 1968
src/ckb/release/moc_mainwindow.cpp . . . 1972

src/ckb/release/moc_modeselectdialog.cpp 1974
src/ckb/release/moc_mperfwidget.cpp 1976
src/ckb/release/moc_quagzipfile.cpp 1979
src/ckb/release/moc_quaziodevice.cpp 1981
src/ckb/release/moc_quazipfile.cpp 1983
src/ckb/release/moc_rebindwidget.cpp 1985
src/ckb/release/moc_rlistwidget.cpp 1988
src/ckb/release/moc_settingswidget.cpp 1990
src/ckb/release/qrc_binary.cpp 1992
src/ckb/release/qrc_image.cpp 1995
src/ckb/release/qrc_text.cpp 1998

Chapter 11

Namespace Documentation

11.1 Ui Namespace Reference

Data Structures

- class AnimAddDialog
- class AnimSettingDialog
- class ExtraSettingsWidget
- class FwUpgradeDialog
- class GradientDialog
- class KbAnimWidget
- class KbBindWidget
- class KbLightWidget
- class KbProfileDialog
- class KbWidget
- class KPerfWidget
- class LayoutDialog
- class MainWindow
- class ModeSelectDialog
- class MPerfWidget
- class RebindWidget
- class SettingsWidget

Chapter 12

Data Structure Documentation

12.1 Ui::AnimAddDialog Class Reference

```
#include <src/ckb/ui_animadddialog.h>
```

Inheritance diagram for Ui::AnimAddDialog:

Collaboration diagram for Ui::AnimAddDialog:

Public Member Functions

- void setupUi (QDialog ∗AnimAddDialog)
- void retranslateUi (QDialog ∗AnimAddDialog)

Data Fields

- QGridLayout ∗ gridLayout
- QHBoxLayout ∗ horizontalLayout
- QDialogButtonBox ∗ buttonBox
- QSpacerItem ∗ horizontalSpacer_2
- QComboBox ∗ animBox
- QLabel ∗ label_2
- QSpacerItem ∗ verticalSpacer_2
- QLabel ∗ label
- QSpacerItem ∗ verticalSpacer_3
- QComboBox ∗ presetBox
- QSpacerItem ∗ horizontalSpacer
- QCheckBox ∗ previewBox

12.1.1 Detailed Description

Definition at line 146 of file ui_animadddialog.h.

12.1.2 Member Function Documentation

12.1.2.1 void Ui_AnimAddDialog::retranslateUi (QDialog ∗ *AnimAddDialog*) [inline],[inherited]

Definition at line 135 of file ui_animadddialog.h.

References Ui_AnimAddDialog::label, Ui_AnimAddDialog::label_2, and Ui_AnimAddDialog::previewBox.

Referenced by Ui_AnimAddDialog::setupUi().

```
    {
        AnimAddDialog->setWindowTitle(QApplication::translate("AnimAddDialog", "Add Animation", Q_NULLPTR));
        label_2->setText(QApplication::translate("AnimAddDialog", "Preset:", Q_NULLPTR));
```

```
        label->setText(QApplication::translate("AnimAddDialog", "Animation:", Q_NULLPTR));
        previewBox->setText(QApplication::translate("AnimAddDialog", "Show preview", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.1.2.2 void Ui_AnimAddDialog::setupUi (QDialog * *AnimAddDialog*) [inline],[inherited]

Definition at line 44 of file ui_animadddialog.h.

References Ui_AnimAddDialog::animBox, Ui_AnimAddDialog::buttonBox, Ui_AnimAddDialog::gridLayout, Ui_AnimAddDialog::horizontalLayout, Ui_AnimAddDialog::horizontalSpacer, Ui_AnimAddDialog::horizontalSpacer_2, Ui_AnimAddDialog::label, Ui_AnimAddDialog::label_2, Ui_AnimAddDialog::presetBox, Ui_AnimAddDialog::previewBox, Ui_AnimAddDialog::retranslateUi(), Ui_AnimAddDialog::verticalSpacer_2, and Ui_AnimAddDialog::verticalSpacer_3.

Referenced by AnimAddDialog::AnimAddDialog().

```
    {
        if (AnimAddDialog->objectName().isEmpty())
            AnimAddDialog->setObjectName(QStringLiteral("AnimAddDialog"));
        AnimAddDialog->resize(350, 205);
        QSizePolicy sizePolicy(QSizePolicy::Fixed, QSizePolicy::Fixed);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(AnimAddDialog->sizePolicy().hasHeightForWidth());
        AnimAddDialog->setSizePolicy(sizePolicy);
        gridLayout = new QGridLayout(AnimAddDialog);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        buttonBox = new QDialogButtonBox(AnimAddDialog);
        buttonBox->setObjectName(QStringLiteral("buttonBox"));
        buttonBox->setOrientation(Qt::Horizontal);
        buttonBox->setStandardButtons(QDialogButtonBox::Cancel|QDialogButtonBox::Ok);
        buttonBox->setCenterButtons(false);

        horizontalLayout->addWidget(buttonBox);


        gridLayout->addLayout(horizontalLayout, 5, 0, 1, 4);

        horizontalSpacer_2 = new QSpacerItem(50, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_2, 1, 3, 1, 1);

        animBox = new QComboBox(AnimAddDialog);
        animBox->setObjectName(QStringLiteral("animBox"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Fixed);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(animBox->sizePolicy().hasHeightForWidth());
        animBox->setSizePolicy(sizePolicy1);

        gridLayout->addWidget(animBox, 1, 2, 1, 1);

        label_2 = new QLabel(AnimAddDialog);
        label_2->setObjectName(QStringLiteral("label_2"));
        QSizePolicy sizePolicy2(QSizePolicy::Preferred, QSizePolicy::Preferred);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(0);
        sizePolicy2.setHeightForWidth(label_2->sizePolicy().hasHeightForWidth());
        label_2->setSizePolicy(sizePolicy2);
        label_2->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout->addWidget(label_2, 2, 1, 1, 1);

```

```
        verticalSpacer_2 = new QSpacerItem(20, 0, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout->addItem(verticalSpacer_2, 4, 2, 1, 1);

        label = new QLabel(AnimAddDialog);
        label->setObjectName(QStringLiteral("label"));
         sizePolicy2.setHeightForWidth(label->sizePolicy().hasHeightForWidth());
         label->setSizePolicy(sizePolicy2);
         label->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

         gridLayout->addWidget(label, 1, 1, 1, 1);

         verticalSpacer_3 = new QSpacerItem(20, 0, QSizePolicy::Minimum, QSizePolicy::Expanding);

         gridLayout->addItem(verticalSpacer_3, 0, 2, 1, 1);

         presetBox = new QComboBox(AnimAddDialog);
         presetBox->setObjectName(QStringLiteral("presetBox"));
         sizePolicy1.setHeightForWidth(presetBox->sizePolicy().hasHeightForWidth());
         presetBox->setSizePolicy(sizePolicy1);

         gridLayout->addWidget(presetBox, 2, 2, 1, 1);

         horizontalSpacer = new QSpacerItem(50, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

         gridLayout->addItem(horizontalSpacer, 1, 0, 1, 1);

         previewBox = new QCheckBox(AnimAddDialog);
         previewBox->setObjectName(QStringLiteral("previewBox"));
         previewBox->setChecked(true);

         gridLayout->addWidget(previewBox, 3, 2, 1, 1);


         retranslateUi(AnimAddDialog);
         QObject::connect(buttonBox, SIGNAL(accepted()), AnimAddDialog, SLOT(accept()));
         QObject::connect(buttonBox, SIGNAL(rejected()), AnimAddDialog, SLOT(reject()));

         QMetaObject::connectSlotsByName(AnimAddDialog);
     } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.1.3 Field Documentation

12.1.3.1 QComboBox* Ui_AnimAddDialog::animBox [inherited]

Definition at line 35 of file ui_animadddialog.h.

Referenced by AnimAddDialog::AnimAddDialog(), AnimAddDialog::chosenScript(), and Ui_AnimAddDialog::setupUi().

12.1.3.2 QDialogButtonBox* Ui_AnimAddDialog::buttonBox [inherited]

Definition at line 33 of file ui_animadddialog.h.

Referenced by Ui_AnimAddDialog::setupUi().

12.1.3.3 QGridLayout* Ui_AnimAddDialog::gridLayout [inherited]

Definition at line 31 of file ui_animadddialog.h.

Referenced by Ui_AnimAddDialog::setupUi().

12.1.3.4 QHBoxLayout* Ui_AnimAddDialog::horizontalLayout [inherited]

Definition at line 32 of file ui_animadddialog.h.

Referenced by Ui_AnimAddDialog::setupUi().

12.1.3.5 QSpacerItem* Ui_AnimAddDialog::horizontalSpacer [inherited]

Definition at line 41 of file ui_animadddialog.h.

Referenced by Ui_AnimAddDialog::setupUi().

12.1.3.6 QSpacerItem* Ui_AnimAddDialog::horizontalSpacer_2 [inherited]

Definition at line 34 of file ui_animadddialog.h.

Referenced by Ui_AnimAddDialog::setupUi().

12.1.3.7 QLabel* Ui_AnimAddDialog::label [inherited]

Definition at line 38 of file ui_animadddialog.h.

Referenced by Ui_AnimAddDialog::retranslateUi(), and Ui_AnimAddDialog::setupUi().

12.1.3.8 QLabel* Ui_AnimAddDialog::label_2 [inherited]

Definition at line 36 of file ui_animadddialog.h.

Referenced by Ui_AnimAddDialog::retranslateUi(), and Ui_AnimAddDialog::setupUi().

12.1.3.9 QComboBox* Ui_AnimAddDialog::presetBox [inherited]

Definition at line 40 of file ui_animadddialog.h.

Referenced by AnimAddDialog::chosenPreset(), AnimAddDialog::on_animBox_activated(), AnimAddDialog::on_previewBox_clicked(), and Ui_AnimAddDialog::setupUi().

12.1.3.10 QCheckBox* Ui_AnimAddDialog::previewBox [inherited]

Definition at line 42 of file ui_animadddialog.h.

Referenced by Ui_AnimAddDialog::retranslateUi(), and Ui_AnimAddDialog::setupUi().

12.1.3.11 QSpacerItem* Ui_AnimAddDialog::verticalSpacer_2 [inherited]

Definition at line 37 of file ui_animadddialog.h.

Referenced by Ui_AnimAddDialog::setupUi().

12.1.3.12 QSpacerItem* Ui_AnimAddDialog::verticalSpacer_3 [inherited]

Definition at line 39 of file ui_animadddialog.h.

Referenced by Ui_AnimAddDialog::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_animadddialog.h

12.2 AnimAddDialog Class Reference

`#include <src/ckb/animadddialog.h>`

Inheritance diagram for AnimAddDialog:

Collaboration diagram for AnimAddDialog:

Public Member Functions

- AnimAddDialog (QWidget ∗parent, KbLight ∗light, const QStringList &keys)
- ∼AnimAddDialog ()
- const AnimScript ∗ chosenScript ()
- int chosenPreset ()

Private Slots

- void on_animBox_activated (int index)
- void on_presetBox_activated (int index)
- void on_previewBox_clicked (bool checked)

Private Attributes

- Ui::AnimAddDialog ∗ ui
- QList< const AnimScript ∗ > scripts
- KbLight ∗ _light
- QStringList _keys
- bool showPreview

12.2.1 Detailed Description

Definition at line 12 of file animadddialog.h.

12.2.2 Constructor & Destructor Documentation

12.2.2.1 AnimAddDialog::AnimAddDialog (QWidget * *parent*, KbLight * *light*, const QStringList & *keys*) [explicit]

Definition at line 4 of file animadddialog.cpp.

References Ui_AnimAddDialog::animBox, AnimScript::list(), AnimScript::name(), on_animBox_activated(), scripts, Ui_AnimAddDialog::setupUi(), and ui.

```
4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                :
5     QDialog(parent),
6     ui(new Ui::AnimAddDialog), _light(light), _keys(keys),
      showPreview(true)
7 {
8     ui->setupUi(this);
9     scripts = AnimScript::list();
10     foreach(const AnimScript* script, scripts)
11         ui->animBox->addItem(script->name());
12     on_animBox_activated(0);
13 }
```

Here is the call graph for this function:

12.2.2.2 AnimAddDialog::~AnimAddDialog ( )

Definition at line 15 of file animadddialog.cpp.

References _light, KbLight::stopPreview(), and ui.

```
15                                  {
16     delete ui;
17     _light->stopPreview();
18 }
```

Here is the call graph for this function:

12.2.3 Member Function Documentation

12.2.3.1 int AnimAddDialog::chosenPreset ( )

Definition at line 24 of file animadddialog.cpp.

References Ui_AnimAddDialog::presetBox, and ui.

Referenced by KbLightWidget::on_animButton_clicked().

```
                                {
    return ui->presetBox->currentIndex();
}
```

Here is the caller graph for this function:

12.2.3.2 const AnimScript * AnimAddDialog::chosenScript ( )

Definition at line 20 of file animadddialog.cpp.

References Ui_AnimAddDialog::animBox, scripts, and ui.

Referenced by on_animBox_activated(), KbLightWidget::on_animButton_clicked(), and on_presetBox_activated().

```
                                        {
    return scripts[ui->animBox->currentIndex()];
}
```

Here is the caller graph for this function:

12.2.3.3 void AnimAddDialog::on_animBox_activated (int *index*) [private],[slot]

Definition at line 28 of file animadddialog.cpp.

References chosenScript(), on_presetBox_activated(), Ui_AnimAddDialog::presetBox, and ui.

Referenced by AnimAddDialog().

```
                                            {
    // Update preset list
    ui->presetBox->clear();
    foreach(const QString& preset, chosenScript()->presets())
        ui->presetBox->addItem(preset);
    ui->presetBox->setCurrentIndex(0);
    on_presetBox_activated(0);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.2.3.4 void AnimAddDialog::on_presetBox_activated (int *index*) [private],[slot]

Definition at line 37 of file animadddialog.cpp.

References _keys, _light, chosenScript(), KbLight::previewAnim(), and showPreview.

Referenced by on_animBox_activated(), and on_previewBox_clicked().

```
37                                                  {
38     // Update preview
39     if(showPreview)
40         _light->previewAnim(chosenScript(), _keys,
       chosenScript()->preset(index));
41 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.2.3.5 void AnimAddDialog::on_previewBox_clicked (bool *checked*) [private], [slot]

Definition at line 43 of file animadddialog.cpp.

References _light, on_presetBox_activated(), Ui_AnimAddDialog::presetBox, showPreview, KbLight::stopPreview(), and ui.

```
43                                                  {
44     showPreview = checked;
45     if(showPreview)
46         on_presetBox_activated(ui->presetBox->currentIndex());
47     else
48         _light->stopPreview();
49 }
```

Here is the call graph for this function:

12.2.4 Field Documentation

12.2.4.1 QStringList AnimAddDialog::_keys [private]

Definition at line 33 of file animadddialog.h.

Referenced by on_presetBox_activated().

12.2.4.2 KbLight* AnimAddDialog::_light [private]

Definition at line 32 of file animadddialog.h.

Referenced by on_presetBox_activated(), on_previewBox_clicked(), and ~AnimAddDialog().

12.2.4.3 QList<const AnimScript*> AnimAddDialog::scripts [private]

Definition at line 30 of file animadddialog.h.

Referenced by AnimAddDialog(), and chosenScript().

12.2.4.4 bool AnimAddDialog::showPreview [private]

Definition at line 34 of file animadddialog.h.

Referenced by on_presetBox_activated(), and on_previewBox_clicked().

12.2.4.5 Ui::AnimAddDialog* AnimAddDialog::ui [private]

Definition at line 29 of file animadddialog.h.

Referenced by AnimAddDialog(), chosenPreset(), chosenScript(), on_animBox_activated(), on_previewBox_clicked(), and ~AnimAddDialog().

The documentation for this class was generated from the following files:

- src/ckb/animadddialog.h
- src/ckb/animadddialog.cpp

12.3 AnimScript Class Reference

```
#include <src/ckb/animscript.h>
```

Inheritance diagram for AnimScript:

Collaboration diagram for AnimScript:

Data Structures

- struct Param

Public Types

- typedef QMap< QString, QVariant > PresetValue

Public Member Functions

- const QUuid & guid () const
- const QString & name () const
- const QString & version () const
- QString copyright () const
- const QString & year () const
- const QString & author () const
- const QString & license () const
- const QString & description () const
- bool hasKeypress () const
- const QStringList & presets () const
- const PresetValue & preset (int index) const
- QListIterator< Param > paramIterator () const
- Param param (const QString &name) const
- bool hasParam (const QString &name) const
- void init (const KeyMap &map, const QStringList &keys, const QMap< QString, QVariant > &paramValues)
- void parameters (const QMap< QString, QVariant > &paramValues)
- void retrigger (quint64 timestamp, bool allowPreempt=false)
- void stop (quint64 timestamp)
- void keypress (const QString &key, bool pressed, quint64 timestamp)

- void frame (quint64 timestamp)
- void end ()
- bool hasFrame () const
- const ColorMap & colors () const
- ~AnimScript ()

Static Public Member Functions

- static QString path ()
- static void scan ()
- static int count ()
- static QList< const AnimScript * > list ()
- static AnimScript * copy (QObject *parent, const QUuid &id)

Private Slots

- void readProcess ()

Private Member Functions

- bool load ()
- void setDuration ()
- void printParams ()
- void begin (quint64 timestamp)
- void advance (quint64 timestamp)
- AnimScript (QObject *parent, const QString &path)
- AnimScript (QObject *parent, const AnimScript &base)

Private Attributes

- struct {
  QUuid **guid**
  QString **name**
  QString **version**
  QString **year**
  QString **author**
  QString **license**
  QString **description**
  QList< Param > **params**
  int **kpMode**:3
  bool **absoluteTime**:1
  bool **repeat**:1
  bool **preempt**:1
  bool **liveParams**:1
  } _info

- QStringList _presets
- QList< PresetValue > _presetValues
- QString _path
- KeyMap _map
- int minX
- int minY
- QStringList _keys

- ColorMap _colors
- PresetValue _paramValues
- quint64 lastFrame
- int durationMsec
- int repeatMsec
- bool initialized:1
- bool firstFrame:1
- bool readFrame:1
- bool readAnyFrame:1
- bool stopped:1
- bool inFrame:1
- QProcess * process
- ColorMap _colorBuffer

Static Private Attributes

- static const int KP_NONE = 0
- static const int KP_NAME = 1
- static const int KP_POSITION = 2
- static QHash< QUuid, AnimScript * > scripts

12.3.1 Detailed Description

Definition at line 16 of file animscript.h.

12.3.2 Data Structure Documentation

12.3.2.1 struct AnimScript::Param

Definition at line 21 of file animscript.h.

Collaboration diagram for AnimScript::Param:

Data Fields

	Type	

Data Fields

QVariant	defaultValue	
QVariant	maximum	
QVariant	minimum	
QString	name	
QString	postfix	
QString	prefix	
Type	type	

12.3.3 Member Typedef Documentation

12.3.3.1 typedef QMap<QString, QVariant> AnimScript::PresetValue

Definition at line 58 of file animscript.h.

12.3.4 Constructor & Destructor Documentation

12.3.4.1 AnimScript::~AnimScript ( )

Definition at line 21 of file animscript.cpp.

References process.

```
21                          {
22      if(process){
23          process->kill();
24          process->waitForFinished(1000);
25          delete process;
26      }
27  }
```

12.3.4.2 AnimScript::AnimScript (QObject * *parent*, const QString & *path*) [private]

Definition at line 11 of file animscript.cpp.

Referenced by copy(), and scan().

```
11                                                          :
12      QObject(parent), _path(path), initialized(false),
       process(0)
13  {
14  }
```

Here is the caller graph for this function:

12.3.4.3 AnimScript::AnimScript (QObject * *parent*, const AnimScript & *base*) [private]

Definition at line 16 of file animscript.cpp.

```
16                                                          :
17     QObject(parent), _info(base._info), _path(base._path),
      initialized(false), process(0)
18 {
19 }
```

12.3.5 Member Function Documentation

12.3.5.1 void AnimScript::advance (quint64 *timestamp*) [private]

Definition at line 445 of file animscript.cpp.

References _info, durationMsec, lastFrame, and process.

Referenced by frame(), keypress(), retrigger(), and stop().

```
445                                          {
446     if(timestamp <= lastFrame || !process)
447         // Don't do anything if the time hasn't actually advanced.
448         return;
449     double delta = (timestamp - lastFrame) / (double)durationMsec;
450     if(!_info.absoluteTime){
451         // Skip any complete durations
452         while(delta > 1.){
453             process->write("time 1\n");
454             delta--;
455         }
456     }
457     process->write(QString("time %1\n").arg(delta).toLatin1());
458     lastFrame = timestamp;
459 }
```

Here is the caller graph for this function:

12.3.5.2 const QString& AnimScript::author ( ) const [inline]

Definition at line 64 of file animscript.h.

References _info.

Referenced by AnimSettingDialog::AnimSettingDialog().

```
64 { return _info.author; }
```

Here is the caller graph for this function:

12.3.5.3 void AnimScript::begin (quint64 *timestamp*) [private]

Definition at line 287 of file animscript.cpp.

References _keys, _map, _path, end(), firstFrame, inFrame, initialized, KeyMap::key(), lastFrame, minX, minY, printParams(), process, readAnyFrame, readFrame, readProcess(), stopped, Key::x, and Key::y.

Referenced by frame(), keypress(), retrigger(), and stop().

```
287                                         {
288     if(!initialized)
289         return;
290     end();
291     stopped = firstFrame = readFrame = readAnyFrame =
      inFrame = false;
292     // Determine the upper left corner of the given keys
293     QStringList keysCopy = _keys;
294     minX = INT_MAX;
295     minY = INT_MAX;
296     foreach(const QString& key, keysCopy){
297         const Key& pos = _map.key(key);
298         if(!pos){
299             keysCopy.removeAll(key);
300             continue;
301         }
302         if(pos.x < minX)
303             minX = pos.x;
304         if(pos.y < minY)
305             minY = pos.y;
306     }
307     if(keysCopy.isEmpty()){
308         // If the key list is empty, don't actually start the animation but pretend it's running anyway
309         firstFrame = readFrame = readAnyFrame = true;
310         return;
311     }
312     process = new QProcess(this);
313     connect(process, SIGNAL(readyRead()), this, SLOT(readProcess()));
314     process->start(_path, QStringList("--ckb-run"));
315     qDebug() << "Starting " << _path;
316     // Write the keymap to the process
317     process->write("begin keymap\n");
318     process->write(QString("keycount %1\n").arg(keysCopy.count()).toLatin1());
319     foreach(const QString& key, keysCopy){
320         const Key& pos = _map.key(key);
321         process->write(QString("key %1 %2,%3\n").arg(key).arg(pos.x -
      minX).arg(pos.y - minY).toLatin1());
322     }
323     process->write("end keymap\n");
324     // Write parameters
325     printParams();
326     // Begin animating
327     process->write("begin run\n");
328     lastFrame = timestamp;
329 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.4 const ColorMap& AnimScript::colors ( ) const [inline]

Definition at line 99 of file animscript.h.

References _colors.

Referenced by KbAnim::blend().

```
99 { return _colors; }
```

Here is the caller graph for this function:

12.3.5.5 AnimScript * AnimScript::copy (QObject * *parent*, const QUuid & *id*) [static]

Definition at line 67 of file animscript.cpp.

References AnimScript(), and scripts.

Referenced by KbAnim::KbAnim().

```
67                                                          {
68      return scripts.contains(id) ? new AnimScript(parent, *
    scripts.value(id)) : 0;
69 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.6 QString AnimScript::copyright ( ) const [inline]

Definition at line 62 of file animscript.h.

References _info.

Referenced by KbAnimWidget::setCurrent().

```
62 { return "Copyright © " + _info.year + " " + _info.author; }
```

Here is the caller graph for this function:

12.3.5.7 static int AnimScript::count ( ) [inline], [static]

Definition at line 54 of file animscript.h.

References scripts.

Referenced by KbLightWidget::KbLightWidget(), load(), KbLightWidget::on_animButton_clicked(), and ExtraSettingsWidget::on_animScanButton_clicked().

```
54 { return scripts.count(); }
```

Here is the caller graph for this function:

12.3.5.8 const QString& AnimScript::description ( ) const [inline]

Definition at line 66 of file animscript.h.

References _info.

Referenced by AnimSettingDialog::AnimSettingDialog().

```
66 { return _info.description; }
```

Here is the caller graph for this function:

12.3.5.9 void AnimScript::end ( )

Definition at line 387 of file animscript.cpp.

References _colors, ColorMap::clear(), process, and readProcess().

Referenced by begin(), KbAnim::catchUp(), init(), and KbAnim::stop().

```
387                     {
388     _colors.clear();
389     if(process){
390         process->kill();
391         connect(process, SIGNAL(finished(int)), process, SLOT(deleteLater()));
392         disconnect(process, SIGNAL(readyRead()), this, SLOT(readProcess()));
393         process = 0;
394     }
395 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.10 void AnimScript::frame (quint64 *timestamp*)

Definition at line 430 of file animscript.cpp.

References advance(), begin(), firstFrame, initialized, process, readFrame, and stopped.

Referenced by KbAnim::blend(), KbAnim::keypress(), and KbAnim::trigger().

```
430                                     {
431     if(!initialized || stopped)
432         return;
433     // Start the animation if it's not running yet
434     if(!process)
435         begin(timestamp);
436
437     advance(timestamp);
438     if((readFrame || !firstFrame) && process)
439         // Don't ask for a new frame if the animation hasn't delivered the last one yet
440         process->write("frame\n");
441     firstFrame = true;
442     readFrame = false;
443 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.11 const QUuid& AnimScript::guid ( ) const [inline]

Definition at line 59 of file animscript.h.

References _info.

Referenced by KbAnim::KbAnim(), list(), and scan().

```
59 { return _info.guid; }
```

Here is the caller graph for this function:

12.3.5.12 bool AnimScript::hasFrame ( ) const [inline]

Definition at line 96 of file animscript.h.

References initialized, and readAnyFrame.

Referenced by KbAnim::isRunning().

```
96 { return initialized && readAnyFrame; }
```

Here is the caller graph for this function:

12.3.5.13 bool AnimScript::hasKeypress ( ) const [inline]

Definition at line 67 of file animscript.h.

References _info, and KP_NONE.

Referenced by AnimSettingDialog::AnimSettingDialog(), and AnimSettingDialog::updateParam().

```
67 { return _info.kpMode != KP_NONE; }
```

Here is the caller graph for this function:

12.3.5.14 bool AnimScript::hasParam (const QString & *name*) const [inline]

Definition at line 74 of file animscript.h.

References _info, and name().

Referenced by AnimSettingDialog::AnimSettingDialog(), load(), and KbAnim::parameter().

```
74 { QListIterator<Param> i(_info.params); while(i.hasNext()){ if(i.next().name ==
      name) return true; } return false; }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.15 void AnimScript::init (const KeyMap & *map,* const QStringList & *keys,* const QMap< QString, QVariant > & *paramValues*)

Definition at line 239 of file animscript.cpp.

References _colorBuffer, _colors, _keys, _map, _paramValues, _path, end(), firstFrame, ColorMap::init(), initialized, setDuration(), and stopped.

Referenced by KbAnim::reInit().

```
239
    {
240     if(_path == "")
241         return;
242     end();
243     _map = map;
244     _colors.init(map);
245     _colorBuffer.init(map);
246     _keys = keys;
247     _paramValues = paramValues;
248     setDuration();
249     stopped = firstFrame = false;
250     initialized = true;
251 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.16 void AnimScript::keypress (const QString & *key,* bool *pressed,* quint64 *timestamp*)

Definition at line 354 of file animscript.cpp.

References _info, _map, _paramValues, advance(), begin(), initialized, KeyMap::key(), KP_NAME, KP_NONE, KP_POSITION, minX, minY, process, retrigger(), stop(), Key::x, and Key::y.

Referenced by KbAnim::catchUp(), and KbAnim::keypress().

```
354                                                                                 {
355     if(!initialized)
356         return;
357     if(!process)
358         begin(timestamp);
359     int kpMode = _info.kpMode;
360     if(_paramValues.value("kpmode", 0).toInt() != 0)
361         // Disable KP mode according to user preferences
362         kpMode = KP_NONE;
363     switch(kpMode){
364     case KP_NONE:
365         // If KPs aren't allowed, call retrigger/stop instead
366         if(pressed)
367             retrigger(timestamp);
368         else if(_paramValues.value("kprelease", false).toBool())
369             stop(timestamp);
370         break;
371     case KP_NAME:
372         // Print keypress by name
373         advance(timestamp);
374         process->write(("key " + key + (pressed ? " down\n" : " up\n")).toLatin1());
375         break;
376     case KP_POSITION:
377         // Print keypress by position
378         const Key& kp = _map.key(key);
379         if(!kp)
380             return;
381         advance(timestamp);
382         process->write(("key " + QString("%1,%2").arg(kp.x - minX).arg(kp.
      y - minY) + (pressed ? " down\n" : " up\n")).toLatin1());
383         break;
384     }
385 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.17 const QString& AnimScript::license ( ) const [inline]

Definition at line 65 of file animscript.h.

References _info.

Referenced by AnimSettingDialog::AnimSettingDialog().

```
65 { return _info.license; }
```

Here is the caller graph for this function:

12.3.5.18 QList< const AnimScript * > AnimScript::list ( ) [static]

Definition at line 51 of file animscript.cpp.

References _info, guid(), name(), and scripts.

Referenced by AnimAddDialog::AnimAddDialog().

```
51                                          {
52     // Gather the animations into an alphabetically-sorted list
53     QMap<QString, const AnimScript*> result;
54     foreach(AnimScript* script, scripts.values()){
55         QString name = script->name();
56         if(result.contains(name)){
57             // If duplicate names exist, make them unique by including their GUIDs
58             AnimScript* last = (AnimScript*)result[name];
59             last->_info.name += " " + last->guid().toString().toUpper();
60             script->_info.name += " " + script->guid().toString().toUpper();
61         }
62         result[script->name()] = script;
63     }
64     return result.values();
65 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.19 bool AnimScript::load ( ) [private]

Definition at line 77 of file animscript.cpp.

References _info, _path, _presets, _presetValues, AnimScript::Param::AGRADIENT, AnimScript::Param::ANGLE, AnimScript::Param::ARGB, AnimScript::Param::BOOL, count(), AnimScript::Param::defaultValue, AnimScript::Param::DOUBLE, AnimScript::Param::GRADIENT, hasParam(), AnimScript::Param::INVALID, KP_NAME, KP_NONE, KP_POSITION, kprelease, AnimScript::Param::LABEL, AnimScript::Param::LONG, name(), ONE_DAY, param(), preset(), AnimScript::Param::RGB, stop(), AnimScript::Param::STRING, and urlParam().

Referenced by scan().

```
77                      {
78      // Run the process to get script info
79      QProcess infoProcess;
80      infoProcess.start(_path, QStringList("--ckb-info"));
81      qDebug() << "Scanning " << _path;
82      infoProcess.waitForFinished(1000);
83      if(infoProcess.state() == QProcess::Running){
84          // Kill the process if it takes more than 1s
85          infoProcess.kill();
86          return false;
87      }
88      // Set defaults for performance info
89      _info.kpMode = KP_NONE;
90      _info.absoluteTime = _info.preempt = _info.liveParams = false;
91      _info.repeat = true;
92      // Read output
93      QString line;
94      while((line = infoProcess.readLine()) != ""){
95          line = line.trimmed();
96          QStringList components = line.split(" ");
97          int count = components.count();
98          if(count < 2)
99              continue;
100         QString param = components[0].trimmed();
101         if(param == "guid")
102             _info.guid = QUuid(urlParam(components[1]));
```

```
        else if(param == "name")
            _info.name = urlParam(components[1]);
        else if(param == "version")
            _info.version = urlParam(components[1]);
        else if(param == "year")
            _info.year = urlParam(components[1]);
        else if(param == "author")
            _info.author = urlParam(components[1]);
        else if(param == "license")
            _info.license = urlParam(components[1]);
        else if(param == "description")
            _info.description = urlParam(components[1]);
        else if(param == "kpmode")
            _info.kpMode = (components[1] == "position") ? KP_POSITION : (components[1] == "name") ? KP_NAME : KP_NONE;
        else if(param == "time")
            _info.absoluteTime = (components[1] == "absolute");
        else if(param == "repeat")
            _info.repeat = (components[1] == "on");
        else if(param == "preempt")
            _info.preempt = (components[1] == "on");
        else if(param == "parammode")
            _info.liveParams = (components[1] == "live");
        else if(param == "param"){
            // Read parameter
            if(count < 3)
                continue;
            while(components.count() < 8)
                components.append("");
            Param::Type type = Param::INVALID;
            QString sType = components[1].toLower();
            if(sType == "long")
                type = Param::LONG;
            else if(sType == "double")
                type = Param::DOUBLE;
            else if(sType == "bool")
                type = Param::BOOL;
            else if(sType == "rgb")
                type = Param::RGB;
            else if(sType == "argb")
                type = Param::ARGB;
            else if(sType == "gradient")
                type = Param::GRADIENT;
            else if(sType == "agradient")
                type = Param::AGRADIENT;
            else if(sType == "angle")
                type = Param::ANGLE;
            else if(sType == "string")
                type = Param::STRING;
            else if(sType == "label")
                type = Param::LABEL;
            else
                continue;
            // "param <type> <name> <prefix> <postfix> <default>"
            QString name = components[2].toLower();
            // Make sure it's not present already
            if(hasParam(name))
                continue;
            QString prefix = urlParam(components[3]), postfix = urlParam(components[4]);
            QVariant def = urlParam(components[5]), minimum = urlParam(components[6]), maximum = urlParam(components[7]);
            // Don't allow predefined params
            if(name == "trigger" || name == "kptrigger" || name == "kpmode" || name == "duration" || name == "delay" || name == "kpdelay" || name == "repeat" || name == "kprepeat" || name == "stop" || name == "kpstop" || name == "kpmodestop" || name == "kprelease")
                continue;
            Param param = { type, name, prefix, postfix, def, minimum, maximum };
            _info.params.append(param);
        } else if(param == "preset"){
            // Add preset
            QString name = urlParam(components.at(1));
            QMap<QString, QVariant> preset;
            for(int i = 2; i < count; i++){
                // Scan name/value setting pairs
                QString setting = components.at(i);
                QStringList sComponents = setting.split("=");
                if(sComponents.count() != 2)
                    continue;
                QString param = sComponents.first().trimmed();
                QString value = urlParam(sComponents.last());
                preset[param] = value;
            }
            // If the preset contains a duration, set the repeat time to the same value
            if(preset.contains("duration")){
                QVariant duration = preset.value("duration");
                preset["repeat"] = duration;
                preset["kprepeat"] = duration;
```

```
            }
            _presets.append(name);
            _presetValues.append(preset);
        }
    }
    // Make sure the required parameters are filled out
    if(_info.guid.isNull() || _info.name == "" || _info.version == "" || _info.year == "" || _info.author == "" || _info.license == "")
        return false;
    // Add timing parameters
    double defaultDuration = -1.;
    if(!_info.absoluteTime){
        defaultDuration = 1.;
        Param duration = { Param::DOUBLE, "duration", "", "", defaultDuration, 0.1, ONE_DAY };
        _info.params.append(duration);
    }
    Param trigger = { Param::BOOL, "trigger", "", "", true, 0, 0 };
    _info.params.append(trigger);
    Param kptrigger = { Param::BOOL, "kptrigger", "", "", false, 0, 0 };
    _info.params.append(kptrigger);
    if(_info.absoluteTime || !_info.repeat)
        _info.preempt = false;
    Param kpmode = { Param::LONG, "kpmode", "", "", 1, 0, 0 };
    if(_info.kpMode)
        kpmode.defaultValue = 0;
    _info.params.append(kpmode);
    Param delay = { Param::DOUBLE, "delay", "", "", 0., 0., ONE_DAY };
    Param kpdelay = { Param::DOUBLE, "kpdelay", "", "", 0., 0., ONE_DAY };
    _info.params.append(delay);
    _info.params.append(kpdelay);
    Param kpmodestop = { Param::BOOL, "kpmodestop", "", "", false, 0, 0 };
    Param kprelease = { Param::BOOL, "kprelease", "", "", false, 0, 0 };
    _info.params.append(kpmodestop);
    _info.params.append(kprelease);
    if(_info.repeat){
        Param repeat = { Param::DOUBLE, "repeat", "", "", defaultDuration, 0.1, ONE_DAY };
        Param kprepeat = { Param::DOUBLE, "kprepeat", "", "", defaultDuration, 0.1, ONE_DAY };
        // When repeats are enabled, stop and kpstop are LONG values (number of repeats)
        Param stop = { Param::LONG, "stop", "", "", -1, 0, 1000 };
        Param kpstop = { Param::LONG, "kpstop", "", "", 0, 0, 1000 };
        _info.params.append(repeat);
        _info.params.append(kprepeat);
        _info.params.append(stop);
        _info.params.append(kpstop);
    } else {
        // When repeats are disabled, stop and kpstop are DOUBLE values (seconds)
        Param stop = { Param::DOUBLE, "stop", "", "", -1., 0.1, ONE_DAY };
        Param kpstop = { Param::DOUBLE, "kpstop", "", "", -1., 0.1, ONE_DAY };
        _info.params.append(stop);
        _info.params.append(kpstop);
    }
    return true;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.20 const QString& AnimScript::name ( ) const [inline]

Definition at line 60 of file animscript.h.

References _info.

Referenced by AnimAddDialog::AnimAddDialog(), AnimSettingDialog::AnimSettingDialog(), hasParam(), KbAnim::-KbAnim(), list(), load(), and KbAnimWidget::setCurrent().

```
60 { return _info.name; }
```

Here is the caller graph for this function:

12.3.5.21 Param AnimScript::param (const QString & *name*) const [inline]

Definition at line 73 of file animscript.h.

References _info, AnimScript::Param::INVALID, and AnimScript::Param::name.

Referenced by KbAnim::KbAnim(), load(), and AnimSettingDialog::updateParam().

```
73 { QListIterator<Param> i(_info.params); while(i.hasNext()){ Param p = i.next(); if(p.name ==
     name) return p; } return ((Param[]){ { Param::INVALID, "", "", "", 0, 0, 0 } })[0]; }
```

Here is the caller graph for this function:

12.3.5.22 void AnimScript::parameters (const QMap< QString, QVariant > & *paramValues*)

Definition at line 265 of file animscript.cpp.

References _info, _paramValues, initialized, printParams(), process, and setDuration().

Referenced by KbAnim::updateParams().

```
265                                                                    {
266     if(!initialized || !process || !_info.liveParams)
267         return;
268     _paramValues = paramValues;
269     setDuration();
270     printParams();
271 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.23 QListIterator<Param> AnimScript::paramIterator ( ) const [inline]

Definition at line 72 of file animscript.h.

References _info.

Referenced by AnimSettingDialog::AnimSettingDialog(), and KbAnim::KbAnim().

```
72 { return _info.params; }
```

Here is the caller graph for this function:

12.3.5.24 QString AnimScript::path ( ) [static]

Definition at line 29 of file animscript.cpp.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), and scan().

```
29                          {
30 #ifdef __APPLE__
31     return QDir(QApplication::applicationDirPath() + "/../Resources").absoluteFilePath("ckb-animations");
32 #else
33     return QDir("/usr/lib").absoluteFilePath("ckb-animations");
34 #endif
35 }
```

Here is the caller graph for this function:

12.3.5.25 const PresetValue& AnimScript::preset (int *index*) const [inline]

Definition at line 69 of file animscript.h.

References _presetValues.

Referenced by load(), and KbLightWidget::on_animButton_clicked().

```
69 { return _presetValues[index]; }
```

Here is the caller graph for this function:

12.3.5.26 const QStringList& AnimScript::presets ( ) const [inline]

Definition at line 68 of file animscript.h.

References _presets.

Referenced by KbLightWidget::on_animButton_clicked().

```
68 { return _presets; }
```

Here is the caller graph for this function:

12.3.5.27 void AnimScript::printParams ( ) [private]

Definition at line 273 of file animscript.cpp.

References _paramValues, and process.

Referenced by begin(), and parameters().

```
273                                 {
274     process->write("begin params\n");
275     QMapIterator<QString, QVariant> i(_paramValues);
276     while(i.hasNext()){
277         i.next();
278         process->write("param ");
279         process->write(i.key().toLatin1());
280         process->write(" ");
281         process->write(QUrl::toPercentEncoding(i.value().toString()));
282         process->write("\n");
283     }
284     process->write("end params\n");
285 }
```

Here is the caller graph for this function:

12.3.5.28 void AnimScript::readProcess ( ) [private],[slot]

Definition at line 397 of file animscript.cpp.

References _colorBuffer, _colors, ColorMap::colorForName(), ColorMap::colors(), ColorMap::count(), inFrame, process, readAnyFrame, readFrame, and stopped.

Referenced by begin(), and end().

```
397                                 {
398     while(process->canReadLine()){
399         QByteArray line = process->readLine().trimmed();
400         if(!inFrame){
401             // Ignore anything not between "begin frame" and "end frame", except for "end run", which
        indicates that the program is done.
402             if(line == "begin frame")
403                 inFrame = true;
404             else if(line == "end run"){
405                 stopped = true;
406                 return;
407             }
408             continue;
409         }
410         if(line.startsWith("argb ")){
411             // Add a color to the buffer
412             char keyName[31];
413             QRgb keyColor = 0;
414             if(sscanf(line, "argb %30s %x", keyName, &keyColor) != 2)
415                 continue;
416             QRgb* inMap = _colorBuffer.colorForName(keyName);
417             if(!inMap)
418                 continue;
419             *inMap = keyColor;
420         }
421         if(line == "end frame"){
422             // Frame is finished. Copy color buffer back to the atomic map
423             memcpy(_colors.colors(), _colorBuffer.
      colors(), sizeof(QRgb) * _colors.count());
424             inFrame = false;
425             readFrame = readAnyFrame = true;
426         }
427     }
428 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.29 void AnimScript::retrigger (quint64 *timestamp,* bool *allowPreempt* = `false`)

Definition at line 331 of file animscript.cpp.

References _info, advance(), begin(), initialized, process, and repeatMsec.

Referenced by KbAnim::catchUp(), keypress(), and KbAnim::trigger().

```
331                                                                 {
332     if(!initialized)
333         return;
334     if(allowPreempt && _info.preempt && repeatMsec > 0)
335         // If preemption is wanted, trigger the animation 1 duration in the past first
336         retrigger(timestamp - repeatMsec);
337     if(!process)
338         begin(timestamp);
339     advance(timestamp);
340     if(process)
341         process->write("start\n");
342 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.30 void AnimScript::scan ( ) [static]

Definition at line 37 of file animscript.cpp.

References _info, AnimScript(), guid(), load(), path(), and scripts.

Referenced by ExtraSettingsWidget::on_animScanButton_clicked().

```
37                      {
38     QDir dir(path());
39     foreach(AnimScript* script, scripts)
40         delete script;
41     scripts.clear();
42     foreach(QString file, dir.entryList(QDir::Files | QDir::Executable)){
43         AnimScript* script = new AnimScript(qApp, dir.absoluteFilePath(file));
44         if(script->load() && !scripts.contains(script->_info.
      guid))
45             scripts[script->_info.guid] = script;
46         else
47             delete script;
48     }
49 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.31 void AnimScript::setDuration ( ) [private]

Definition at line 253 of file animscript.cpp.

References _info, _paramValues, durationMsec, and repeatMsec.

Referenced by init(), and parameters().

```
253                                 {
254     if(_info.absoluteTime){
255         durationMsec = 1000;
256         repeatMsec = 0;
257     } else {
258         durationMsec = round(_paramValues.value("duration").toDouble() * 1000.);
259         if(durationMsec <= 0)
260             durationMsec = -1;
261         repeatMsec = round(_paramValues.value("repeat").toDouble() * 1000.);
262     }
263 }
```

Here is the caller graph for this function:

12.3.5.32 void AnimScript::stop (quint64 *timestamp*)

Definition at line 344 of file animscript.cpp.

References advance(), begin(), initialized, and process.

Referenced by KbAnim::keypress(), keypress(), and load().

```
344                                     {
345     if(!initialized)
346         return;
347     if(!process)
348         begin(timestamp);
349     advance(timestamp);
350     if(process)
351         process->write("stop\n");
352 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.3.5.33 const QString& AnimScript::version ( ) const [inline]

Definition at line 61 of file animscript.h.

References _info.

Referenced by AnimSettingDialog::AnimSettingDialog(), and KbAnimWidget::setCurrent().

```
61 { return _info.version; }
```

Here is the caller graph for this function:

12.3.5.34 const QString& AnimScript::year ( ) const [inline]

Definition at line 63 of file animscript.h.

References _info.

Referenced by AnimSettingDialog::AnimSettingDialog().

```
63 { return _info.year; }
```

Here is the caller graph for this function:

12.3.6 Field Documentation

12.3.6.1 ColorMap AnimScript::_colorBuffer [private]

Definition at line 143 of file animscript.h.

Referenced by init(), and readProcess().

12.3.6.2 ColorMap AnimScript::_colors [private]

Definition at line 135 of file animscript.h.

Referenced by colors(), end(), init(), and readProcess().

12.3.6.3 struct { ... } AnimScript::_info [private]

Referenced by advance(), author(), copyright(), description(), guid(), hasKeypress(), hasParam(), keypress(), license(), list(), load(), name(), param(), parameters(), paramIterator(), retrigger(), scan(), setDuration(), version(), and year().

12.3.6.4 QStringList AnimScript::_keys [private]

Definition at line 133 of file animscript.h.

Referenced by begin(), and init().

12.3.6.5 KeyMap AnimScript::_map [private]

Definition at line 130 of file animscript.h.

Referenced by begin(), init(), and keypress().

12.3.6.6 PresetValue AnimScript::_paramValues [private]

Definition at line 136 of file animscript.h.

Referenced by init(), keypress(), parameters(), printParams(), and setDuration().

12.3.6.7 QString AnimScript::_path [private]

Definition at line 128 of file animscript.h.

Referenced by begin(), init(), and load().

12.3.6.8 QStringList AnimScript::_presets [private]

Definition at line 125 of file animscript.h.

Referenced by load(), and presets().

12.3.6.9 QList<PresetValue> AnimScript::_presetValues [private]

Definition at line 126 of file animscript.h.

Referenced by load(), and preset().

12.3.6.10 int AnimScript::durationMsec [private]

Definition at line 140 of file animscript.h.

Referenced by advance(), and setDuration().

12.3.6.11 bool AnimScript::firstFrame [private]

Definition at line 141 of file animscript.h.

Referenced by begin(), frame(), and init().

12.3.6.12 bool AnimScript::inFrame [private]

Definition at line 141 of file animscript.h.

Referenced by begin(), and readProcess().

12.3.6.13 bool AnimScript::initialized [private]

Definition at line 141 of file animscript.h.

Referenced by begin(), frame(), hasFrame(), init(), keypress(), parameters(), retrigger(), and stop().

12.3.6.14 const int AnimScript::KP_NAME = 1 [static], [private]

Definition at line 124 of file animscript.h.

Referenced by keypress(), and load().

12.3.6.15 const int AnimScript::KP_NONE = 0 [static], [private]

Definition at line 124 of file animscript.h.

Referenced by hasKeypress(), keypress(), and load().

12.3.6.16 const int AnimScript::KP_POSITION = 2 [static], [private]

Definition at line 124 of file animscript.h.

Referenced by keypress(), and load().

12.3.6.17 quint64 AnimScript::lastFrame [private]

Definition at line 139 of file animscript.h.

Referenced by advance(), and begin().

12.3.6.18 int AnimScript::minX [private]

Definition at line 131 of file animscript.h.

Referenced by begin(), and keypress().

12.3.6.19 int AnimScript::minY [private]

Definition at line 131 of file animscript.h.

Referenced by begin(), and keypress().

12.3.6.20 QProcess* AnimScript::process [private]

Definition at line 142 of file animscript.h.

Referenced by advance(), begin(), end(), frame(), keypress(), parameters(), printParams(), readProcess(), retrigger(), stop(), and ~AnimScript().

12.3.6.21 bool AnimScript::readAnyFrame [private]

Definition at line 141 of file animscript.h.

Referenced by begin(), hasFrame(), and readProcess().

12.3.6.22 bool AnimScript::readFrame [private]

Definition at line 141 of file animscript.h.

Referenced by begin(), frame(), and readProcess().

12.3.6.23 int AnimScript::repeatMsec [private]

Definition at line 140 of file animscript.h.

Referenced by retrigger(), and setDuration().

12.3.6.24 QHash< QUuid, AnimScript * > AnimScript::scripts [static], [private]

Definition at line 152 of file animscript.h.

Referenced by copy(), count(), list(), and scan().

12.3.6.25 bool AnimScript::stopped [private]

Definition at line 141 of file animscript.h.

Referenced by begin(), frame(), init(), and readProcess().

The documentation for this class was generated from the following files:

- src/ckb/animscript.h

- src/ckb/animscript.cpp

12.4 Ui::AnimSettingDialog Class Reference

```
#include <src/ckb/ui_animsettingdialog.h>
```

Inheritance diagram for Ui::AnimSettingDialog:

Collaboration diagram for Ui::AnimSettingDialog:

Public Member Functions

- void setupUi (QDialog *AnimSettingDialog)
- void retranslateUi (QDialog *AnimSettingDialog)

Data Fields

- QGridLayout * gridLayout
- QDialogButtonBox * buttonBox
- QTabWidget * tabWidget
- QWidget * settingTab
- QGridLayout * settingsGrid
- QLabel * label_2
- QSpacerItem * horizontalSpacer_3
- QLineEdit * animName
- QWidget * timeTab
- QGridLayout * timeGrid
- QSpacerItem * horizontalSpacer_5
- QLabel * kpRepeatLabel
- QLabel * repeatLabel
- QDoubleSpinBox * repeatBox
- QLabel * repeatLabel_2
- QFrame * line
- QLabel * kpRepeatLabel_2
- QLabel * label_4
- QLabel * label_8
- QDoubleSpinBox * kpDelayBox
- QLabel * label_13
- QLabel * label_12
- QDoubleSpinBox * delayBox
- QCheckBox * kpModeStopBox
- QLabel * label_10
- QSpacerItem * verticalSpacer_3
- QSpacerItem * horizontalSpacer_4

- QCheckBox * kpReleaseBox
- QLabel * label_6
- QDoubleSpinBox * kpRepeatBox
- QSpacerItem * verticalSpacer_2
- QFrame * line_2
- QSpacerItem * horizontalSpacer_6
- QWidget * infoTab
- QGridLayout * gridLayout_2
- QLabel * sNameLabel
- QLabel * label_7
- QLabel * label_11
- QLabel * sAuthorLabel
- QLabel * label_9
- QLabel * label_5
- QLabel * sYearLabel
- QLabel * label_3
- QSpacerItem * horizontalSpacer
- QSpacerItem * horizontalSpacer_2
- QLabel * sVerLabel
- QLabel * sLicenseLabel
- QLabel * label
- QSpacerItem * verticalSpacer
- QLabel * sDescLabel

12.4.1 Detailed Description

Definition at line 385 of file ui_animsettingdialog.h.

12.4.2 Member Function Documentation

12.4.2.1 void Ui_AnimSettingDialog::retranslateUi (QDialog * *AnimSettingDialog*) [inline],[inherited]

Definition at line 349 of file ui_animsettingdialog.h.

References Ui_AnimSettingDialog::infoTab, Ui_AnimSettingDialog::kpModeStopBox, Ui_AnimSettingDialog::kpReleaseBox, Ui_AnimSettingDialog::kpRepeatLabel, Ui_AnimSettingDialog::kpRepeatLabel_2, Ui_AnimSettingDialog::label, Ui_AnimSettingDialog::label_10, Ui_AnimSettingDialog::label_11, Ui_AnimSettingDialog::label_12, Ui_AnimSettingDialog::label_13, Ui_AnimSettingDialog::label_2, Ui_AnimSettingDialog::label_3, Ui_AnimSettingDialog::label_4, Ui_AnimSettingDialog::label_5, Ui_AnimSettingDialog::label_6, Ui_AnimSettingDialog::label_7, Ui_AnimSettingDialog::label_8, Ui_AnimSettingDialog::label_9, Ui_AnimSettingDialog::repeatLabel, Ui_AnimSettingDialog::repeatLabel_2, Ui_AnimSettingDialog::sAuthorLabel, Ui_AnimSettingDialog::sDescLabel, Ui_AnimSettingDialog::settingTab, Ui_AnimSettingDialog::sLicenseLabel, Ui_AnimSettingDialog::sNameLabel, Ui_AnimSettingDialog::sVerLabel, Ui_AnimSettingDialog::sYearLabel, Ui_AnimSettingDialog::tabWidget, and Ui_AnimSettingDialog::timeTab.

Referenced by Ui_AnimSettingDialog::setupUi().

```
    {
        AnimSettingDialog->setWindowTitle(QApplication::translate("AnimSettingDialog", "Dialog", Q_NULLPTR));
        label_2->setText(QApplication::translate("AnimSettingDialog", "Name:", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(settingTab), QApplication::translate("AnimSettingDialog", "Settings", Q_NULLPTR));
        kpRepeatLabel->setText(QApplication::translate("AnimSettingDialog", "Repeat every:", Q_NULLPTR));
        repeatLabel->setText(QApplication::translate("AnimSettingDialog", "Repeat every:", Q_NULLPTR));
        repeatLabel_2->setText(QApplication::translate("AnimSettingDialog", "seconds", Q_NULLPTR));
        kpRepeatLabel_2->setText(QApplication::translate("AnimSettingDialog", "seconds",
```

```
Q_NULLPTR));
        label_4->setText(QApplication::translate("AnimSettingDialog", "<b>On mode start</b>", Q_NULLPTR));
        label_8->setText(QApplication::translate("AnimSettingDialog", "seconds", Q_NULLPTR));
        label_13->setText(QApplication::translate("AnimSettingDialog", "seconds", Q_NULLPTR));
        label_12->setText(QApplication::translate("AnimSettingDialog", "Start delay:", Q_NULLPTR));
        kpModeStopBox->setText(QApplication::translate("AnimSettingDialog", "Stop on key press", Q_NULLPTR));
        label_10->setText(QApplication::translate("AnimSettingDialog", "Start delay:", Q_NULLPTR));
        kpReleaseBox->setText(QApplication::translate("AnimSettingDialog", "Stop on key release", Q_NULLPTR));
        label_6->setText(QApplication::translate("AnimSettingDialog", "<b>On key press</b>", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(timeTab), QApplication::translate("AnimSettingDialog", "Timing", Q_NULLPTR));
        sNameLabel->setText(QApplication::translate("AnimSettingDialog", "Name", Q_NULLPTR));
        label_7->setText(QApplication::translate("AnimSettingDialog", "Year:", Q_NULLPTR));
        label_11->setText(QApplication::translate("AnimSettingDialog", "Description:", Q_NULLPTR));
        sAuthorLabel->setText(QApplication::translate("AnimSettingDialog", "Author", Q_NULLPTR));
        label_9->setText(QApplication::translate("AnimSettingDialog", "License:", Q_NULLPTR));
        label_5->setText(QApplication::translate("AnimSettingDialog", "Version:", Q_NULLPTR));
        sYearLabel->setText(QApplication::translate("AnimSettingDialog", "Year", Q_NULLPTR));
        label_3->setText(QApplication::translate("AnimSettingDialog", "Author:", Q_NULLPTR));
        sVerLabel->setText(QApplication::translate("AnimSettingDialog", "Version", Q_NULLPTR));
        sLicenseLabel->setText(QApplication::translate("AnimSettingDialog", "License", Q_NULLPTR));
        label->setText(QApplication::translate("AnimSettingDialog", "Script name:", Q_NULLPTR));
        sDescLabel->setText(QApplication::translate("AnimSettingDialog", "Description", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(infoTab), QApplication::translate("AnimSettingDialog", "About", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.4.2.2 void Ui_AnimSettingDialog::setupUi (QDialog * *AnimSettingDialog*) [inline],[inherited]

Definition at line 85 of file ui_animsettingdialog.h.

References Ui_AnimSettingDialog::animName, Ui_AnimSettingDialog::buttonBox, Ui_AnimSettingDialog::delayBox, Ui_AnimSettingDialog::gridLayout, Ui_AnimSettingDialog::gridLayout_2, Ui_AnimSettingDialog::horizontalSpacer, Ui_AnimSettingDialog::horizontalSpacer_2, Ui_AnimSettingDialog::horizontalSpacer_3, Ui_AnimSettingDialog::horizontalSpacer_4, Ui_AnimSettingDialog::horizontalSpacer_5, Ui_AnimSettingDialog::horizontalSpacer_6, Ui_AnimSettingDialog::infoTab, Ui_AnimSettingDialog::kpDelayBox, Ui_AnimSettingDialog::kpModeStopBox, Ui_AnimSettingDialog::kpReleaseBox, Ui_AnimSettingDialog::kpRepeatBox, Ui_AnimSettingDialog::kpRepeatLabel, Ui_AnimSettingDialog::kpRepeatLabel_2, Ui_AnimSettingDialog::label, Ui_AnimSettingDialog::label_10, Ui_AnimSettingDialog::label_11, Ui_AnimSettingDialog::label_12, Ui_AnimSettingDialog::label_13, Ui_AnimSettingDialog::label_2, Ui_AnimSettingDialog::label_3, Ui_AnimSettingDialog::label_4, Ui_AnimSettingDialog::label_5, Ui_AnimSettingDialog::label_6, Ui_AnimSettingDialog::label_7, Ui_AnimSettingDialog::label_8, Ui_AnimSettingDialog::label_9, Ui_AnimSettingDialog::line, Ui_AnimSettingDialog::line_2, Ui_AnimSettingDialog::repeatBox, Ui_AnimSettingDialog::repeatLabel, Ui_AnimSettingDialog::repeatLabel_2, Ui_AnimSettingDialog::retranslateUi(), Ui_AnimSettingDialog::sAuthorLabel, Ui_AnimSettingDialog::sDescLabel, Ui_AnimSettingDialog::settingsGrid, Ui_AnimSettingDialog::settingTab, Ui_AnimSettingDialog::sLicenseLabel, Ui_AnimSettingDialog::sNameLabel, Ui_AnimSettingDialog::sVerLabel, Ui_AnimSettingDialog::sYearLabel, Ui_AnimSettingDialog::tabWidget, Ui_AnimSettingDialog::timeGrid, Ui_AnimSettingDialog::timeTab, Ui_AnimSettingDialog::verticalSpacer, Ui_AnimSettingDialog::verticalSpacer_2, and Ui_AnimSettingDialog::verticalSpacer_3.

Referenced by AnimSettingDialog::AnimSettingDialog().

```
    {
        if (AnimSettingDialog->objectName().isEmpty())
            AnimSettingDialog->setObjectName(QStringLiteral("AnimSettingDialog"));
        AnimSettingDialog->resize(480, 457);
        AnimSettingDialog->setMinimumSize(QSize(480, 0));
        AnimSettingDialog->setFocusPolicy(Qt::ClickFocus);
        gridLayout = new QGridLayout(AnimSettingDialog);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        buttonBox = new QDialogButtonBox(AnimSettingDialog);
        buttonBox->setObjectName(QStringLiteral("buttonBox"));
        buttonBox->setOrientation(Qt::Horizontal);
        buttonBox->setStandardButtons(QDialogButtonBox::Cancel|QDialogButtonBox::Ok);

        gridLayout->addWidget(buttonBox, 2, 0, 1, 1);

         tabWidget = new QTabWidget(AnimSettingDialog);
         tabWidget->setObjectName(QStringLiteral("tabWidget"));
         settingTab = new QWidget();
         settingTab->setObjectName(QStringLiteral("settingTab"));
         settingsGrid = new QGridLayout(settingTab);
         settingsGrid->setSpacing(12);
         settingsGrid->setObjectName(QStringLiteral("settingsGrid"));
         settingsGrid->setContentsMargins(12, 12, 12, 12);
         label_2 = new QLabel(settingTab);
         label_2->setObjectName(QStringLiteral("label_2"));

         settingsGrid->addWidget(label_2, 0, 1, 1, 1);

         horizontalSpacer_3 = new QSpacerItem(5, 0, QSizePolicy::Fixed,
QSizePolicy::Minimum);

         settingsGrid->addItem(horizontalSpacer_3, 0, 2, 1, 1);

         animName = new QLineEdit(settingTab);
         animName->setObjectName(QStringLiteral("animName"));

         settingsGrid->addWidget(animName, 0, 3, 1, 3);

         tabWidget->addTab(settingTab, QString());
         timeTab = new QWidget();
         timeTab->setObjectName(QStringLiteral("timeTab"));
         timeGrid = new QGridLayout(timeTab);
         timeGrid->setSpacing(12);
         timeGrid->setObjectName(QStringLiteral("timeGrid"));
         timeGrid->setContentsMargins(12, 12, 12, 12);
         horizontalSpacer_5 = new QSpacerItem(15, 0, QSizePolicy::Fixed,
QSizePolicy::Minimum);

         timeGrid->addItem(horizontalSpacer_5, 3, 2, 1, 1);

         kpRepeatLabel = new QLabel(timeTab);
         kpRepeatLabel->setObjectName(QStringLiteral("kpRepeatLabel"));

         timeGrid->addWidget(kpRepeatLabel, 11, 1, 1, 1);

         repeatLabel = new QLabel(timeTab);
         repeatLabel->setObjectName(QStringLiteral("repeatLabel"));

         timeGrid->addWidget(repeatLabel, 3, 1, 1, 1);

         repeatBox = new QDoubleSpinBox(timeTab);
         repeatBox->setObjectName(QStringLiteral("repeatBox"));
         repeatBox->setDecimals(1);
         repeatBox->setMinimum(0.1);
         repeatBox->setMaximum(86400);

         timeGrid->addWidget(repeatBox, 3, 3, 1, 1);

         repeatLabel_2 = new QLabel(timeTab);
         repeatLabel_2->setObjectName(QStringLiteral("repeatLabel_2"));

         timeGrid->addWidget(repeatLabel_2, 3, 4, 1, 1);

         line = new QFrame(timeTab);
         line->setObjectName(QStringLiteral("line"));
         line->setFrameShape(QFrame::HLine);
         line->setFrameShadow(QFrame::Sunken);

         timeGrid->addWidget(line, 1, 0, 1, 6);

         kpRepeatLabel_2 = new QLabel(timeTab);
         kpRepeatLabel_2->setObjectName(QStringLiteral("kpRepeatLabel_2"));

         timeGrid->addWidget(kpRepeatLabel_2, 11, 4, 1, 1);

         label_4 = new QLabel(timeTab);
         label_4->setObjectName(QStringLiteral("label_4"));
```

```

        timeGrid->addWidget(label_4, 0, 0, 1, 6);

        label_8 = new QLabel(timeTab);
        label_8->setObjectName(QStringLiteral("label_8"));

        timeGrid->addWidget(label_8, 2, 4, 1, 1);

        kpDelayBox = new QDoubleSpinBox(timeTab);
        kpDelayBox->setObjectName(QStringLiteral("kpDelayBox"));
        kpDelayBox->setDecimals(1);
        kpDelayBox->setMaximum(86400);

        timeGrid->addWidget(kpDelayBox, 10, 3, 1, 1);

        label_13 = new QLabel(timeTab);
        label_13->setObjectName(QStringLiteral("label_13"));

        timeGrid->addWidget(label_13, 10, 4, 1, 1);

        label_12 = new QLabel(timeTab);
        label_12->setObjectName(QStringLiteral("label_12"));

        timeGrid->addWidget(label_12, 10, 1, 1, 1);

        delayBox = new QDoubleSpinBox(timeTab);
        delayBox->setObjectName(QStringLiteral("delayBox"));
        delayBox->setDecimals(1);
        delayBox->setMaximum(86400);

        timeGrid->addWidget(delayBox, 2, 3, 1, 1);

        kpModeStopBox = new QCheckBox(timeTab);
        kpModeStopBox->setObjectName(QStringLiteral("kpModeStopBox"));

        timeGrid->addWidget(kpModeStopBox, 5, 1, 1, 3);

        label_10 = new QLabel(timeTab);
        label_10->setObjectName(QStringLiteral("label_10"));

        timeGrid->addWidget(label_10, 2, 1, 1, 1);

        verticalSpacer_3 = new QSpacerItem(0, 10, QSizePolicy::Minimum, QSizePolicy::Fixed)
    ;

        timeGrid->addItem(verticalSpacer_3, 7, 1, 1, 1);

        horizontalSpacer_4 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        timeGrid->addItem(horizontalSpacer_4, 2, 5, 1, 1);

        kpReleaseBox = new QCheckBox(timeTab);
        kpReleaseBox->setObjectName(QStringLiteral("kpReleaseBox"));

        timeGrid->addWidget(kpReleaseBox, 14, 1, 1, 3);

        label_6 = new QLabel(timeTab);
        label_6->setObjectName(QStringLiteral("label_6"));

        timeGrid->addWidget(label_6, 8, 0, 1, 6);

        kpRepeatBox = new QDoubleSpinBox(timeTab);
        kpRepeatBox->setObjectName(QStringLiteral("kpRepeatBox"));
        kpRepeatBox->setDecimals(1);
        kpRepeatBox->setMinimum(0.1);
        kpRepeatBox->setMaximum(86400);

        timeGrid->addWidget(kpRepeatBox, 11, 3, 1, 1);

        verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
    QSizePolicy::Expanding);

        timeGrid->addItem(verticalSpacer_2, 15, 1, 1, 1);

        line_2 = new QFrame(timeTab);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
        line_2->setFrameShadow(QFrame::Sunken);

        timeGrid->addWidget(line_2, 9, 0, 1, 6);

        horizontalSpacer_6 = new QSpacerItem(0, 0, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        timeGrid->addItem(horizontalSpacer_6, 12, 2, 1, 1);

```

```
        tabWidget->addTab(timeTab, QString());
        infoTab = new QWidget();
        infoTab->setObjectName(QStringLiteral("infoTab"));
        gridLayout_2 = new QGridLayout(infoTab);
        gridLayout_2->setSpacing(12);
        gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
        gridLayout_2->setContentsMargins(12, 12, 12, 12);
        sNameLabel = new QLabel(infoTab);
        sNameLabel->setObjectName(QStringLiteral("sNameLabel"));

        gridLayout_2->addWidget(sNameLabel, 0, 2, 1, 1);

        label_7 = new QLabel(infoTab);
        label_7->setObjectName(QStringLiteral("label_7"));

        gridLayout_2->addWidget(label_7, 3, 0, 1, 1);

        label_11 = new QLabel(infoTab);
        label_11->setObjectName(QStringLiteral("label_11"));

        gridLayout_2->addWidget(label_11, 5, 0, 1, 1);

        sAuthorLabel = new QLabel(infoTab);
        sAuthorLabel->setObjectName(QStringLiteral("sAuthorLabel"));

        gridLayout_2->addWidget(sAuthorLabel, 2, 2, 1, 1);

        label_9 = new QLabel(infoTab);
        label_9->setObjectName(QStringLiteral("label_9"));

        gridLayout_2->addWidget(label_9, 4, 0, 1, 1);

        label_5 = new QLabel(infoTab);
        label_5->setObjectName(QStringLiteral("label_5"));

        gridLayout_2->addWidget(label_5, 1, 0, 1, 1);

        sYearLabel = new QLabel(infoTab);
        sYearLabel->setObjectName(QStringLiteral("sYearLabel"));

        gridLayout_2->addWidget(sYearLabel, 3, 2, 1, 1);

        label_3 = new QLabel(infoTab);
        label_3->setObjectName(QStringLiteral("label_3"));

        gridLayout_2->addWidget(label_3, 2, 0, 1, 1);

        horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer, 0, 3, 1, 1);

        horizontalSpacer_2 = new QSpacerItem(20, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_2, 0, 1, 1, 1);

        sVerLabel = new QLabel(infoTab);
        sVerLabel->setObjectName(QStringLiteral("sVerLabel"));

        gridLayout_2->addWidget(sVerLabel, 1, 2, 1, 1);

        sLicenseLabel = new QLabel(infoTab);
        sLicenseLabel->setObjectName(QStringLiteral("sLicenseLabel"));

        gridLayout_2->addWidget(sLicenseLabel, 4, 2, 1, 1);

        label = new QLabel(infoTab);
        label->setObjectName(QStringLiteral("label"));

        gridLayout_2->addWidget(label, 0, 0, 1, 1);

        verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding
    );

        gridLayout_2->addItem(verticalSpacer, 6, 0, 1, 1);

        sDescLabel = new QLabel(infoTab);
        sDescLabel->setObjectName(QStringLiteral("sDescLabel"));
        sDescLabel->setAlignment(Qt::AlignLeading|Qt::AlignLeft|Qt::AlignTop);

        gridLayout_2->addWidget(sDescLabel, 5, 2, 2, 2);

        tabWidget->addTab(infoTab, QString());

        gridLayout->addWidget(tabWidget, 0, 0, 1, 1);

```

```
        retranslateUi(AnimSettingDialog);
        QObject::connect(buttonBox, SIGNAL(accepted()), AnimSettingDialog, SLOT(accept()));
        QObject::connect(buttonBox, SIGNAL(rejected()), AnimSettingDialog, SLOT(reject()));

        tabWidget->setCurrentIndex(0);


        QMetaObject::connectSlotsByName(AnimSettingDialog);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.4.3 Field Documentation

12.4.3.1 QLineEdit* Ui_AnimSettingDialog::animName [inherited]

Definition at line 41 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), AnimSettingDialog::name(), and Ui_AnimSettingDialog-::setupUi().

12.4.3.2 QDialogButtonBox* Ui_AnimSettingDialog::buttonBox [inherited]

Definition at line 35 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.3 QDoubleSpinBox* Ui_AnimSettingDialog::delayBox [inherited]

Definition at line 56 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and Ui_AnimSettingDialog::setupUi().

12.4.3.4 QGridLayout* Ui_AnimSettingDialog::gridLayout [inherited]

Definition at line 34 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.5 QGridLayout* Ui_AnimSettingDialog::gridLayout_2 [inherited]

Definition at line 68 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.6 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer [inherited]

Definition at line 77 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.7 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer_2 [inherited]

Definition at line 78 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.8 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer_3 [inherited]

Definition at line 40 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.9 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer_4 [inherited]

Definition at line 60 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.10 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer_5 [inherited]

Definition at line 44 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.11 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer_6 [inherited]

Definition at line 66 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.12 QWidget* Ui_AnimSettingDialog::infoTab [inherited]

Definition at line 67 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.13 QDoubleSpinBox* Ui_AnimSettingDialog::kpDelayBox [inherited]

Definition at line 53 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and Ui_AnimSettingDialog::setupUi().

12.4.3.14 QCheckBox* Ui_AnimSettingDialog::kpModeStopBox [inherited]

Definition at line 57 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.15 QCheckBox* Ui_AnimSettingDialog::kpReleaseBox [inherited]

Definition at line 61 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.16 QDoubleSpinBox* Ui_AnimSettingDialog::kpRepeatBox [inherited]

Definition at line 63 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and Ui_AnimSettingDialog::setupUi().

12.4.3.17 QLabel* Ui_AnimSettingDialog::kpRepeatLabel [inherited]

Definition at line 45 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.18 QLabel* Ui_AnimSettingDialog::kpRepeatLabel_2 [inherited]

Definition at line 50 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.19 QLabel* Ui_AnimSettingDialog::label [inherited]

Definition at line 81 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.20 QLabel* Ui_AnimSettingDialog::label_10 [inherited]

Definition at line 58 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.21 QLabel* Ui_AnimSettingDialog::label_11 [inherited]

Definition at line 71 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.22 QLabel* Ui_AnimSettingDialog::label_12 [inherited]

Definition at line 55 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.23 QLabel* Ui_AnimSettingDialog::label_13 [inherited]

Definition at line 54 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.24 QLabel* Ui_AnimSettingDialog::label_2 [inherited]

Definition at line 39 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.25 QLabel* Ui_AnimSettingDialog::label_3 [inherited]

Definition at line 76 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.26 QLabel* Ui_AnimSettingDialog::label_4 [inherited]

Definition at line 51 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.27 QLabel* Ui_AnimSettingDialog::label_5 [inherited]

Definition at line 74 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.28 QLabel* Ui_AnimSettingDialog::label_6 [inherited]

Definition at line 62 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.29 QLabel* Ui_AnimSettingDialog::label_7 [inherited]

Definition at line 70 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.30 QLabel* Ui_AnimSettingDialog::label_8 [inherited]

Definition at line 52 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.31 QLabel* Ui_AnimSettingDialog::label_9 [inherited]

Definition at line 73 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.32 QFrame* Ui_AnimSettingDialog::line [inherited]

Definition at line 49 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.33 QFrame* Ui_AnimSettingDialog::line_2 [inherited]

Definition at line 65 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.34 QDoubleSpinBox* Ui_AnimSettingDialog::repeatBox [inherited]

Definition at line 47 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and Ui_AnimSettingDialog::setupUi().

12.4.3.35 QLabel* Ui_AnimSettingDialog::repeatLabel [inherited]

Definition at line 46 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.36 QLabel* Ui_AnimSettingDialog::repeatLabel_2 [inherited]

Definition at line 48 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.37 QLabel* Ui_AnimSettingDialog::sAuthorLabel [inherited]

Definition at line 72 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.38 QLabel* Ui_AnimSettingDialog::sDescLabel [inherited]

Definition at line 83 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.39 QGridLayout* Ui_AnimSettingDialog::settingsGrid [inherited]

Definition at line 38 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and Ui_AnimSettingDialog::setupUi().

12.4.3.40 QWidget* Ui_AnimSettingDialog::settingTab [inherited]

Definition at line 37 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.41 QLabel* Ui_AnimSettingDialog::sLicenseLabel [inherited]

Definition at line 80 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.42 QLabel* Ui_AnimSettingDialog::sNameLabel [inherited]

Definition at line 69 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.43 QLabel* Ui_AnimSettingDialog::sVerLabel [inherited]

Definition at line 79 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.44 QLabel* Ui_AnimSettingDialog::sYearLabel [inherited]

Definition at line 75 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.45 QTabWidget* Ui_AnimSettingDialog::tabWidget [inherited]

Definition at line 36 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.46 QGridLayout* Ui_AnimSettingDialog::timeGrid [inherited]

Definition at line 43 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and Ui_AnimSettingDialog::setupUi().

12.4.3.47 QWidget* Ui_AnimSettingDialog::timeTab [inherited]

Definition at line 42 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::retranslateUi(), and Ui_AnimSettingDialog::setupUi().

12.4.3.48 QSpacerItem* Ui_AnimSettingDialog::verticalSpacer [inherited]

Definition at line 82 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.49 QSpacerItem* Ui_AnimSettingDialog::verticalSpacer_2 [inherited]

Definition at line 64 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

12.4.3.50 QSpacerItem* Ui_AnimSettingDialog::verticalSpacer_3 [inherited]

Definition at line 59 of file ui_animsettingdialog.h.

Referenced by Ui_AnimSettingDialog::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_animsettingdialog.h

12.5 AnimSettingDialog Class Reference

```
#include <src/ckb/animsettingdialog.h>
```

Inheritance diagram for AnimSettingDialog:

Collaboration diagram for AnimSettingDialog:

Public Member Functions

- AnimSettingDialog (QWidget *parent, KbAnim *anim)
- ~AnimSettingDialog ()
- QString name () const

Private Slots

- void newDuration (double duration)
- void updateStops ()
- void angleDialChanged (QString name)
- void angleSpinnerChanged (QString name)
- void updateParam (QString name)
- void on_delayBox_valueChanged (double arg1)
- void on_repeatBox_valueChanged (double arg1)
- void on_kpDelayBox_valueChanged (double arg1)
- void on_kpRepeatBox_valueChanged (double arg1)
- void on_kpReleaseBox_stateChanged (int arg1)

Private Member Functions

- QFrame * hLine ()

Private Attributes

- Ui::AnimSettingDialog * ui
- QCheckBox * stopCheck
- QCheckBox * kpStopCheck
- bool hasRepeat
- KbAnim * _anim
- double lastDuration
- QMap< QString, QWidget * > settingWidgets

- QSignalMapper updateMapper
- QMap< QString, QSpinBox * > angleSpinners
- QSignalMapper angleDialMapper
- QSignalMapper angleSpinnerMapper

12.5.1 Detailed Description

Definition at line 15 of file animsettingdialog.h.

12.5.2 Constructor & Destructor Documentation

12.5.2.1 AnimSettingDialog::AnimSettingDialog (QWidget * *parent*, KbAnim * *anim*) [explicit]

Definition at line 19 of file animsettingdialog.cpp.

References AnimScript::Param::AGRADIENT, AnimScript::Param::ANGLE, angleDialChanged(), angleDialMapper, angleFlip(), angleSpinnerChanged(), angleSpinnerMapper, angleSpinners, Ui_AnimSettingDialog::animName, AnimScript::Param::ARGB, AnimScript::author(), AnimScript::Param::BOOL, Ui_AnimSettingDialog::delayBox, AnimScript::description(), AnimScript::Param::DOUBLE, AnimScript::Param::GRADIENT, AnimScript::hasKeypress(), AnimScript::hasParam(), KbAnim::hasParameter(), hasRepeat, hLine(), Ui_AnimSettingDialog::kpDelayBox, Ui_AnimSettingDialog::kpModeStopBox, Ui_AnimSettingDialog::kpReleaseBox, Ui_AnimSettingDialog::kpRepeatBox, Ui_AnimSettingDialog::kpRepeatLabel, Ui_AnimSettingDialog::kpRepeatLabel_2, kpStopCheck, AnimScript::Param::LABEL, lastDuration, AnimScript::license(), AnimScript::Param::LONG, AnimScript::Param::maximum, AnimScript::Param::minimum, AnimScript::Param::name, AnimScript::name(), KbAnim::name(), newDuration(), KbAnim::parameter(), AnimScript::paramIterator(), AnimScript::Param::postfix, AnimScript::Param::prefix, Ui_AnimSettingDialog::repeatBox, Ui_AnimSettingDialog::repeatLabel, Ui_AnimSettingDialog::repeatLabel_2, AnimScript::Param::RGB, Ui_AnimSettingDialog::sAuthorLabel, KbAnim::script(), KbAnim::scriptName(), Ui_AnimSettingDialog::sDescLabel, Ui_AnimSettingDialog::settingsGrid, settingWidgets, Ui_AnimSettingDialog::setupUi(), Ui_AnimSettingDialog::sLicenseLabel, Ui_AnimSettingDialog::sNameLabel, stopCheck, AnimScript::Param::STRING, Ui_AnimSettingDialog::sVerLabel, Ui_AnimSettingDialog::sYearLabel, Ui_AnimSettingDialog::timeGrid, AnimScript::Param::type, ui, updateMapper, updateParam(), updateStops(), AnimScript::version(), and AnimScript::year().

```
19                                                                  :
20     QDialog(parent),
21     ui(new Ui::AnimSettingDialog), stopCheck(0),
       kpStopCheck(0),
22     _anim(anim), lastDuration(1.0)
23 {
24     ui->setupUi(this);
25     setWindowTitle(anim->scriptName() + " Animation");
26     ui->animName->setText(anim->name());
27     const AnimScript* script = anim->script();
28
29     connect(&updateMapper, SIGNAL(mapped(QString)), this, SLOT(
       updateParam(QString)));
30     connect(&angleDialMapper, SIGNAL(mapped(QString)), this, SLOT(
       angleDialChanged(QString)));
31     connect(&angleSpinnerMapper, SIGNAL(mapped(QString)), this, SLOT(
       angleSpinnerChanged(QString)));
32
33     // Build settings UI
34     int row = 1;
35     ui->settingsGrid->addItem(new QSpacerItem(0, 10, QSizePolicy::Fixed, QSizePolicy::Fixed),
       row++, 6);
36     ui->settingsGrid->addWidget(new QLabel("<b>Animation</b>", this), row++, 0, 1, 7);
37     ui->settingsGrid->addWidget(hLine(), row++, 0, 1, 7);
38     bool rSpacePlaced = false;
39     QListIterator<AnimScript::Param> i(script->paramIterator());
40     while(i.hasNext()){
41         const AnimScript::Param& param = i.next();
42         // Skip timing/playback params
43         if(param.name == "duration"
44                 || param.name == "trigger" || param.name == "kptrigger"
45                 || param.name == "kpmode"
46                 || param.name == "delay" || param.name == "kpdelay"
47                 || param.name == "repeat" || param.name == "kprepeat"
48                 || param.name == "stop" || param.name == "kpstop"
```

```
                || param.name == "kpmodestop" || param.name == "kprelease")
            continue;
        QVariant value = anim->parameter(param.name);
        // Display prefix label on the left (except for booleans and labels)
        if(param.type != AnimScript::Param::BOOL && param.type != AnimScript::Param::LABEL)
            ui->settingsGrid->addWidget(new QLabel(param.prefix, this), row, 1);
        // Configure and display main widget
        QWidget* widget = 0;
        int colSpan = 1;
        QString postfix = param.postfix;
        switch(param.type){
        case AnimScript::Param::BOOL:
            widget = new QCheckBox(param.prefix, this);
            ((QCheckBox*)widget)->setChecked(value.toBool());
            colSpan = 4;
            connect(widget, SIGNAL(stateChanged(int)), &updateMapper, SLOT(map()));
            break;
        case AnimScript::Param::LONG:
            widget = new QSpinBox(this);
            ((QSpinBox*)widget)->setMinimum(param.minimum.toInt());
            ((QSpinBox*)widget)->setMaximum(param.maximum.toInt());
            ((QSpinBox*)widget)->setValue(value.toInt());
            if(postfix.length() <= 3){
                ((QSpinBox*)widget)->setSuffix(postfix);
                postfix = "";
            }
            connect(widget, SIGNAL(valueChanged(int)), &updateMapper, SLOT(map()));
            break;
        case AnimScript::Param::DOUBLE:
            widget = new QDoubleSpinBox(this);
            ((QDoubleSpinBox*)widget)->setDecimals(1);
            ((QDoubleSpinBox*)widget)->setMinimum(param.minimum.toDouble());
            ((QDoubleSpinBox*)widget)->setMaximum(param.maximum.toDouble());
            ((QDoubleSpinBox*)widget)->setValue(value.toDouble());
            if(postfix.length() <= 3){
                ((QDoubleSpinBox*)widget)->setSuffix(postfix);
                postfix = "";
            }
            connect(widget, SIGNAL(valueChanged(double)), &updateMapper, SLOT(map()));
            break;
        case AnimScript::Param::RGB:
            widget = new ColorButton(this);
            ((ColorButton*)widget)->color(QColor("#" + value.toString()));
            colSpan = 3;
            connect(widget, SIGNAL(colorChanged(QColor)), &updateMapper, SLOT(map()));
            break;
        case AnimScript::Param::ARGB:{
            widget = new ColorButton(this, true);
            QString val = value.toString();
            QColor color;
            if(val.length() == 8){
                color = "#" + val.right(6);
                color.setAlpha(val.left(2).toInt(0, 16));
            } else
                color = "#" + val;
            ((ColorButton*)widget)->color(color);
            colSpan = 3;
            connect(widget, SIGNAL(colorChanged(QColor)), &updateMapper, SLOT(map()));
            break;
        }
        case AnimScript::Param::GRADIENT:
            widget = new GradientButton(this);
            ((GradientButton*)widget)->fromString(value.toString());
            colSpan = 3;
            connect(widget, SIGNAL(gradientChanged()), &updateMapper, SLOT(map()));
            break;
        case AnimScript::Param::AGRADIENT:
            widget = new GradientButton(this, true);
            ((GradientButton*)widget)->fromString(value.toString());
            colSpan = 3;
            connect(widget, SIGNAL(gradientChanged()), &updateMapper, SLOT(map()));
            break;
        case AnimScript::Param::ANGLE:
            widget = new QDial(this);
            ((QDial*)widget)->setFixedSize(60, 60);
            ((QDial*)widget)->setMinimum(0);
            ((QDial*)widget)->setMaximum(360);
            // this is NOT a typo...     ^
            // Even though 360 shouldn't be valid, the wheel/arrow keys will lose 1 degree at the bottom unless 360 is set as max
            ((QDial*)widget)->setSingleStep(5);
            ((QDial*)widget)->setPageStep(15);
            ((QDial*)widget)->setNotchTarget(6);
            ((QDial*)widget)->setNotchesVisible(true);
            ((QDial*)widget)->setWrapping(true);
            ((QDial*)widget)->setInvertedAppearance(true);
```

```
            ((QDial*)widget)->setValue(angleFlip(value.toInt()));
            angleDialMapper.setMapping(widget, param.name);
            connect(widget, SIGNAL(valueChanged(int)), &angleDialMapper, SLOT(map()));
            break;
        case AnimScript::Param::STRING:
            widget = new QLineEdit(this);
            ((QLineEdit*)widget)->setText(value.toString());
            colSpan = 3;
            connect(widget, SIGNAL(textEdited(const QString&)), &updateMapper, SLOT(map()));
            break;
        case AnimScript::Param::LABEL:
            widget = new QLabel(this);
            ((QLabel*)widget)->setText(param.prefix);
            colSpan = 4;
            break;
        default:
            break;
        }
        if(widget)
            updateMapper.setMapping(widget, param.name);
        if(param.type == AnimScript::Param::BOOL || param.type == AnimScript::Param::LABEL){
            // Boolean values are placed on the left with no prefix or postfix
            settingWidgets[param.name] = widget;
            ui->settingsGrid->addWidget(widget, row, 3, 1, colSpan);
        } else {
            // Display the widget
            if(widget){
                settingWidgets[param.name] = widget;
                ui->settingsGrid->addWidget(widget, row, 3, 1, colSpan);
            }
            // Angles additionally have a spin box
            if(param.type == AnimScript::Param::ANGLE){
                QSpinBox* spinner = new QSpinBox(this);
                spinner->setMinimum(0);
                spinner->setMaximum(359);
                spinner->setWrapping(true);
                spinner->setSuffix("°");
                spinner->setValue(value.toInt());
                angleSpinners[param.name] = spinner;
                angleSpinnerMapper.setMapping(spinner, param.name);
                connect(spinner, SIGNAL(valueChanged(int)), &angleSpinnerMapper, SLOT(map()));
                ui->settingsGrid->addWidget(spinner, row, 4);
                colSpan = 2;
            }
            // Display postfix label on the right
            ui->settingsGrid->addWidget(new QLabel(postfix, this), row, 3 + colSpan, 1, 4 - colSpan);
            if(colSpan < 3 && !rSpacePlaced){
                // Add a spacer to compress short elements to the left
                ui->settingsGrid->addItem(new QSpacerItem(0, 0, QSizePolicy::Minimum), row, 4 + colSpan);
                rSpacePlaced = true;
            }
        }
        row++;
    }
    // Add playback info at bottom
    ui->settingsGrid->addItem(new QSpacerItem(0, 10, QSizePolicy::Fixed, QSizePolicy::Fixed), row++, 6);
    ui->settingsGrid->addWidget(new QLabel("<b>Playback</b>", this), row++, 0, 1, 7);
    ui->settingsGrid->addWidget(hLine(), row++, 0, 1, 7);
    if(script->hasParam("duration")){
        // Show duration spinner (if allowed)
        lastDuration = anim->parameter("duration").toDouble();
        ui->settingsGrid->addWidget(new QLabel("Duration:", this), row, 1);
        QDoubleSpinBox* spinner = new QDoubleSpinBox(this);
        spinner->setDecimals(1);
        spinner->setMinimum(0.1);
        spinner->setValue(lastDuration);
        connect(spinner, SIGNAL(valueChanged(double)), this, SLOT(newDuration(double)));
        settingWidgets["duration"] = spinner;
        ui->settingsGrid->addWidget(spinner, row, 3, 1, 1);
        ui->settingsGrid->addWidget(new QLabel("seconds", this), row, 4, 1, 2);
        row++;
    }
    // Show boxes for start with mode/with keypress
    QCheckBox* check = new QCheckBox("Start with mode", this);
    check->setChecked(anim->parameter("trigger").toBool());
    ui->settingsGrid->addWidget(check, row, 3, 1, 4);
    settingWidgets["trigger"] = check;
    connect(check, SIGNAL(stateChanged(int)), &updateMapper, SLOT(map()));
    updateMapper.setMapping(check, "trigger");
    row++;
    check = new QCheckBox("Start with key press", this);
```

```
    check->setChecked(anim->parameter("kptrigger").toBool());
    ui->settingsGrid->addWidget(check, row, 3, 1, 2);
    settingWidgets["kptrigger"] = check;
    connect(check, SIGNAL(stateChanged(int)), &updateMapper, SLOT(map()));
    updateMapper.setMapping(check, "kptrigger");
    // Add an option allowing the user to select keypress mode
    QComboBox* combo = new QComboBox(this);
    int selected = anim->parameter("kpmode").toInt();
    if(script->hasKeypress()){
        // If the script supports keypresses, show the option to handle them that way (default)
        combo->addItem("on pressed key");
        combo->addItem("on whole keyboard");
        combo->addItem("on keyboard (once)");
    } else {
        selected--;
        // Otherwise, just show the choice of whether to start it every time or just once
        combo->addItem("every time");
        combo->addItem("only once");
    }
    if(selected < 0 || selected > combo->count())
        selected = 0;
    combo->setCurrentIndex(selected);
    ui->settingsGrid->addWidget(combo, row, 5, 1, 2);
    settingWidgets["kpmode"] = combo;
    connect(combo, SIGNAL(activated(int)), &updateMapper, SLOT(map()));
    updateMapper.setMapping(combo, "kpmode");
    row++;

    // Add horizontal spacer to compress content to left
    ui->settingsGrid->addItem(new QSpacerItem(0, 0, QSizePolicy::Expanding), 0, 6);
    // Add vertical spacer to compress content to top
    ui->settingsGrid->addItem(new QSpacerItem(0, 0, QSizePolicy::Minimum,
QSizePolicy::Expanding), row, 0);

    // Add timing fields
    settingWidgets["delay"] = ui->delayBox;
    ui->delayBox->setValue(anim->parameter("delay").toDouble());
    settingWidgets["kpdelay"] = ui->kpDelayBox;
    ui->kpDelayBox->setValue(anim->parameter("kpdelay").toDouble());
    settingWidgets["kpmodestop"] = ui->kpModeStopBox;
    ui->kpModeStopBox->setChecked(anim->parameter("kpmodestop").toBool());
    connect(ui->kpModeStopBox, SIGNAL(clicked(bool)), &
updateMapper, SLOT(map()));
    updateMapper.setMapping(ui->kpModeStopBox, "kpmodestop");
    settingWidgets["kprelease"] = ui->kpReleaseBox;
    ui->kpReleaseBox->setChecked(anim->parameter("kprelease").toBool());
    if(anim->hasParameter("repeat")){
        hasRepeat = true;
        settingWidgets["repeat"] = ui->repeatBox;
        ui->repeatBox->setValue(anim->parameter("repeat").toDouble());
        settingWidgets["kprepeat"] = ui->kpRepeatBox;
        ui->kpRepeatBox->setValue(anim->parameter("kprepeat").toDouble());
        // If repeat is enabled, add repeat counts as integer values
        // Mode repeat
        ui->timeGrid->addWidget(new QLabel("Repeat:", this), 4, 1);
        QSpinBox* spinner = new QSpinBox(this);
        spinner->setMinimum(0);
        spinner->setMaximum(1000000);
        spinner->setValue(anim->parameter("stop").toInt());
        settingWidgets["stop"] = spinner;
        connect(spinner, SIGNAL(valueChanged(int)), &updateMapper, SLOT(map()));
        updateMapper.setMapping(spinner, "stop");
        ui->timeGrid->addWidget(spinner, 4, 3);
        ui->timeGrid->addWidget(new QLabel("times", this), 4, 4);
        // KP repeat
        ui->timeGrid->addWidget(new QLabel("Repeat:", this), 12, 1);
        spinner = new QSpinBox(this);
        spinner->setMinimum(0);
        spinner->setMaximum(1000000);
        spinner->setValue(anim->parameter("kpstop").toInt());
        settingWidgets["kpstop"] = spinner;
        connect(spinner, SIGNAL(valueChanged(int)), &updateMapper, SLOT(map()));
        updateMapper.setMapping(spinner, "kpstop");
        ui->timeGrid->addWidget(spinner, 12, 3);
        ui->timeGrid->addWidget(new QLabel("times", this), 12, 4);
        // Infinite repeat toggles
        stopCheck = new QCheckBox("Forever", this);
        stopCheck->setChecked(anim->parameter("stop").toInt() < 0);
        ui->timeGrid->addWidget(stopCheck, 4, 5);
        kpStopCheck = new QCheckBox("Forever", this);
        connect(stopCheck, SIGNAL(clicked()), this, SLOT(updateStops()));
        kpStopCheck->setChecked(anim->parameter("kpstop").toInt() < 0);
        ui->timeGrid->addWidget(kpStopCheck, 12, 5);
        connect(kpStopCheck, SIGNAL(clicked()), this, SLOT(
updateStops()));
    } else {
        hasRepeat = false;
```

```
        // If repeat is not enabled, hide repeat-related fields
        ui->repeatBox->setHidden(true);
        ui->repeatLabel->setHidden(true);
        ui->repeatLabel_2->setHidden(true);
        ui->kpRepeatBox->setHidden(true);
        ui->kpRepeatLabel->setHidden(true);
        ui->kpRepeatLabel_2->setHidden(true);
        // Add stop times as double values
        // Stop time
        QDoubleSpinBox* spinner = new QDoubleSpinBox(this);
        spinner->setDecimals(1);
        spinner->setMinimum(0.1);
        spinner->setMaximum(24. * 60. * 60.);
        double stop = anim->parameter("stop").toDouble();
        if(stop <= 0.)
            spinner->setValue(lastDuration);
        else
            spinner->setValue(stop);
        settingWidgets["stop"] = spinner;
        connect(spinner, SIGNAL(valueChanged(double)), &updateMapper, SLOT(map()));
        updateMapper.setMapping(spinner, "stop");
        ui->timeGrid->addWidget(spinner, 4, 3);
        ui->timeGrid->addWidget(new QLabel("seconds", this), 4, 4);
        // KP stop time
        spinner = new QDoubleSpinBox(this);
        spinner->setDecimals(1);
        spinner->setMinimum(0.1);
        spinner->setMaximum(24. * 60. * 60.);
        double kpstop = anim->parameter("kpstop").toDouble();
        if(kpstop <= 0.)
            spinner->setValue(lastDuration);
        else
            spinner->setValue(kpstop);
        settingWidgets["kpstop"] = spinner;
        connect(spinner, SIGNAL(valueChanged(double)), &updateMapper, SLOT(map()));
        updateMapper.setMapping(spinner, "kpstop");
        ui->timeGrid->addWidget(spinner, 12, 3);
        ui->timeGrid->addWidget(new QLabel("seconds", this), 12, 4);
        // Infinite run toggles
        stopCheck = new QCheckBox("Stop after:", this);
        stopCheck->setChecked(stop > 0.);
        ui->timeGrid->addWidget(stopCheck, 4, 1);
        connect(stopCheck, SIGNAL(clicked()), this, SLOT(updateStops()));
        kpStopCheck = new QCheckBox("Stop after:", this);
        kpStopCheck->setChecked(kpstop > 0.);
        ui->timeGrid->addWidget(kpStopCheck, 12, 1);
        connect(kpStopCheck, SIGNAL(clicked()), this, SLOT(updateStops()));
    }
    updateStops();

    // Set script info UI
    ui->sNameLabel->setText(script->name());
    ui->sVerLabel->setText(script->version());
    ui->sAuthorLabel->setText(script->author());
    ui->sYearLabel->setText(script->year());
    ui->sLicenseLabel->setText(script->license());
    ui->sDescLabel->setText(script->description());

    // Lock dialog size
    setFixedSize(minimumSize());
}
```

Here is the call graph for this function:

12.5.2.2 AnimSettingDialog::~AnimSettingDialog ( )

Definition at line 476 of file animsettingdialog.cpp.

References ui.

```
476                                     {
477     delete ui;
478 }
```

12.5.3 Member Function Documentation

12.5.3.1 void AnimSettingDialog::angleDialChanged (QString *name*) [private],[slot]

Definition at line 389 of file animsettingdialog.cpp.

References angleFlip(), angleSpinners, name(), settingWidgets, and updateParam().

Referenced by AnimSettingDialog().

```
389                                                 {
390     // Dial changed; update spinner value
391     angleSpinners[name]->setValue(angleFlip(((QDial*)
      settingWidgets[name])->value()));
392     updateParam(name);
393 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.5.3.2 void AnimSettingDialog::angleSpinnerChanged (QString *name*) [private],[slot]

Definition at line 395 of file animsettingdialog.cpp.

References angleFlip(), angleSpinners, settingWidgets, and updateParam().

Referenced by AnimSettingDialog().

```
395                                                 {
```

```
    // Spinner changed; update dial value
    ((QDial*)settingWidgets[name])->setValue(angleFlip(
  angleSpinners[name]->value()));
    updateParam(name);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.5.3.3 QFrame * AnimSettingDialog::hLine ( ) [private]

Definition at line 480 of file animsettingdialog.cpp.

References frame.

Referenced by AnimSettingDialog().

```
480                                {
481     QFrame* frame = new QFrame(this);
482     frame->setFrameShape(QFrame::HLine);
483     frame->setFrameShadow(QFrame::Sunken);
484     return frame;
485 }
```

Here is the caller graph for this function:

12.5.3.4 QString AnimSettingDialog::name ( ) const

Definition at line 472 of file animsettingdialog.cpp.

References Ui_AnimSettingDialog::animName, and ui.

Referenced by angleDialChanged(), and KbAnimWidget::on_propertyButton_clicked().

```
472                                     {
473     return ui->animName->text();
474 }
```

Here is the caller graph for this function:

12.5.3.5 void AnimSettingDialog::newDuration (double *duration*) [private],[slot]

Definition at line 361 of file animsettingdialog.cpp.

References lastDuration, settingWidgets, and updateParam().

Referenced by AnimSettingDialog().

```
361                                             {
362     // Duration changed. Automatically fix Repeat and KP Repeat to the same values, if they matched before
363     QDoubleSpinBox* rep = (QDoubleSpinBox*)settingWidgets.value("repeat");
364     QDoubleSpinBox* kpRep = (QDoubleSpinBox*)settingWidgets.value("kprepeat");
365     if(rep && rep->value() == lastDuration)
366         rep->setValue(duration);
367     if(kpRep && kpRep->value() == lastDuration)
368         kpRep->setValue(duration);
369     lastDuration = duration;
370     updateParam("duration");
371     updateParam("repeat");
372     updateParam("kprepeat");
373 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.5.3.6 void AnimSettingDialog::on_delayBox_valueChanged (double *arg1*) [private],[slot]

Definition at line 487 of file animsettingdialog.cpp.

References updateParam().

```
487                                                     {
488     updateParam("delay");
489 }
```

Here is the call graph for this function:

12.5.3.7 void AnimSettingDialog::on_kpDelayBox_valueChanged (double *arg1*) [private],[slot]

Definition at line 495 of file animsettingdialog.cpp.

References updateParam().

```
495                                                                 {
496     updateParam("kpdelay");
497 }
```

Here is the call graph for this function:

12.5.3.8 void AnimSettingDialog::on_kpReleaseBox_stateChanged (int *arg1*) [private],[slot]

Definition at line 503 of file animsettingdialog.cpp.

References updateParam().

```
503                                                     {
504     updateParam("kprelease");
505 }
```

Here is the call graph for this function:

12.5.3.9 void AnimSettingDialog::on_kpRepeatBox_valueChanged (double *arg1*) [private],[slot]

Definition at line 499 of file animsettingdialog.cpp.

References updateParam().

```
499                                                     {
500     updateParam("kprepeat");
501 }
```

Here is the call graph for this function:

12.5.3.10 void AnimSettingDialog::on_repeatBox_valueChanged (double *arg1*) [private],[slot]

Definition at line 491 of file animsettingdialog.cpp.

References updateParam().

```
491                                                     {
492     updateParam("repeat");
493 }
```

Here is the call graph for this function:

12.5.3.11 void AnimSettingDialog::updateParam (QString *name*) [private],[slot]

Definition at line 401 of file animsettingdialog.cpp.

References _anim, AnimScript::Param::AGRADIENT, AnimScript::Param::ANGLE, angleFlip(), AnimScript::Param::ARGB, AnimScript::Param::BOOL, ColorButton::color(), AnimScript::Param::DOUBLE, AnimScript::Param::GRADIENT, AnimScript::hasKeypress(), hasRepeat, kpStopCheck, AnimScript::Param::LONG, AnimScript::param(), KbAnim::parameter(), AnimScript::Param::RGB, KbAnim::script(), settingWidgets, stopCheck, AnimScript::Param::STRING, GradientButton::toString(), and AnimScript::Param::type.

Referenced by angleDialChanged(), angleSpinnerChanged(), AnimSettingDialog(), newDuration(), on_delayBox_valueChanged(), on_kpDelayBox_valueChanged(), on_kpReleaseBox_stateChanged(), on_kpRepeatBox_valueChanged(), on_repeatBox_valueChanged(), and updateStops().

```
401                                                 {
402     if(!settingWidgets.contains(name))
403         return;
404     // stop and kpstop have defeat switches
405     if((name == "stop" && stopCheck->isChecked() == hasRepeat)
406             || (name == "kpstop" && kpStopCheck->isChecked() ==
    hasRepeat)){
407         _anim->parameter(name, -1);
408         return;
409     } else if(name == "kpmode"){
410         // kpmode uses a drop-down, and selection is inverted
411         QComboBox* widget = (QComboBox*)settingWidgets[name];
412         int selected = widget->currentIndex();
413         if(!_anim->script()->hasKeypress())
414             selected++;
415         _anim->parameter(name, selected);
416         return;
417     }
418     // Read value based on type
```

```
    switch(_anim->script()->param(name).type){
    case AnimScript::Param::BOOL:{
        QCheckBox* widget = (QCheckBox*)settingWidgets[name];
        _anim->parameter(name, (int)widget->isChecked());
        break;
    }
    case AnimScript::Param::LONG:{
        QSpinBox* widget = (QSpinBox*)settingWidgets[name];
        _anim->parameter(name, widget->value());
        break;
    }
    case AnimScript::Param::DOUBLE:{
        QDoubleSpinBox* widget = (QDoubleSpinBox*)settingWidgets[name];
        _anim->parameter(name, widget->value());
        break;
    }
    case AnimScript::Param::RGB:{
        ColorButton* widget = (ColorButton*)settingWidgets[name];
        QColor color = widget->color();
        char hex[7];
        snprintf(hex, sizeof(hex), "%02x%02x%02x", color.red(), color.green(), color.blue());
        _anim->parameter(name, QString(hex));
        break;
    }
    case AnimScript::Param::ARGB:{
        ColorButton* widget = (ColorButton*)settingWidgets[name];
        QColor color = widget->color();
        char hex[9];
        snprintf(hex, sizeof(hex), "%02x%02x%02x%02x", color.alpha(), color.red(), color.green(), color.blue());
        _anim->parameter(name, QString(hex));
        break;
    }
    case AnimScript::Param::GRADIENT:
    case AnimScript::Param::AGRADIENT:{
        GradientButton* widget = (GradientButton*)settingWidgets[name];
        _anim->parameter(name, widget->toString());
        break;
    }
    case AnimScript::Param::ANGLE:{
        QDial* widget = (QDial*)settingWidgets[name];
        _anim->parameter(name, angleFlip(widget->value()));
        break;
    }
    case AnimScript::Param::STRING:{
        QLineEdit* widget = (QLineEdit*)settingWidgets[name];
        _anim->parameter(name, widget->text());
        break;
    }
    default:
        break;
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.5.3.12 void AnimSettingDialog::updateStops ( ) [private],[slot]

Definition at line 375 of file animsettingdialog.cpp.

References hasRepeat, kpStopCheck, settingWidgets, stopCheck, and updateParam().

Referenced by AnimSettingDialog().

```
375                                     {
376     if(hasRepeat){
377         // When repeat is enabled, the check box is "repeat forever", so disable stop count if checked
378         settingWidgets.value("stop")->setDisabled(stopCheck->isChecked());
379         settingWidgets.value("kpstop")->setDisabled(kpStopCheck->isChecked());
380     } else {
381         // When repeat is disabled, the check box is "stop after", so disable stop count UNLESS checked
382         settingWidgets.value("stop")->setEnabled(stopCheck->isChecked());
383         settingWidgets.value("kpstop")->setEnabled(kpStopCheck->isChecked());
384     }
385     updateParam("stop");
386     updateParam("kpstop");
387 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.5.4 Field Documentation

12.5.4.1 KbAnim* AnimSettingDialog::_anim [private]

Definition at line 32 of file animsettingdialog.h.

Referenced by updateParam().

12.5.4.2 QSignalMapper AnimSettingDialog::angleDialMapper [private]

Definition at line 38 of file animsettingdialog.h.

Referenced by AnimSettingDialog().

12.5.4.3 QSignalMapper AnimSettingDialog::angleSpinnerMapper [private]

Definition at line 38 of file animsettingdialog.h.

Referenced by AnimSettingDialog().

12.5.4.4 QMap<QString, QSpinBox*> AnimSettingDialog::angleSpinners [private]

Definition at line 37 of file animsettingdialog.h.

Referenced by angleDialChanged(), angleSpinnerChanged(), and AnimSettingDialog().

12.5.4.5 bool AnimSettingDialog::hasRepeat [private]

Definition at line 30 of file animsettingdialog.h.

Referenced by AnimSettingDialog(), updateParam(), and updateStops().

12.5.4.6 QCheckBox * AnimSettingDialog::kpStopCheck [private]

Definition at line 29 of file animsettingdialog.h.

Referenced by AnimSettingDialog(), updateParam(), and updateStops().

12.5.4.7 double AnimSettingDialog::lastDuration [private]

Definition at line 33 of file animsettingdialog.h.

Referenced by AnimSettingDialog(), and newDuration().

12.5.4.8 QMap<QString, QWidget*> AnimSettingDialog::settingWidgets [private]

Definition at line 34 of file animsettingdialog.h.

Referenced by angleDialChanged(), angleSpinnerChanged(), AnimSettingDialog(), newDuration(), updateParam(), and updateStops().

12.5.4.9 QCheckBox* AnimSettingDialog::stopCheck [private]

Definition at line 29 of file animsettingdialog.h.

Referenced by AnimSettingDialog(), updateParam(), and updateStops().

12.5.4.10 Ui::AnimSettingDialog* AnimSettingDialog::ui [private]

Definition at line 28 of file animsettingdialog.h.

Referenced by AnimSettingDialog(), name(), and ~AnimSettingDialog().

12.5.4.11 QSignalMapper AnimSettingDialog::updateMapper [private]

Definition at line 35 of file animsettingdialog.h.

Referenced by AnimSettingDialog().

The documentation for this class was generated from the following files:

- src/ckb/animsettingdialog.h
- src/ckb/animsettingdialog.cpp

12.6 AutoRun Class Reference

`#include <src/ckb/autorun.h>`

Collaboration diagram for AutoRun:

Static Public Member Functions

- static bool available ()
- static bool once ()
- static bool isEnabled ()
- static void enable ()
- static void disable ()

12.6.1 Detailed Description

Definition at line 8 of file autorun.h.

12.6.2 Member Function Documentation

12.6.2.1 bool AutoRun::available ( ) [static]

Definition at line 20 of file autorun.cpp.

Referenced by disable(), enable(), and SettingsWidget::SettingsWidget().

```
20                          {
21     // Allow autostart if the program is located in a system path
22 #ifdef Q_OS_LINUX
23     return QDir::root().absoluteFilePath(QStandardPaths::findExecutable("ckb")) == qApp->
       applicationFilePath();
24 #elif defined(Q_OS_MACX)
25     return qApp->applicationFilePath().startsWith("/Applications/ckb.app", Qt::CaseInsensitive);
26 #endif
27 }
```

Here is the caller graph for this function:

12.6.2.2 void AutoRun::disable ( ) [static]

Definition at line 53 of file autorun.cpp.

References available().

Referenced by SettingsWidget::on_loginItemBox_clicked().

```
53                      {
54      if(!available())
55          return;
56      // Remove file
57      QFile::remove(path.absoluteFilePath(file));
58  }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.6.2.3 void AutoRun::enable ( ) [static]

Definition at line 42 of file autorun.cpp.

References available(), and CkbSettings::set().

Referenced by SettingsWidget::on_loginItemBox_clicked(), and SettingsWidget::SettingsWidget().

```
42                      {
43     if(!available())
44         return;
45     // Copy file into place
46     if(!path.exists())
47         QDir::home().mkpath(path.absolutePath());
48     QFile::copy(internalFile, path.absoluteFilePath(file));
49     // Mark once() as done
50     CkbSettings::set(settingPath, true);
51 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.6.2.4 bool AutoRun::isEnabled ( ) [static]

Definition at line 33 of file autorun.cpp.

References CkbSettings::set().

Referenced by SettingsWidget::SettingsWidget().

```
33                      {
34     // Check if the file exists. If not, autostart is disabled.
35     if(!path.exists() || !path.exists(file))
36         return false;
37     // If autostart is enabled, set the flag from once() (in case it hasn't been done yet)
38     CkbSettings::set(settingPath, true);
39     return true;
40 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.6.2.5 bool AutoRun::once ( ) [static]

Definition at line 29 of file autorun.cpp.

References CkbSettings::get().

Referenced by SettingsWidget::SettingsWidget().

```
29                  {
30      return CkbSettings::get(settingPath).toBool();
31  }
```

Here is the call graph for this function:

Here is the caller graph for this function:

The documentation for this class was generated from the following files:

- src/ckb/autorun.h
- src/ckb/autorun.cpp

12.7 CkbSettings Class Reference

```
#include <src/ckb/ckbsettings.h>
```

Collaboration diagram for CkbSettings:

Public Member Functions

- CkbSettings ()
- CkbSettings (const QString &basePath, bool eraseExisting=false)
- CkbSettings (QSettings &settings)
- ~CkbSettings ()
- void beginGroup (const QString &prefix)
- void endGroup ()
- QStringList childGroups () const
- QStringList childKeys () const
- bool contains (const QString &key) const
- bool containsGroup (const QString &group)
- QVariant value (const QString &key, const QVariant &defaultValue=QVariant()) const
- void setValue (const QString &key, const QVariant &value)
- void remove (const QString &key)

Static Public Member Functions

- static QVariant get (const QString &key, const QVariant &defaultValue=QVariant())

- static void set (const QString &key, const QVariant &value)
- static bool isBusy ()
- static void cleanUp ()

Private Member Functions

- QString pwd () const
- QString pwd (const QString &key) const

Private Attributes

- QSettings * backing
- QStringList groups
- QStringList removeCache
- QMap< QString, QVariant > writeCache

12.7.1 Detailed Description

Definition at line 11 of file ckbsettings.h.

12.7.2 Constructor & Destructor Documentation

12.7.2.1 CkbSettings::CkbSettings ( )

Definition at line 61 of file ckbsettings.cpp.

```
61                          :
62     backing(globalSettings()) {
63 }
```

12.7.2.2 CkbSettings::CkbSettings (const QString & *basePath*, bool *eraseExisting* = `false`)

Definition at line 65 of file ckbsettings.cpp.

References beginGroup().

```
65                                                                  :
66     backing(globalSettings()) {
67     if(basePath.isEmpty()){
68         if(eraseExisting)
69             qDebug() << "CkbSettings created with basePath = \"\" and eraseExisting = true. This is a
       mistake.";
70         return;
71     }
72     if(eraseExisting)
73         remove(basePath);
74     beginGroup(basePath);
75 }
```

Here is the call graph for this function:

12.7.2.3 CkbSettings::CkbSettings (QSettings & *settings*)

Definition at line 77 of file ckbsettings.cpp.

```
77                                                  :
78     backing(&settings) {
79 }
```

12.7.2.4 CkbSettings::~CkbSettings ( )

Definition at line 145 of file ckbsettings.cpp.

References backing, removeCache, and writeCache.

```
145                                 {
146     if(removeCache.isEmpty() && writeCache.isEmpty())
147         return;
148     // Save the settings from the settings thread.
149     // They have to be saved from that thread specifically to avoid performance issues
150     CkbSettingsWriter* writer = new CkbSettingsWriter(
      backing, removeCache, writeCache);
151     writer->moveToThread(globalThread);
152     QObject::staticMetaObject.invokeMethod(writer, "run", Qt::QueuedConnection);
153 }
```

12.7.3 Member Function Documentation

12.7.3.1 void CkbSettings::beginGroup (const QString & *prefix*)

Definition at line 81 of file ckbsettings.cpp.

References groups.

Referenced by CkbSettings(), KbAnim::save(), and SGroup::SGroup().

```
81                                                  {
82     groups.append(prefix);
83 }
```

Here is the caller graph for this function:

12.7.3.2 QStringList CkbSettings::childGroups ( ) const

Definition at line 89 of file ckbsettings.cpp.

References backing, current, lockMutex, and pwd().

Referenced by containsGroup(), and GradientDialog::GradientDialog().

```
89                                                  {
90     QString current = pwd();
91     lockMutex;
92     if(!current.isEmpty())
93         backing->beginGroup(current);
94     QStringList res = backing->childGroups();
95     if(!current.isEmpty())
96         backing->endGroup();
97     return res;
98 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.3.3 QStringList CkbSettings::childKeys ( ) const

Definition at line 100 of file ckbsettings.cpp.

References backing, current, lockMutex, and pwd().

Referenced by GradientDialog::GradientDialog(), KbAnim::KbAnim(), KbBind::load(), KbLight::load(), and KbBind::loadGlobalRemap().

```
100                                         {
101     QString current = pwd();
102     lockMutex;
103     if(!current.isEmpty())
104         backing->beginGroup(current);
105     QStringList res = backing->childKeys();
106     if(!current.isEmpty())
107         backing->endGroup();
108     return res;
109 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.3.4 void CkbSettings::cleanUp ( ) [static]

Definition at line 46 of file ckbsettings.cpp.

References _globalSettings, cacheWritesInProgress(), and globalThread.

Referenced by MainWindow::cleanup().

```
46                          {
47     if(!_globalSettings)
48         return;
49     // Wait for all writers to finish
50     while(cacheWritesInProgress.load() > 0)
51         QThread::yieldCurrentThread();
52     // Stop thread and delete objects
53     globalThread->quit();
54     globalThread->wait();
55     delete globalThread;
56     delete _globalSettings;
57     globalThread = 0;
58     _globalSettings = 0;
59 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.3.5 bool CkbSettings::contains (const QString & *key*) const

Definition at line 111 of file ckbsettings.cpp.

References backing, lockMutex, and pwd().

Referenced by KbMode::KbMode(), KbProfile::KbProfile(), and KbPerf::load().

```
111                                                 {
112     lockMutex;
113     return backing->contains(pwd(key));
114 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.3.6 bool CkbSettings::containsGroup (const QString & *group*)

Definition at line 116 of file ckbsettings.cpp.

References childGroups().

Referenced by KbPerf::load().

```
                                                {
    QStringList components = group.split("/");
    if(components.length() > 1){
        // Find sub-group
        SGroup group(*this, components[0]);
        return containsGroup(QStringList(components.mid(1)).join('/'));
    }
    return childGroups().contains(group);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.3.7 void CkbSettings::endGroup ( )

Definition at line 85 of file ckbsettings.cpp.

References groups.

Referenced by KbAnim::save(), and SGroup::~SGroup().

```
                        {
    groups.removeLast();
}
```

Here is the caller graph for this function:

12.7.3.8 QVariant CkbSettings::get (const QString & *key*, const QVariant & *defaultValue* = `QVariant()`) [static]

Definition at line 155 of file ckbsettings.cpp.

References globalCache, globalSettings(), lockMutexCache, and lockMutexStatic2.

Referenced by MainWindow::closeEvent(), KbLightWidget::KbLightWidget(), MainWindow::MainWindow(), AutoRun::once(), and MainWindow::timerTick().

```
                                                                    {
    // Store these settings in a memory cache
    lockMutexCache;
    if(globalCache.contains(key))
        return globalCache.value(key);
    // If it wasn't found in the memory cache, look for it in QSettings
    lockMutexStatic2;
    QSettings* settings = globalSettings();
    return globalCache[key] = settings->value(key, defaultValue);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.3.9 bool CkbSettings::isBusy ( ) [static]

Definition at line 42 of file ckbsettings.cpp.

References cacheWritesInProgress().

Referenced by Kb::autoSave(), and ExtraSettingsWidget::pollUpdates().

```
                        {
    return cacheWritesInProgress.load() > 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.3.10 QString CkbSettings::pwd ( ) const [inline], [private]

Definition at line 51 of file ckbsettings.h.

References groups.

Referenced by childGroups(), childKeys(), contains(), remove(), setValue(), and value().

```
51 { return groups.join("/"); }
```

Here is the caller graph for this function:

12.7.3.11 QString CkbSettings::pwd (const QString & *key*) const [inline], [private]

Definition at line 52 of file ckbsettings.h.

References groups, and pwd().

Referenced by pwd().

```
52 { return pwd() + (groups.isEmpty() ? "" : "/") + key; }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.3.12 void CkbSettings::remove (const QString & *key*)

Definition at line 141 of file ckbsettings.cpp.

References pwd(), and removeCache.

Referenced by SettingsWidget::SettingsWidget().

```
141                                         {
142     removeCache.append(pwd(key));
143 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.3.13 void CkbSettings::set (const QString & *key*, const QVariant & *value*) [static]

Definition at line 166 of file ckbsettings.cpp.

References globalCache, globalSettings(), lockMutexCache, lockMutexStatic, and value().

Referenced by MainWindow::closeEvent(), AutoRun::enable(), AutoRun::isEnabled(), SettingsWidget::on_autoFWBox_clicked(), ExtraSettingsWidget::on_delayBox_clicked(), ExtraSettingsWidget::on_ditherBox_clicked(), SettingsWidget::on_layoutBox_activated(), ExtraSettingsWidget::on_mAccelBox_clicked(), ExtraSettingsWidget::on_sAccelBox_clicked(), KbLightWidget::on_showAnimBox_clicked(), ExtraSettingsWidget::on_sSpeedBox_valueChanged(), ExtraSettingsWidget::on_trayBox_clicked(), MPerfWidget::on_xyBox_clicked(), and ExtraSettingsWidget::pollUpdates().

```
{
    {
        lockMutexCache;
        if(globalCache.value(key) == value)
            return;
        globalCache[key] = value;
    }
    lockMutexStatic;
    globalSettings()->setValue(key, value);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.3.14 void CkbSettings::setValue (const QString & *key*, const QVariant & *value*)

Definition at line 131 of file ckbsettings.cpp.

References globalCache, lockMutexCache, pwd(), value(), and writeCache.

Referenced by ExtraSettingsWidget::on_fpsBox_valueChanged(), KbProfile::save(), KbPerf::save(), KbAnim::save(), KbBind::save(), KbMode::save(), KbLight::save(), Kb::save(), KbBind::saveGlobalRemap(), SettingsWidget::SettingsWidget(), and GradientDialog::~GradientDialog().

```
131                                                                 {
132     // Cache the write values, save them when the object is destroyed
133     QString realKey = pwd(key);
134     writeCache[realKey] = value;
135     // Update global cache if needed
136     lockMutexCache;
137     if(globalCache.contains(realKey))
138         globalCache[realKey] = value;
139 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.3.15 QVariant CkbSettings::value (const QString & *key*, const QVariant & *defaultValue* = `QVariant()`) const

Definition at line 126 of file ckbsettings.cpp.

References backing, lockMutex, and pwd().

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), GradientDialog::GradientDialog(), KbAnim::KbAnim(), KbMode::KbMode(), KbProfile::KbProfile(), KbPerf::load(), KbBind::load(), KbLight::load(), Kb::load(), KbBind::loadGlobalRemap(), set(), SettingsWidget::SettingsWidget(), and setValue().

```
126                                                                 {
127     lockMutex;
128     return backing->value(pwd(key), defaultValue);
129 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.7.4 Field Documentation

12.7.4.1 QSettings* CkbSettings::backing [private]

Definition at line 46 of file ckbsettings.h.

Referenced by childGroups(), childKeys(), contains(), value(), and ~CkbSettings().

12.7.4.2 QStringList CkbSettings::groups [private]

Definition at line 47 of file ckbsettings.h.

Referenced by beginGroup(), endGroup(), and pwd().

12.7.4.3 QStringList CkbSettings::removeCache [private]

Definition at line 48 of file ckbsettings.h.

Referenced by remove(), and ~CkbSettings().

12.7.4.4 QMap<QString, QVariant> CkbSettings::writeCache [private]

Definition at line 49 of file ckbsettings.h.

Referenced by setValue(), and ~CkbSettings().

The documentation for this class was generated from the following files:

- src/ckb/ckbsettings.h
- src/ckb/ckbsettings.cpp

12.8 CkbSettingsWriter Class Reference

```
#include <src/ckb/ckbsettingswriter.h>
```

Inheritance diagram for CkbSettingsWriter:

Collaboration diagram for CkbSettingsWriter:

Public Member Functions

- CkbSettingsWriter (QSettings ∗backing, const QStringList &removals, const QMap< QString, QVariant > &updates)
- ∼CkbSettingsWriter ()
- Q_SLOT void run ()

Private Attributes

- QSettings ∗ _backing
- QStringList _removals
- QMap< QString, QVariant > _updates

12.8.1 Detailed Description

Definition at line 12 of file ckbsettingswriter.h.

12.8.2 Constructor & Destructor Documentation

12.8.2.1 CkbSettingsWriter::CkbSettingsWriter (QSettings ∗ *backing*, const QStringList & *removals*, const QMap< QString, QVariant > & *updates*)

Definition at line 12 of file ckbsettingswriter.cpp.

References cacheWritesInProgress.

```
12
                    :
13     _backing(backing), _removals(removals), _updates(updates) {
14     cacheWritesInProgress.ref();
15 }
```

12.8.2.2 CkbSettingsWriter::~CkbSettingsWriter ( )

Definition at line 17 of file ckbsettingswriter.cpp.

References cacheWritesInProgress.

```
17                                  {
18     cacheWritesInProgress.deref();
19 }
```

12.8.3 Member Function Documentation

12.8.3.1 void CkbSettingsWriter::run ( )

Definition at line 21 of file ckbsettingswriter.cpp.

References _backing, _removals, _updates, and lockMutexStatic.

```
21                              {
22     lockMutexStatic;
23     // Process key removals
24     foreach(const QString& rm, _removals){
25         _backing->remove(rm);
26     }
27     // Process writes
28     QMapIterator<QString, QVariant> i(_updates);
29     while(i.hasNext()){
30         i.next();
31         _backing->setValue(i.key(), i.value());
32         // Updating the global cache was done above
33     }
34     _backing->sync();
35     deleteLater();
36 }
```

12.8.4 Field Documentation

12.8.4.1 QSettings* CkbSettingsWriter::_backing [private]

Definition at line 21 of file ckbsettingswriter.h.

Referenced by run().

12.8.4.2 QStringList CkbSettingsWriter::_removals [private]

Definition at line 22 of file ckbsettingswriter.h.

Referenced by run().

12.8.4.3 QMap<QString, QVariant> CkbSettingsWriter::_updates [private]

Definition at line 23 of file ckbsettingswriter.h.

Referenced by run().

The documentation for this class was generated from the following files:

- src/ckb/ckbsettingswriter.h
- src/ckb/ckbsettingswriter.cpp

12.9 ColorButton Class Reference

```
#include <src/ckb/colorbutton.h>
```

Inheritance diagram for ColorButton:

Collaboration diagram for ColorButton:

Signals

- void colorChanged (QColor newColor)

Public Member Functions

- ColorButton (QWidget *parent=0, bool allowAlpha=false)
- const QColor & color () const
- void color (const QColor &newColor)
- bool allowAlpha () const
- void allowAlpha (bool newAllowAlpha)
- bool setLabel () const
- void setLabel (bool newSetLabel)
- bool bigIcons () const
- void bigIcons (bool newBigIcons)

Private Slots

- void pickColor ()

Private Member Functions

- void updateImage ()

Private Attributes

- QColor _color
- bool _alpha
- bool _setLabel
- bool _bigIcons

12.9.1 Detailed Description

Definition at line 6 of file colorbutton.h.

12.9.2 Constructor & Destructor Documentation

12.9.2.1 ColorButton::ColorButton (QWidget * *parent* = 0, bool *allowAlpha* = false) [explicit]

Definition at line 5 of file colorbutton.cpp.

References pickColor(), and updateImage().

```
5                                                       :
6     QPushButton(parent), _alpha(allowAlpha),
      _setLabel(true), _bigIcons(false)
7 {
8     setAutoDefault(false);
9     setDefault(false);
10     updateImage();
11     // Pick color on click (use queued connection so that any on_*_clicked() events can be processed first)
12     connect(this, SIGNAL(clicked()), this, SLOT(pickColor()), Qt::QueuedConnection);
13 }
```

Here is the call graph for this function:

12.9.3 Member Function Documentation

12.9.3.1 bool ColorButton::allowAlpha ( ) const [inline]

Definition at line 17 of file colorbutton.h.

References _alpha.

Referenced by KPerfWidget::KPerfWidget(), and MPerfWidget::MPerfWidget().

```
17 { return _alpha; }
```

Here is the caller graph for this function:

12.9.3.2 void ColorButton::allowAlpha (bool *newAllowAlpha*)

Definition at line 22 of file colorbutton.cpp.

References _alpha, and updateImage().

```
22                                                  {
23     _alpha = newAllowAlpha;
24     updateImage();
25 }
```

Here is the call graph for this function:

12.9.3.3 bool ColorButton::bigIcons ( ) const [inline]

Definition at line 23 of file colorbutton.h.

References _bigIcons.

Referenced by KPerfWidget::KPerfWidget(), and MPerfWidget::MPerfWidget().

```
23 { return _bigIcons; }
```

Here is the caller graph for this function:

12.9.3.4 void ColorButton::bigIcons (bool *newBigIcons*)

Definition at line 27 of file colorbutton.cpp.

References _bigIcons, and updateImage().

```
27                                          {
28     _bigIcons = newBigIcons;
29     updateImage();
30 }
```

Here is the call graph for this function:

12.9.3.5 const QColor& ColorButton::color ( ) const [inline]

Definition at line 13 of file colorbutton.h.

References _color.

Referenced by MPerfWidget::colorChanged(), GradientDialog::currentChanged(), KbLightWidget::newSelection(), GradientDialog::on_stopOpacity_valueChanged(), KPerfWidget::setPerf(), MPerfWidget::setPerf(), KPerfWidget::ui-Updated(), and AnimSettingDialog::updateParam().

```
13 { return _color; }
```

Here is the caller graph for this function:

12.9.3.6 void ColorButton::color (const QColor & *newColor*)

Definition at line 15 of file colorbutton.cpp.

References _alpha, _color, and updateImage().

```
15                                          {
16     _color = newColor;
17     if(!_alpha)
18         _color.setAlpha(255);
19     updateImage();
20 }
```

Here is the call graph for this function:

12.9.3.7 void ColorButton::colorChanged (QColor *newColor*) [signal]

Definition at line 132 of file moc_colorbutton.cpp.

Referenced by pickColor().

```
{
    void *_a[] = { Q_NULLPTR, const_cast<void*>(reinterpret_cast<const void*>(&_t1)) };
    QMetaObject::activate(this, &staticMetaObject, 0, _a);
}
```

Here is the caller graph for this function:

12.9.3.8 void ColorButton::pickColor ( ) [private],[slot]

Definition at line 60 of file colorbutton.cpp.

References _alpha, _color, colorChanged(), and updateImage().

Referenced by ColorButton().

```
                                {
    QColor newColor = QColorDialog::getColor(_color, this, QString(),
   QColorDialog::ColorDialogOptions(_alpha ? QColorDialog::ShowAlphaChannel : 0));
    if(newColor.isValid()){
        _color = newColor;
        updateImage();
        emit colorChanged(_color);
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.9.3.9 bool ColorButton::setLabel ( ) const [inline]

Definition at line 20 of file colorbutton.h.

References _setLabel.

Referenced by KPerfWidget::KPerfWidget(), and MPerfWidget::MPerfWidget().

```
20 { return _setLabel; }
```

Here is the caller graph for this function:

12.9.3.10 void ColorButton::setLabel (bool *newSetLabel*) [inline]

Definition at line 21 of file colorbutton.h.

References _setLabel.

```
21 { _setLabel = newSetLabel; }
```

12.9.3.11 void ColorButton::updateImage ( ) [private]

Definition at line 32 of file colorbutton.cpp.

References _alpha, _bigIcons, _color, and _setLabel.

Referenced by allowAlpha(), bigIcons(), color(), ColorButton(), and pickColor().

```
32                                {
33     if(!_color.isValid()){
34         setIcon(QIcon());
35         if(_setLabel)
36             setText("Change color...");
37         return;
38     }
39     const int w = 24, h = _bigIcons ? 24 : 12;
40     QImage image(w, h, QImage::Format_RGB888);
41     QPainter painter(&image);
42     painter.setPen(Qt::NoPen);
43     painter.fillRect(0, 0, w, h, QColor(0, 0, 0));
44     if(_alpha && _color.alpha() != 255){
45         painter.fillRect(1, 1, w / 2 - 1, h / 2 - 1, QColor(255, 255, 255));
46         painter.fillRect(w / 2, 1, w / 2 - 1, h / 2 - 1, QColor(192, 192, 192));
47         painter.fillRect(1, h / 2, w / 2 - 1, h / 2 - 1, QColor(192, 192, 192));
48         painter.fillRect(w / 2, h / 2, w / 2 - 1, h / 2 - 1, QColor(255, 255, 255));
49     }
50     painter.fillRect(1, 1, w - 2, h - 2, _color);
51     setIcon(QIcon(QPixmap::fromImage(image)));
52     if(_setLabel){
53         QString text = QString(" (%1, %2, %3)").arg(_color.red()).arg(
       _color.green()).arg(_color.blue());
54         if(_alpha)
```

```
            text += QString(", %4%").arg(QString::number(_color.alphaF() * 100., 'f', 0));
        setText(text);
    }
}
```

Here is the caller graph for this function:

12.9.4 Field Documentation

12.9.4.1 bool ColorButton::_alpha [private]

Definition at line 34 of file colorbutton.h.

Referenced by allowAlpha(), color(), pickColor(), and updateImage().

12.9.4.2 bool ColorButton::_bigIcons [private]

Definition at line 34 of file colorbutton.h.

Referenced by bigIcons(), and updateImage().

12.9.4.3 QColor ColorButton::_color [private]

Definition at line 33 of file colorbutton.h.

Referenced by color(), pickColor(), and updateImage().

12.9.4.4 bool ColorButton::_setLabel [private]

Definition at line 34 of file colorbutton.h.

Referenced by setLabel(), and updateImage().

The documentation for this class was generated from the following files:

- src/ckb/colorbutton.h
- src/ckb/colorbutton.cpp
- src/ckb/release/moc_colorbutton.cpp

12.10 ColorMap Class Reference

`#include <src/ckb/colormap.h>`

Collaboration diagram for ColorMap:

Public Member Functions

- ColorMap ()
- ~ColorMap ()
- ColorMap (const ColorMap &rhs)
- const ColorMap & operator= (const ColorMap &rhs)
- void init (const KeyMap &map)
- void clear ()
- int count () const
- const char ∗const ∗ keyNames () const
- QRgb ∗ colors ()
- const QRgb ∗ colors () const
- QRgb ∗ colorForName (const char ∗name)
- const QRgb ∗ colorForName (const char ∗name) const

Private Member Functions

- void alloc (int count)
- void deAlloc ()

Private Attributes

- const char ** _keyNames
- QRgb * _colors
- int _count
- int _mapCount

12.10.1 Detailed Description

Definition at line 15 of file colormap.h.

12.10.2 Constructor & Destructor Documentation

12.10.2.1 ColorMap::ColorMap ( )

Definition at line 3 of file colormap.cpp.

```
:
    _keyNames(0), _colors(0), _count(0), _mapCount(0)
{
}
```

12.10.2.2 ColorMap::~ColorMap ( )

Definition at line 8 of file colormap.cpp.

References deAlloc().

```
{
    deAlloc();
}
```

Here is the call graph for this function:

12.10.2.3 ColorMap::ColorMap (const ColorMap & *rhs*)

Definition at line 12 of file colormap.cpp.

```
:
    _keyNames(0), _colors(0), _count(0), _mapCount(0)
{
    *this = rhs;
}
```

12.10.3 Member Function Documentation

12.10.3.1 void ColorMap::alloc (int *count*) [private]

Definition at line 27 of file colormap.cpp.

References _colors, _count, _keyNames, _mapCount, clear(), and deAlloc().

Referenced by init(), and operator=().

```
27                                  {
28     if(newCount > _mapCount){
29         // ^ map never shrinks, only expands
30         deAlloc();
31         _mapCount = newCount;
32         _keyNames = new const char*[_mapCount];
33         _colors = new QRgb[_mapCount];
34     }
35     _count = newCount;
36     clear();
37 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.10.3.2 void ColorMap::clear ( )

Definition at line 45 of file colormap.cpp.

References _colors, and _count.

Referenced by alloc(), AnimScript::end(), and KbLight::resetIndicators().

```
45                          {
46     memset(_colors, 0, _count * sizeof(QRgb));
47 }
```

Here is the caller graph for this function:

12.10.3.3 QRgb ∗ ColorMap::colorForName (const char ∗ *name*)

Definition at line 72 of file colormap.cpp.

References _colors, _count, _keyNames, and qs_strcmp().

Referenced by KbLight::base(), KbLight::color(), KeyWidget::paintEvent(), AnimScript::readProcess(), KbLight::rebuildBaseMap(), and KbLight::setIndicator().

```
72                                                  {
73     if(!_keyNames)
74         return 0;
75     const char** namePtr = (const char**)bsearch(&name, _keyNames,
      _count, sizeof(const char*), qs_strcmp);
76     if(!namePtr)
77         return 0;
78     ptrdiff_t position = namePtr - _keyNames;
79     return _colors + position;
80 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.10.3.4 const QRgb * ColorMap::colorForName (const char * *name*) const

Definition at line 82 of file colormap.cpp.

References _colors, _count, _keyNames, and qs_strcmp().

```
82                                                          {
83     if(!_keyNames)
84         return 0;
85     const char** namePtr = (const char**)bsearch(&name, _keyNames,
      _count, sizeof(const char*), qs_strcmp);
86     if(!namePtr)
87         return 0;
88     ptrdiff_t position = namePtr - _keyNames;
89     return _colors + position;
90 }
```

Here is the call graph for this function:

12.10.3.5 QRgb* ColorMap::colors ( ) [inline]

Definition at line 32 of file colormap.h.

References _colors.

Referenced by KbLight::base(), KbAnim::blend(), KbLight::color(), KbLight::frameUpdate(), KbLight::printRGB(), and AnimScript::readProcess().

```
32 { return _colors; }
```

Here is the caller graph for this function:

12.10.3.6 const QRgb∗ ColorMap::colors ( ) const [inline]

Definition at line 33 of file colormap.h.

References _colors.

```
33 { return _colors; }
```

12.10.3.7 int ColorMap::count ( ) const [inline]

Definition at line 30 of file colormap.h.

References _count.

Referenced by KbLight::base(), KbAnim::blend(), KbLight::color(), KbLight::frameUpdate(), KbLight::printRGB(), and AnimScript::readProcess().

```
30 { return _count; }
```

Here is the caller graph for this function:

12.10.3.8 void ColorMap::deAlloc ( ) [private]

Definition at line 39 of file colormap.cpp.

References _colors, _count, _keyNames, and _mapCount.

Referenced by alloc(), and ∼ColorMap().

```
                        {
    _count = _mapCount = 0;
    if(_keyNames) delete[] _keyNames;
    if(_colors) delete[] _colors;
}
```

Here is the caller graph for this function:

12.10.3.9 void ColorMap::init (const KeyMap & *map*)

Definition at line 53 of file colormap.cpp.

References _count, _keyNames, alloc(), Key::hasLed, Key::name, KeyMap::positions(), and qs_strcmp().

Referenced by AnimScript::init(), and KbLight::map().

```
                                    {
    QList<Key> newKeys = map.positions();
    // There's no point including keys that don't have LEDs, so remove them now
    QMutableListIterator<Key> i(newKeys);
    while(i.hasNext()){
        Key key = i.next();
        if(!key.hasLed)
            i.remove();
    }
    // Now that we know how many keys we'll have, check memory
    alloc(newKeys.count());
    // Copy key names
    int keyPos = 0;
    foreach(const Key& key, newKeys)
        _keyNames[keyPos++] = key.name;     // as above, it's safe to copy these since the
strings are constants
    // Sort names for quick access
    qsort(_keyNames, _count, sizeof(const char*), qs_strcmp);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.10.3.10 const char* const* ColorMap::keyNames ( ) const [inline]

Definition at line 31 of file colormap.h.

References _keyNames.

Referenced by KbLight::printRGB().

```
31 { return _keyNames; }
```

Here is the caller graph for this function:

12.10.3.11 const ColorMap & ColorMap::operator= (const ColorMap & *rhs*)

Definition at line 18 of file colormap.cpp.

References _colors, _count, _keyNames, and alloc().

```
18                                                  {
19     alloc(rhs._count);
20     // Copy key names and colors
21     // (Note: it's safe to copy the const char*'s because key names are constants and will never move or be
       deleted)
22     memcpy(_keyNames, rhs._keyNames, sizeof(const char*) *
      _count);
23     memcpy(_colors, rhs._colors, sizeof(QRgb) * _count);
24     return rhs;
25 }
```

Here is the call graph for this function:

12.10.4 Field Documentation

12.10.4.1 QRgb* ColorMap::_colors [private]

Definition at line 44 of file colormap.h.

Referenced by alloc(), clear(), colorForName(), colors(), deAlloc(), and operator=().

12.10.4.2 int ColorMap::_count [private]

Definition at line 45 of file colormap.h.

Referenced by alloc(), clear(), colorForName(), count(), deAlloc(), init(), and operator=().

12.10.4.3 const char** ColorMap::_keyNames [private]

Definition at line 43 of file colormap.h.

Referenced by alloc(), colorForName(), deAlloc(), init(), keyNames(), and operator=().

12.10.4.4 int ColorMap::_mapCount [private]

Definition at line 45 of file colormap.h.

Referenced by alloc(), and deAlloc().

The documentation for this class was generated from the following files:

- src/ckb/colormap.h
- src/ckb/colormap.cpp

12.11 devcmd.__unnamed__ Struct Reference

Collaboration diagram for devcmd.__unnamed__:

Data Fields

- cmdhandler_io hwload
- cmdhandler_io hwsave
- cmdhandler_io fwupdate
- cmdhandler_io pollrate
- cmdhandler_io active
- cmdhandler_io idle
- cmdhandler erase
- cmdhandler eraseprofile
- cmdhandler name
- cmdhandler profilename
- cmdhandler id
- cmdhandler profileid
- cmdhandler rgb
- cmdhandler ioff
- cmdhandler ion
- cmdhandler iauto
- cmdhandler bind
- cmdhandler unbind
- cmdhandler rebind
- cmdhandler_mac macro
- cmdhandler_mac dpi
- cmdhandler dpisel
- cmdhandler lift
- cmdhandler snap
- cmdhandler notify
- cmdhandler inotify
- cmdhandler get

- cmdhandler restart
- int(∗ start)(usbdevice ∗kb, int makeactive)
- void(∗ setmodeindex)(usbdevice ∗kb, int index)
- void(∗ allocprofile)(usbdevice ∗kb)
- int(∗ loadprofile)(usbdevice ∗kb)
- void(∗ freeprofile)(usbdevice ∗kb)
- int(∗ updatergb)(usbdevice ∗kb, int force)
- void(∗ updateindicators)(usbdevice ∗kb, int force)
- int(∗ updatedpi)(usbdevice ∗kb, int force)

12.11.1 Detailed Description

Definition at line 78 of file command.h.

12.11.2 Field Documentation

12.11.2.1

12.11.2.2

12.11.2.3

12.11.2.4

12.11.2.5

12.11.2.6

12.11.2.7

12.11.2.8

12.11.2.9

12.11.2.10

12.11.2.11

12.11.2.12

12.11.2.13

12.11.2.14

12.11.2.15

12.11.2.16

12.11.2.17

12.11.2.18

12.11.2.19

12.11.2.20

12.11.2.21

12.11.2.22

12.11.2.23

12.11.2.24

12.11.2.25

12.11.2.26

12.11.2.27

12.11.2.28

12.11.2.29

12.11.2.30

12.11.2.31

12.11.2.32

12.11.2.33

12.11.2.34

12.11.2.35

12.11.2.36

The documentation for this struct was generated from the following files:

12.12 Ui::ExtraSettingsWidget Class Reference

```
#include <src/ckb/ui_extrasettingswidget.h>
```

Inheritance diagram for Ui::ExtraSettingsWidget:

Collaboration diagram for Ui::ExtraSettingsWidget:

Public Member Functions

- void setupUi (QDialog *ExtraSettingsWidget)
- void retranslateUi (QDialog *ExtraSettingsWidget)

Data Fields

- QGridLayout * gridLayout
- QSpacerItem * horizontalSpacer_2
- QSpacerItem * verticalSpacer
- QSpacerItem * verticalSpacer_3
- QSpacerItem * verticalSpacer_2
- QLabel * fpsWarnLabel
- QSpacerItem * horizontalSpacer_3
- QLabel * label_3
- QSpinBox * fpsBox
- QSpacerItem * verticalSpacer_4
- QSpacerItem * verticalSpacer_9
- QLabel * label_6
- QSpacerItem * verticalSpacer_6
- QSpacerItem * verticalSpacer_5
- QCheckBox * sAccelBox
- QSpacerItem * verticalSpacer_7
- QSpacerItem * verticalSpacer_8
- QSpacerItem * verticalSpacer_10
- QSpacerItem * verticalSpacer_11
- QSpacerItem * horizontalSpacer
- QFrame * line_2
- QHBoxLayout * horizontalLayout
- QLabel * animPathLabel
- QLabel * animCountLabel
- QPushButton * animScanButton
- QCheckBox * brightnessBox
- QCheckBox * trayBox
- QLabel * label
- QFrame * line
- QLabel * label_5
- QFrame * line_3
- QLabel * label_2
- QCheckBox * ditherBox
- QCheckBox * delayBox
- QLabel * osxLabel
- QFrame * osxLine
- QCheckBox * mAccelBox
- QWidget * sSpeedWidget
- QHBoxLayout * horizontalLayout_2
- QLabel * label_10
- QSpinBox * sSpeedBox
- QLabel * label_11
- QDialogButtonBox * buttonBox

12.12.1 Detailed Description

Definition at line 366 of file ui_extrasettingswidget.h.

12.12.2 Member Function Documentation

12.12.2.1 void Ui_ExtraSettingsWidget::retranslateUi (QDialog * *ExtraSettingsWidget*) [inline],[inherited]

Definition at line 322 of file ui_extrasettingswidget.h.

References Ui_ExtraSettingsWidget::animCountLabel, Ui_ExtraSettingsWidget::animPathLabel, Ui_ExtraSettingsWidget::animScanButton, Ui_ExtraSettingsWidget::brightnessBox, Ui_ExtraSettingsWidget::delayBox, Ui_ExtraSettingsWidget::ditherBox, Ui_ExtraSettingsWidget::fpsWarnLabel, Ui_ExtraSettingsWidget::label, Ui_ExtraSettingsWidget::label_10, Ui_ExtraSettingsWidget::label_11, Ui_ExtraSettingsWidget::label_2, Ui_ExtraSettingsWidget::label_3, Ui_ExtraSettingsWidget::label_5, Ui_ExtraSettingsWidget::label_6, Ui_ExtraSettingsWidget::mAccelBox, Ui_ExtraSettingsWidget::osxLabel, Ui_ExtraSettingsWidget::sAccelBox, and Ui_ExtraSettingsWidget::trayBox.

Referenced by Ui_ExtraSettingsWidget::setupUi().

```
    {
        ExtraSettingsWidget->setWindowTitle(QApplication::translate("ExtraSettingsWidget", "Application Settings", Q_NULLPTR));
        fpsWarnLabel->setText(QApplication::translate("ExtraSettingsWidget", "Warning: high frame rates may cause stability issues", Q_NULLPTR));
        label_3->setText(QApplication::translate("ExtraSettingsWidget", "Frame rate (FPS):", Q_NULLPTR));
        label_6->setText(QApplication::translate("ExtraSettingsWidget", "Location:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        sAccelBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "Try this if you're having problems with the scroll wheel.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        sAccelBox->setText(QApplication::translate("ExtraSettingsWidget", "Disable scroll acceleration", Q_NULLPTR));
        animPathLabel->setText(QApplication::translate("ExtraSettingsWidget", "/path/to/animations", Q_NULLPTR));
        animCountLabel->setText(QApplication::translate("ExtraSettingsWidget", "0 animations found", Q_NULLPTR));
        animScanButton->setText(QApplication::translate("ExtraSettingsWidget", "Re-scan", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        brightnessBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "By default, the same brightness level will be applied to all profiles and all devices. Enable this to store it with the lighting mode instead.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        brightnessBox->setText(QApplication::translate("ExtraSettingsWidget", "Set brightness per-mode", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        trayBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "The tray icon will not be displayed. The application will still run in the background; re-launch the app to see the GUI again.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        trayBox->setText(QApplication::translate("ExtraSettingsWidget", "Hide tray icon", Q_NULLPTR));
        label->setText(QApplication::translate("ExtraSettingsWidget", "Behavior", Q_NULLPTR));
        label_5->setText(QApplication::translate("ExtraSettingsWidget", "Animation scripts", Q_NULLPTR));
        label_2->setText(QApplication::translate("ExtraSettingsWidget", "Hardware", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        ditherBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "May improve appearance on some keyboards.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        ditherBox->setText(QApplication::translate("ExtraSettingsWidget", "Use spatial dithering to simulate extra color resolution", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        delayBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "When using macros with strings longer than 25 chars, some OS may lose characters (e.g. Mint 17.2). Select to prevent that bug.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        delayBox->setText(QApplication::translate("ExtraSettingsWidget", "Use delay for very long macros", Q_NULLPTR));
        osxLabel->setText(QApplication::translate("ExtraSettingsWidget", "OS X tweaks", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        mAccelBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "Try this if you're having problems with mouse movement.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        mAccelBox->setText(QApplication::translate("ExtraSettingsWidget", "Disable mouse acceleration", Q_NULLPTR));
        label_10->setText(QApplication::translate("ExtraSettingsWidget", "Scroll", Q_NULLPTR));
        label_11->setText(QApplication::translate("ExtraSettingsWidget", "line(s) at a time", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.12.2.2 void Ui_ExtraSettingsWidget::setupUi (QDialog * *ExtraSettingsWidget*) [inline],[inherited]

Definition at line 78 of file ui_extrasettingswidget.h.

References Ui_ExtraSettingsWidget::animCountLabel, Ui_ExtraSettingsWidget::animPathLabel, Ui_ExtraSettingsWidget::animScanButton, Ui_ExtraSettingsWidget::brightnessBox, Ui_ExtraSettingsWidget::buttonBox, Ui_ExtraSettingsWidget::delayBox, Ui_ExtraSettingsWidget::ditherBox, Ui_ExtraSettingsWidget::fpsBox, Ui_ExtraSettingsWidget::fpsWarnLabel, Ui_ExtraSettingsWidget::gridLayout, Ui_ExtraSettingsWidget::horizontalLayout, Ui_ExtraSettingsWidget::horizontalLayout_2, Ui_ExtraSettingsWidget::horizontalSpacer, Ui_ExtraSettingsWidget::horizontalSpacer_2, Ui_ExtraSettingsWidget::horizontalSpacer_3, Ui_ExtraSettingsWidget::label, Ui_ExtraSettingsWidget::label_10, Ui_ExtraSettingsWidget::label_11, Ui_ExtraSettingsWidget::label_2, Ui_ExtraSettingsWidget::label_3, Ui_ExtraSettingsWidget::label_5, Ui_ExtraSettingsWidget::label_6, Ui_ExtraSettingsWidget::line, Ui_ExtraSettingsWidget::line_2, Ui_ExtraSettingsWidget::line_3, Ui_ExtraSettingsWidget::mAccelBox, Ui_ExtraSettingsWidget::osxLabel, Ui_ExtraSettingsWidget::osxLine, Ui_ExtraSettingsWidget::retranslateUi(), Ui_ExtraSettingsWidget::sAccelBox, Ui_ExtraSettingsWidget::sSpeedBox, Ui_ExtraSettingsWidget::sSpeedWidget, Ui_ExtraSettingsWidget::trayBox, Ui_ExtraSettingsWidget::verticalSpacer, Ui_ExtraSettingsWidget::verticalSpacer_10, Ui_ExtraSettingsWidget::verticalSpacer_11, Ui_ExtraSettingsWidget::verticalSpacer_2, Ui_ExtraSettingsWidget::verticalSpacer_3, Ui_ExtraSettingsWidget::verticalSpacer_4, Ui_ExtraSettingsWidget::verticalSpacer_5, Ui_ExtraSettingsWidget::verticalSpacer_6, Ui_ExtraSettingsWidget::verticalSpacer_7, Ui_ExtraSettingsWidget::verticalSpacer_8, and Ui_ExtraSettingsWidget::verticalSpacer_9.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget().

```
79     {
80         if (ExtraSettingsWidget->objectName().isEmpty())
81             ExtraSettingsWidget->setObjectName(QStringLiteral("ExtraSettingsWidget"));
82         ExtraSettingsWidget->resize(650, 515);
83         gridLayout = new QGridLayout(ExtraSettingsWidget);
84         gridLayout->setObjectName(QStringLiteral("gridLayout"));
85         horizontalSpacer_2 = new QSpacerItem(30, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);
86
87         gridLayout->addItem(horizontalSpacer_2, 12, 2, 1, 1);
88
89         verticalSpacer = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);
90
91         gridLayout->addItem(verticalSpacer, 2, 0, 1, 1);
92
93         verticalSpacer_3 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed)
    ;
94
95         gridLayout->addItem(verticalSpacer_3, 3, 0, 1, 1);
96
97         verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
    QSizePolicy::Expanding);
98
99         gridLayout->addItem(verticalSpacer_2, 19, 5, 1, 1);
100
101         fpsWarnLabel = new QLabel(ExtraSettingsWidget);
102         fpsWarnLabel->setObjectName(QStringLiteral("fpsWarnLabel"));
103         QSizePolicy sizePolicy(QSizePolicy::Expanding, QSizePolicy::Preferred);
104         sizePolicy.setHorizontalStretch(0);
105         sizePolicy.setVerticalStretch(0);
106         sizePolicy.setHeightForWidth(fpsWarnLabel->sizePolicy().hasHeightForWidth());
107         fpsWarnLabel->setSizePolicy(sizePolicy);
108
109         gridLayout->addWidget(fpsWarnLabel, 12, 5, 1, 1);
110
111         horizontalSpacer_3 = new QSpacerItem(10, 20, QSizePolicy::Fixed,
```

```
QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_3, 12, 4, 1, 1);

        label_3 = new QLabel(ExtraSettingsWidget);
        label_3->setObjectName(QStringLiteral("label_3"));

        gridLayout->addWidget(label_3, 12, 1, 1, 1);

        fpsBox = new QSpinBox(ExtraSettingsWidget);
        fpsBox->setObjectName(QStringLiteral("fpsBox"));
        fpsBox->setMinimum(5);
        fpsBox->setMaximum(60);
        fpsBox->setValue(30);

        gridLayout->addWidget(fpsBox, 12, 3, 1, 1);

        verticalSpacer_4 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_4, 7, 0, 1, 1);

        verticalSpacer_9 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_9, 12, 0, 1, 1);

        label_6 = new QLabel(ExtraSettingsWidget);
        label_6->setObjectName(QStringLiteral("label_6"));

        gridLayout->addWidget(label_6, 7, 1, 1, 1);

        verticalSpacer_6 = new QSpacerItem(20, 10, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_6, 8, 1, 1, 1);

        verticalSpacer_5 = new QSpacerItem(20, 10, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_5, 4, 1, 1, 1);

        sAccelBox = new QCheckBox(ExtraSettingsWidget);
        sAccelBox->setObjectName(QStringLiteral("sAccelBox"));

        gridLayout->addWidget(sAccelBox, 18, 1, 1, 4);

        verticalSpacer_7 = new QSpacerItem(20, 10, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_7, 14, 1, 1, 1);

        verticalSpacer_8 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_8, 13, 0, 1, 1);

        verticalSpacer_10 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_10, 17, 0, 1, 1);

        verticalSpacer_11 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_11, 18, 0, 1, 1);

        horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer, 12, 6, 1, 1);

        line_2 = new QFrame(ExtraSettingsWidget);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
        line_2->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_2, 10, 0, 1, 7);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        animPathLabel = new QLabel(ExtraSettingsWidget);
        animPathLabel->setObjectName(QStringLiteral("animPathLabel"));

        horizontalLayout->addWidget(animPathLabel);

        animCountLabel = new QLabel(ExtraSettingsWidget);
```

```
        animCountLabel->setObjectName(QStringLiteral("animCountLabel"));
        sizePolicy.setHeightForWidth(animCountLabel->sizePolicy().hasHeightForWidth());
        animCountLabel->setSizePolicy(sizePolicy);
        animCountLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        horizontalLayout->addWidget(animCountLabel);

        animScanButton = new QPushButton(ExtraSettingsWidget);
        animScanButton->setObjectName(QStringLiteral("animScanButton"));

        horizontalLayout->addWidget(animScanButton);


        gridLayout->addLayout(horizontalLayout, 7, 3, 1, 4);

        brightnessBox = new QCheckBox(ExtraSettingsWidget);
        brightnessBox->setObjectName(QStringLiteral("brightnessBox"));

        gridLayout->addWidget(brightnessBox, 3, 1, 1, 6);

        trayBox = new QCheckBox(ExtraSettingsWidget);
        trayBox->setObjectName(QStringLiteral("trayBox"));

        gridLayout->addWidget(trayBox, 2, 1, 1, 6);

        label = new QLabel(ExtraSettingsWidget);
        label->setObjectName(QStringLiteral("label"));
        QFont font;
        font.setBold(true);
        font.setWeight(75);
        label->setFont(font);

        gridLayout->addWidget(label, 0, 0, 1, 7);

        line = new QFrame(ExtraSettingsWidget);
        line->setObjectName(QStringLiteral("line"));
        line->setFrameShape(QFrame::HLine);
        line->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line, 1, 0, 1, 7);

        label_5 = new QLabel(ExtraSettingsWidget);
        label_5->setObjectName(QStringLiteral("label_5"));
        label_5->setFont(font);

        gridLayout->addWidget(label_5, 5, 0, 1, 7);

        line_3 = new QFrame(ExtraSettingsWidget);
        line_3->setObjectName(QStringLiteral("line_3"));
        line_3->setFrameShape(QFrame::HLine);
        line_3->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_3, 6, 0, 1, 7);

        label_2 = new QLabel(ExtraSettingsWidget);
        label_2->setObjectName(QStringLiteral("label_2"));
        label_2->setFont(font);

        gridLayout->addWidget(label_2, 9, 0, 1, 7);

        ditherBox = new QCheckBox(ExtraSettingsWidget);
        ditherBox->setObjectName(QStringLiteral("ditherBox"));

        gridLayout->addWidget(ditherBox, 13, 1, 1, 6);

        delayBox = new QCheckBox(ExtraSettingsWidget);
        delayBox->setObjectName(QStringLiteral("delayBox"));

        gridLayout->addWidget(delayBox, 14, 1, 1, 6);

        osxLabel = new QLabel(ExtraSettingsWidget);
        osxLabel->setObjectName(QStringLiteral("osxLabel"));
        osxLabel->setFont(font);

        gridLayout->addWidget(osxLabel, 15, 0, 1, 7);

        osxLine = new QFrame(ExtraSettingsWidget);
        osxLine->setObjectName(QStringLiteral("osxLine"));
        osxLine->setFrameShape(QFrame::HLine);
        osxLine->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(osxLine, 16, 0, 1, 7);

        mAccelBox = new QCheckBox(ExtraSettingsWidget);
        mAccelBox->setObjectName(QStringLiteral("mAccelBox"));

        gridLayout->addWidget(mAccelBox, 17, 1, 1, 6);
```

```

        sSpeedWidget = new QWidget(ExtraSettingsWidget);
        sSpeedWidget->setObjectName(QStringLiteral("sSpeedWidget"));
        sizePolicy.setHeightForWidth(sSpeedWidget->sizePolicy().hasHeightForWidth());
        sSpeedWidget->setSizePolicy(sizePolicy);
        horizontalLayout_2 = new QHBoxLayout(sSpeedWidget);
        horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
        horizontalLayout_2->setContentsMargins(0, 0, 0, 0);
        label_10 = new QLabel(sSpeedWidget);
        label_10->setObjectName(QStringLiteral("label_10"));

        horizontalLayout_2->addWidget(label_10);

        sSpeedBox = new QSpinBox(sSpeedWidget);
        sSpeedBox->setObjectName(QStringLiteral("sSpeedBox"));
        sSpeedBox->setMinimum(1);
        sSpeedBox->setMaximum(10);
        sSpeedBox->setValue(3);

        horizontalLayout_2->addWidget(sSpeedBox);

        label_11 = new QLabel(sSpeedWidget);
        label_11->setObjectName(QStringLiteral("label_11"));
        sizePolicy.setHeightForWidth(label_11->sizePolicy().hasHeightForWidth());
        label_11->setSizePolicy(sizePolicy);

        horizontalLayout_2->addWidget(label_11);


        gridLayout->addWidget(sSpeedWidget, 18, 5, 1, 2);

        buttonBox = new QDialogButtonBox(ExtraSettingsWidget);
        buttonBox->setObjectName(QStringLiteral("buttonBox"));
        buttonBox->setOrientation(Qt::Horizontal);
        buttonBox->setStandardButtons(QDialogButtonBox::Ok);

        gridLayout->addWidget(buttonBox, 20, 0, 1, 7);


        retranslateUi(ExtraSettingsWidget);
        QObject::connect(buttonBox, SIGNAL(accepted()), ExtraSettingsWidget, SLOT(accept()));
        QObject::connect(buttonBox, SIGNAL(rejected()), ExtraSettingsWidget, SLOT(reject()));

        QMetaObject::connectSlotsByName(ExtraSettingsWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.12.3 Field Documentation

12.12.3.1 QLabel* Ui_ExtraSettingsWidget::animCountLabel [inherited]

Definition at line 57 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::on_animScanButton_clicked(), Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.2 QLabel* Ui_ExtraSettingsWidget::animPathLabel [inherited]

Definition at line 56 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.3 QPushButton* Ui_ExtraSettingsWidget::animScanButton [inherited]

Definition at line 58 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.4 QCheckBox* Ui_ExtraSettingsWidget::brightnessBox [inherited]

Definition at line 59 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.5 QDialogButtonBox* Ui_ExtraSettingsWidget::buttonBox [inherited]

Definition at line 76 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.6 QCheckBox* Ui_ExtraSettingsWidget::delayBox [inherited]

Definition at line 67 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.7 QCheckBox* Ui_ExtraSettingsWidget::ditherBox [inherited]

Definition at line 66 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.8 QSpinBox* Ui_ExtraSettingsWidget::fpsBox [inherited]

Definition at line 42 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.9 QLabel* Ui_ExtraSettingsWidget::fpsWarnLabel [inherited]

Definition at line 39 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), ExtraSettingsWidget::on_fpsBox_valueChanged(), Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.10 QGridLayout* Ui_ExtraSettingsWidget::gridLayout [inherited]

Definition at line 34 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.11 QHBoxLayout* Ui_ExtraSettingsWidget::horizontalLayout [inherited]

Definition at line 55 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.12 QHBoxLayout* Ui_ExtraSettingsWidget::horizontalLayout_2 [inherited]

Definition at line 72 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.13 QSpacerItem* Ui_ExtraSettingsWidget::horizontalSpacer [inherited]

Definition at line 53 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.14 QSpacerItem* Ui_ExtraSettingsWidget::horizontalSpacer_2 [inherited]

Definition at line 35 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.15 QSpacerItem* Ui_ExtraSettingsWidget::horizontalSpacer_3 [inherited]

Definition at line 40 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.16 QLabel* Ui_ExtraSettingsWidget::label [inherited]

Definition at line 61 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.17 QLabel* Ui_ExtraSettingsWidget::label_10 [inherited]

Definition at line 73 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.18 QLabel* Ui_ExtraSettingsWidget::label_11 [inherited]

Definition at line 75 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.19 QLabel* Ui_ExtraSettingsWidget::label_2 [inherited]

Definition at line 65 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.20 QLabel* Ui_ExtraSettingsWidget::label_3 [inherited]

Definition at line 41 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.21 QLabel* Ui_ExtraSettingsWidget::label_5 [inherited]

Definition at line 63 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.22 QLabel* Ui_ExtraSettingsWidget::label_6 [inherited]

Definition at line 45 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.23 QFrame* Ui_ExtraSettingsWidget::line [inherited]

Definition at line 62 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.24 QFrame* Ui_ExtraSettingsWidget::line_2 [inherited]

Definition at line 54 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.25 QFrame* Ui_ExtraSettingsWidget::line_3 [inherited]

Definition at line 64 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.26 QCheckBox* Ui_ExtraSettingsWidget::mAccelBox [inherited]

Definition at line 70 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.27 QLabel* Ui_ExtraSettingsWidget::osxLabel [inherited]

Definition at line 68 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.28 QFrame* Ui_ExtraSettingsWidget::osxLine [inherited]

Definition at line 69 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.29 QCheckBox* Ui_ExtraSettingsWidget::sAccelBox [inherited]

Definition at line 48 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), ExtraSettingsWidget::on_sSpeedBox_valueChanged(), Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.30 QSpinBox* Ui_ExtraSettingsWidget::sSpeedBox [inherited]

Definition at line 74 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), ExtraSettingsWidget::on_sAccelBox_clicked(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.31 QWidget* Ui_ExtraSettingsWidget::sSpeedWidget [inherited]

Definition at line 71 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), ExtraSettingsWidget::on_sAccelBox_clicked(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.32 QCheckBox* Ui_ExtraSettingsWidget::trayBox [inherited]

Definition at line 60 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), Ui_ExtraSettingsWidget::retranslateUi(), and Ui_ExtraSettingsWidget::setupUi().

12.12.3.33 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer [inherited]

Definition at line 36 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.34 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_10 [inherited]

Definition at line 51 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.35 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_11 [inherited]

Definition at line 52 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.36 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_2 [inherited]

Definition at line 38 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.37 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_3 [inherited]

Definition at line 37 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.38 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_4 [inherited]

Definition at line 43 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.39 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_5 [inherited]

Definition at line 47 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.40 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_6 [inherited]

Definition at line 46 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.41 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_7 [inherited]

Definition at line 49 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.42 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_8 [inherited]

Definition at line 50 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

12.12.3.43 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_9 [inherited]

Definition at line 44 of file ui_extrasettingswidget.h.

Referenced by Ui_ExtraSettingsWidget::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_extrasettingswidget.h

12.13 ExtraSettingsWidget Class Reference

```
#include <src/ckb/extrasettingswidget.h>
```

Inheritance diagram for ExtraSettingsWidget:

Collaboration diagram for ExtraSettingsWidget:

Public Member Functions

- ExtraSettingsWidget (QWidget *parent=0)
- ~ExtraSettingsWidget ()
- void pollUpdates ()

Private Slots

- void on_trayBox_clicked (bool checked)
- void on_brightnessBox_clicked (bool checked)
- void on_animScanButton_clicked ()
- void on_fpsBox_valueChanged (int arg1)
- void on_ditherBox_clicked (bool checked)
- void on_mAccelBox_clicked (bool checked)
- void on_sAccelBox_clicked (bool checked)
- void on_sSpeedBox_valueChanged (int arg1)
- void on_delayBox_clicked (bool checked)

Private Attributes

- Ui::ExtraSettingsWidget * ui

12.13.1 Detailed Description

Definition at line 10 of file extrasettingswidget.h.

12.13.2 Constructor & Destructor Documentation

12.13.2.1 ExtraSettingsWidget::ExtraSettingsWidget (QWidget * *parent* = 0) [explicit]

Read Macro Delay setting, update UI and Kb-internal flag

Definition at line 10 of file extrasettingswidget.cpp.

References Ui_ExtraSettingsWidget::animPathLabel, Ui_ExtraSettingsWidget::brightnessBox, Ui_ExtraSettingsWidget::delayBox, Kb::dither(), Ui_ExtraSettingsWidget::ditherBox, Ui_ExtraSettingsWidget::fpsBox, Ui_ExtraSettingsWidget::fpsWarnLabel, Kb::frameRate(), lastSharedDimming, Ui_ExtraSettingsWidget::mAccelBox, Kb::macroDelay(), KbLight::MAX_DIM, Kb::mouseAccel(), on_animScanButton_clicked(), Ui_ExtraSettingsWidget::osxLabel, Ui_ExtraSettingsWidget::osxLine, AnimScript::path(), Ui_ExtraSettingsWidget::sAccelBox, Kb::scrollSpeed(), Ui_ExtraSettingsWidget::setupUi(), KbLight::shareDimming(), Ui_ExtraSettingsWidget::sSpeedBox, Ui_ExtraSettingsWidget::sSpeedWidget, Ui_ExtraSettingsWidget::trayBox, ui, and CkbSettings::value().

```
10                                                          :
11     QDialog(parent),
12     ui(new Ui::ExtraSettingsWidget)
13 {
14     ui->setupUi(this);
15     CkbSettings settings("Program");
16
17     // Read frame rate from settings
18     int rate = settings.value("framerate").toInt();
19     if(rate <= 0 || rate > 60)
20         rate = 30;
21     ui->fpsBox->setValue(rate);
22     Kb::frameRate(rate);
23     ui->fpsWarnLabel->setVisible(rate > 30);
24
25     // Read global brightness setting (default = on, 100% brightness)
26     int dimming = settings.value("GlobalBrightness").toInt();
27     if(dimming < -1 || dimming > KbLight::MAX_DIM)
28         dimming = 0;
29     lastSharedDimming = dimming;
30     KbLight::shareDimming(dimming);
31     // Set checkbox value (-1 = don't share)
32     ui->brightnessBox->setChecked(dimming == -1);
33
34     // Read dither
35     bool dither = settings.value("Dither").toBool();
36     Kb::dither(dither);
37     ui->ditherBox->setChecked(dither);
38
39 #ifdef Q_OS_MACX
40     // Read OSX settings
41     bool noAccel = settings.value("DisableMouseAccel").toBool();
42     Kb::mouseAccel(!noAccel);
43     ui->mAccelBox->setChecked(noAccel);
44     bool noScrollAccel = settings.value("DisableScrollAccel").toBool();
45     int scrollSpeed = settings.value("ScrollSpeed", 3).toInt();
46     ui->sAccelBox->setChecked(noScrollAccel);
47     ui->sSpeedBox->setValue(scrollSpeed);
48     Kb::scrollSpeed(noScrollAccel ? scrollSpeed : 0);
49     if(!noScrollAccel)
50         ui->sSpeedWidget->hide();
51 #else
52     // Hide all OSX options on Linux
53     ui->osxLabel->hide();
54     ui->osxLine->hide();
55     ui->mAccelBox->hide();
56     ui->sAccelBox->hide();
57     ui->sSpeedWidget->hide();
58 #endif
59
60     // Read tray icon setting
61     ui->trayBox->setChecked(settings.value("SuppressTrayIcon").toBool());
62
63     // Update animation info
64     ui->animPathLabel->setText(AnimScript::path());
65     on_animScanButton_clicked();
66
68     bool macroDelay = settings.value("MacroDelay").toBool();
69     Kb::macroDelay(macroDelay);
70     ui->delayBox->setChecked(macroDelay);
71 }
```

Here is the call graph for this function:

12.13.2.2 ExtraSettingsWidget::~ExtraSettingsWidget ( )

Definition at line 73 of file extrasettingswidget.cpp.

References ui.

```
73                                          {
74     delete ui;
75 }
```

12.13.3 Member Function Documentation

12.13.3.1 void ExtraSettingsWidget::on_animScanButton_clicked ( ) [private],[slot]

Definition at line 87 of file extrasettingswidget.cpp.

References Ui_ExtraSettingsWidget::animCountLabel, AnimScript::count(), AnimScript::scan(), and ui.

Referenced by ExtraSettingsWidget().

```
87                                                  {
88     AnimScript::scan();
89     int count = AnimScript::count();
90     if(count == 0)
91         ui->animCountLabel->setText("No animations found");
92     else if(count == 1)
93         ui->animCountLabel->setText("1 animation found");
94     else
95         ui->animCountLabel->setText(QString("%1 animations found").arg(count));
96 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.13.3.2 void ExtraSettingsWidget::on_brightnessBox_clicked (bool *checked*) [private],[slot]

Definition at line 82 of file extrasettingswidget.cpp.

References pollUpdates(), and KbLight::shareDimming().

```
82                                                          {
83     KbLight::shareDimming(checked ? -1 : 0);
84     pollUpdates();
85 }
```

Here is the call graph for this function:

12.13.3.3 void ExtraSettingsWidget::on_delayBox_clicked (bool *checked*) [private],[slot]

Definition at line 143 of file extrasettingswidget.cpp.

References Kb::macroDelay(), and CkbSettings::set().

```
143                                                         {
144     CkbSettings::set("Program/MacroDelay", checked);
145     Kb::macroDelay(checked);
146 }
```

Here is the call graph for this function:

12.13.3.4 void ExtraSettingsWidget::on_ditherBox_clicked (bool *checked*) [private],[slot]

Definition at line 110 of file extrasettingswidget.cpp.

References Kb::dither(), and CkbSettings::set().

```
110                                                     {
111     CkbSettings::set("Program/Dither", checked);
112     Kb::dither(checked);
113 }
```

Here is the call graph for this function:

12.13.3.5 void ExtraSettingsWidget::on_fpsBox_valueChanged (int *arg1*) [private],[slot]

Definition at line 98 of file extrasettingswidget.cpp.

References Ui_ExtraSettingsWidget::fpsWarnLabel, Kb::frameRate(), CkbSettings::setValue(), and ui.

```
98                                                      {
99     // Set FPS
100     CkbSettings settings("Program");
101     settings.setValue("framerate", arg1);
102     Kb::frameRate(arg1);
103     // Show warning label if FPS is above 30
104     if(arg1 > 30)
105         ui->fpsWarnLabel->show();
106     else
107         ui->fpsWarnLabel->hide();
108 }
```

Here is the call graph for this function:

12.13.3.6 void ExtraSettingsWidget::on_mAccelBox_clicked (bool *checked*) [private],[slot]

Definition at line 124 of file extrasettingswidget.cpp.

References Kb::mouseAccel(), and CkbSettings::set().

```
124                                                     {
125     CkbSettings::set("Program/DisableMouseAccel", checked);
126     Kb::mouseAccel(!checked);
127 }
```

Here is the call graph for this function:

12.13.3.7 void ExtraSettingsWidget::on_sAccelBox_clicked (bool *checked*) [private],[slot]

Definition at line 129 of file extrasettingswidget.cpp.

References Kb::scrollSpeed(), CkbSettings::set(), Ui_ExtraSettingsWidget::sSpeedBox, Ui_ExtraSettingsWidget::sSpeedWidget, and ui.

```
129                                                         {
130     CkbSettings::set("Program/DisableScrollAccel", checked);
131     Kb::scrollSpeed(checked ? ui->sSpeedBox->value() : 0);
132     if(checked)
133         ui->sSpeedWidget->show();
134     else
135         ui->sSpeedWidget->hide();
136 }
```

Here is the call graph for this function:

12.13.3.8 void ExtraSettingsWidget::on_sSpeedBox_valueChanged (int *arg1*) [private],[slot]

Definition at line 138 of file extrasettingswidget.cpp.

References Ui_ExtraSettingsWidget::sAccelBox, Kb::scrollSpeed(), CkbSettings::set(), and ui.

```
138                                                         {
139     CkbSettings::set("Program/ScrollSpeed", arg1);
140     Kb::scrollSpeed(ui->sAccelBox->isChecked() ? arg1 : 0);
141 }
```

Here is the call graph for this function:

12.13.3.9 void ExtraSettingsWidget::on_trayBox_clicked (bool *checked*) [private],[slot]

Definition at line 77 of file extrasettingswidget.cpp.

References MainWindow::mainWindow, CkbSettings::set(), and MainWindow::toggleTrayIcon().

```
77                                                  {
78     CkbSettings::set("Program/SuppressTrayIcon", checked);
79     MainWindow::mainWindow->toggleTrayIcon(!checked);
80 }
```

Here is the call graph for this function:

12.13.3.10 void ExtraSettingsWidget::pollUpdates ( )

Definition at line 115 of file extrasettingswidget.cpp.

References CkbSettings::isBusy(), lastSharedDimming, CkbSettings::set(), and KbLight::shareDimming().

Referenced by on_brightnessBox_clicked(), and SettingsWidget::pollUpdates().

```
115                                         {
116     // Check for changes to shared brightness setting
117     int dimming = KbLight::shareDimming();
118     if(dimming != lastSharedDimming && !CkbSettings::isBusy()){
119         CkbSettings::set("Program/GlobalBrightness", dimming);
120         lastSharedDimming = dimming;
121     }
122 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.13.4 Field Documentation

12.13.4.1 Ui::ExtraSettingsWidget* ExtraSettingsWidget::ui [private]

Definition at line 33 of file extrasettingswidget.h.

Referenced by ExtraSettingsWidget(), on_animScanButton_clicked(), on_fpsBox_valueChanged(), on_sAccelBox_clicked(), on_sSpeedBox_valueChanged(), and ~ExtraSettingsWidget().

The documentation for this class was generated from the following files:

- src/ckb/extrasettingswidget.h
- src/ckb/extrasettingswidget.cpp

12.14 KbFirmware::FW Struct Reference

Collaboration diagram for KbFirmware::FW:

Public Member Functions

- FW ()

Data Fields

- QString url
- QString fileName
- QByteArray hash
- float fwVersion
- float ckbVersion

12.14.1 Detailed Description

Definition at line 34 of file kbfirmware.h.

12.14.2 Constructor & Destructor Documentation

12.14.2.1 KbFirmware::FW::FW ( )

Definition at line 12 of file kbfirmware.cpp.

```
12 : fwVersion(0.f), ckbVersion(0.f) {}
```

12.14.3 Field Documentation

12.14.3.1 float KbFirmware::FW::ckbVersion

Definition at line 37 of file kbfirmware.h.

Referenced by KbFirmware::_latestForBoard(), and KbFirmware::processDownload().

12.14.3.2 QString KbFirmware::FW::fileName

Definition at line 35 of file kbfirmware.h.

Referenced by KbFirmware::_fileForBoard(), and KbFirmware::processDownload().

12.14.3.3 float KbFirmware::FW::fwVersion

Definition at line 37 of file kbfirmware.h.

Referenced by KbFirmware::_latestForBoard(), and KbFirmware::processDownload().

12.14.3.4 QByteArray KbFirmware::FW::hash

Definition at line 36 of file kbfirmware.h.

Referenced by KbFirmware::_fileForBoard(), KbFirmware::_latestForBoard(), and KbFirmware::processDownload().

12.14.3.5 QString KbFirmware::FW::url

Definition at line 35 of file kbfirmware.h.

Referenced by KbFirmware::_fileForBoard(), and KbFirmware::processDownload().

The documentation for this struct was generated from the following files:

- src/ckb/kbfirmware.h
- src/ckb/kbfirmware.cpp

12.15 FwUpgradeDialog Class Reference

```
#include <src/ckb/fwupgradedialog.h>
```

Inheritance diagram for FwUpgradeDialog:

Collaboration diagram for FwUpgradeDialog:

Public Member Functions

- FwUpgradeDialog (QWidget *parent, float newV, const QByteArray &fwBlob, Kb *device)
- ~FwUpgradeDialog ()
- int exec ()

Private Slots

- void fwUpdateProgress (int current, int total)
- void fwUpdateFinished (bool succeeded)
- void removeDev ()
- void on_cancelButton_clicked ()
- void on_actionButton_clicked ()

Private Member Functions

- void closeEvent (QCloseEvent *event)
- const QString & saveBlob ()
- void cleanBlob ()

Private Attributes

- Ui::FwUpgradeDialog * ui
- QString savePath
- QByteArray blob
- Kb * kb
- QEventLoop * evLoop
- bool exitSuccess

12.15.1 Detailed Description

Definition at line 13 of file fwupgradedialog.h.

12.15.2 Constructor & Destructor Documentation

12.15.2.1 FwUpgradeDialog::FwUpgradeDialog (QWidget * *parent*, float *newV*, const QByteArray & *fwBlob*, Kb * *device*)

Definition at line 31 of file fwupgradedialog.cpp.

References Ui_FwUpgradeDialog::curLabel, Ui_FwUpgradeDialog::devLabel, DIALOG_HEIGHT_MIN, DIALOG_WIDTH, Kb::firmware, fwUpdateFinished(), fwUpdateProgress(), kb, Ui_FwUpgradeDialog::newLabel, removeDev(), Ui_FwUpgradeDialog::setupUi(), ui, and Kb::usbModel.

```
31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
:
32     QDialog(parent),
33     ui(new Ui::FwUpgradeDialog),
34     blob(fwBlob), kb(device), evLoop(0), exitSuccess(true)
35 {
36     ui->setupUi(this);
37     ui->curLabel->setText(kb->firmware);
38     ui->newLabel->setText(QString::number(newV, 'f', 2));
39     ui->devLabel->setText(kb->usbModel);
40
41     connect(device, SIGNAL(destroyed()), this, SLOT(removeDev()));
42     connect(device, SIGNAL(fwUpdateProgress(int,int)), this, SLOT(
       fwUpdateProgress(int,int)));
43     connect(device, SIGNAL(fwUpdateFinished(bool)), this, SLOT(
       fwUpdateFinished(bool)));
44
45     setFixedSize(DIALOG_WIDTH, DIALOG_HEIGHT_MIN);
46 }
```

Here is the call graph for this function:

12.15.2.2 FwUpgradeDialog::~FwUpgradeDialog ( )

Definition at line 48 of file fwupgradedialog.cpp.

References cleanBlob(), and ui.

```
48                                  {
49     cleanBlob();
50     delete ui;
51 }
```

Here is the call graph for this function:

12.15.3 Member Function Documentation

12.15.3.1 void FwUpgradeDialog::cleanBlob ( ) [private]

Definition at line 77 of file fwupgradedialog.cpp.

References savePath.

Referenced by fwUpdateFinished(), and ~FwUpgradeDialog().

```
77                                  {
78     if(savePath.isEmpty())
79         return;
80     QFile(savePath).remove();
81     savePath = "";
82 }
```

Here is the caller graph for this function:

12.15.3.2 void FwUpgradeDialog::closeEvent (QCloseEvent * *event*) [private]

Definition at line 53 of file fwupgradedialog.cpp.

```
53                                                  {
54     event->ignore();
55 }
```

12.15.3.3 int FwUpgradeDialog::exec ( )

Definition at line 107 of file fwupgradedialog.cpp.

References Ui_FwUpgradeDialog::actionButton, blob, Ui_FwUpgradeDialog::cancelButton, KbFirmware::dataForBoard(), DIALOG_HEIGHT_MAX(), DIALOG_WIDTH, evLoop, exitSuccess, Kb::features, kb, Ui_FwUpgradeDialog::newLabel, Ui_FwUpgradeDialog::progressBar, saveBlob(), Ui_FwUpgradeDialog::statusLabel, ui, and verifyFw().

Referenced by KbWidget::on_fwUpdButton_clicked().

```
107                         {
108     QString features = kb->features;
109     if(!blob.isEmpty()){
110         // If a blob was already specified, check its version and validity
111         float newV = verifyFw(blob, features);
112         if(newV == 0.f){
113             QMessageBox::warning(parentWidget(), "Error", "<center>Not a valid firmware for this
        device.</center>");
114             return QDialog::Rejected;
115         }
116         ui->newLabel->setText(QString::number(newV, 'f', 2));
117     } else {
118         // Download a new blob file
119         ui->progressBar->show();
120         ui->cancelButton->setEnabled(false);
121         ui->actionButton->setEnabled(false);
122         show();
123         // This can take a while
124         blob = KbFirmware::dataForBoard(features);
125         // Check validity
126         float newV = verifyFw(blob, features);
127         if(newV == 0.f){
128             hide();
129             QMessageBox::warning(parentWidget(), "Error", "<center>There was a problem with the downloaded
        file.<br />Please try again later.</center>");
130             return QDialog::Rejected;
131         }
132     }
133     // Save temporary file
134     if(saveBlob().isEmpty()){
135         hide();
136         QMessageBox::warning(parentWidget(), "Error", "<center>Unable to save temporary file.</center>");
137         return QDialog::Rejected;
138     }
139     // Set up UI
140     ui->progressBar->setValue(0);
141     ui->progressBar->setMaximum(1);
142     ui->progressBar->setTextVisible(false);
143     ui->statusLabel->setText("Ready to install new firmware.<br /><br /><b>Disclaimer:</b> ckb
        is not endorsed by Corsair. This is <i>unlikely</i> to brick your device, but I accept no responsibility if
        it does. If you're paranoid, update from Windows.");
144     ui->cancelButton->setEnabled(true);
145     ui->actionButton->setEnabled(true);
146     setFixedSize(DIALOG_WIDTH, DIALOG_HEIGHT_MAX);
147     show();
148     // Run modal event loop
149     evLoop = new QEventLoop(this);
150     evLoop->exec();
151     delete evLoop;
152     hide();
153     return exitSuccess ? QDialog::Accepted : QDialog::Rejected;
154 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.15.3.4 void FwUpgradeDialog::fwUpdateFinished (bool *succeeded*) [private],[slot]

Definition at line 170 of file fwupgradedialog.cpp.

References Ui_FwUpgradeDialog::actionButton, cleanBlob(), evLoop, Ui_FwUpgradeDialog::progressBar, quit(), Ui_FwUpgradeDialog::statusLabel, and ui.

Referenced by FwUpgradeDialog(), and removeDev().

```
170                                                 {
171     cleanBlob();
172     if(succeeded)
173         ui->statusLabel->setText("Update successful!");
174     else
175         ui->statusLabel->setText("Update failed.");
176     ui->actionButton->setText("OK");
177     ui->actionButton->setEnabled(true);
178     ui->progressBar->setMaximum(1);
179     ui->progressBar->setValue(1);
180     // Exit after 10s
181     if(evLoop)
182         QTimer::singleShot(10000, evLoop, SLOT(quit()));
183 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.15.3.5 void FwUpgradeDialog::fwUpdateProgress (int *current*, int *total*) [private],[slot]

Definition at line 163 of file fwupgradedialog.cpp.

References Ui_FwUpgradeDialog::progressBar, and ui.

Referenced by FwUpgradeDialog().

```
163                                                         {
164     if(current > 0 && total > 0){
165         ui->progressBar->setMaximum(total);
166         ui->progressBar->setValue(current);
167     }
168 }
```

Here is the caller graph for this function:

12.15.3.6 void FwUpgradeDialog::on_actionButton_clicked ( ) [private],[slot]

Definition at line 191 of file fwupgradedialog.cpp.

References Ui_FwUpgradeDialog::actionButton, Ui_FwUpgradeDialog::cancelButton, DIALOG_HEIGHT_MIN, DIALOG_WIDTH, evLoop, Kb::fwUpdate(), kb, Ui_FwUpgradeDialog::progressBar, savePath, Ui_FwUpgradeDialog::statusLabel, and ui.

```
{
    if(!savePath.isEmpty() && kb){
        // Start upgrade
        setFixedSize(DIALOG_WIDTH, DIALOG_HEIGHT_MIN);
        ui->progressBar->show();
        ui->progressBar->setValue(0);
        ui->progressBar->setMaximum(0);
        ui->progressBar->setTextVisible(true);
        ui->cancelButton->hide();
        ui->actionButton->setEnabled(false);
        ui->actionButton->setText("Please wait");
        ui->statusLabel->setText("Installing firmware...");
        kb->fwUpdate(savePath);
    } else {
        // Finished, close dialog.
        if(evLoop)
            evLoop->quit();
    }
}
```

Here is the call graph for this function:

12.15.3.7 void FwUpgradeDialog::on_cancelButton_clicked ( ) [private],[slot]

Definition at line 185 of file fwupgradedialog.cpp.

References evLoop, and exitSuccess.

```
{
    exitSuccess = false;
    if(evLoop)
        evLoop->quit();
}
```

12.15.3.8 void FwUpgradeDialog::removeDev ( ) [private],[slot]

Definition at line 156 of file fwupgradedialog.cpp.

References fwUpdateFinished(), kb, and savePath.

Referenced by FwUpgradeDialog().

```
{
    kb = 0;
    // Assume success if upgrade in progress
    if(!savePath.isEmpty())
        fwUpdateFinished(true);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.15.3.9 const QString & FwUpgradeDialog::saveBlob ( ) [private]

Definition at line 57 of file fwupgradedialog.cpp.

References blob, and savePath.

Referenced by exec().

```
57                                          {
58     if(!savePath.isEmpty())
59         return savePath;
60     QDir tmp = QDir::temp();
61     qint64 pid = QCoreApplication::applicationPid();
62     QString path = tmp.absoluteFilePath(QString("ckb-%1-fwblob.bin").arg(pid));
63     QFile output(path);
64     if(!output.open(QIODevice::WriteOnly)){
65         return savePath;
66     }
67     if(!output.write(blob)){
68         output.close();
69         tmp.remove(path);
70         return savePath;
71     }
72     output.close();
73     savePath = path;
74     return savePath;
75 }
```

Here is the caller graph for this function:

12.15.4 Field Documentation

12.15.4.1 QByteArray FwUpgradeDialog::blob [private]

Definition at line 41 of file fwupgradedialog.h.

Referenced by exec(), and saveBlob().

12.15.4.2 QEventLoop* FwUpgradeDialog::evLoop [private]

Definition at line 45 of file fwupgradedialog.h.

Referenced by exec(), fwUpdateFinished(), on_actionButton_clicked(), and on_cancelButton_clicked().

12.15.4.3 bool FwUpgradeDialog::exitSuccess [private]

Definition at line 46 of file fwupgradedialog.h.

Referenced by exec(), and on_cancelButton_clicked().

12.15.4.4 Kb* FwUpgradeDialog::kb [private]

Definition at line 42 of file fwupgradedialog.h.

Referenced by exec(), FwUpgradeDialog(), on_actionButton_clicked(), and removeDev().

12.15.4.5 QString FwUpgradeDialog::savePath [private]

Definition at line 37 of file fwupgradedialog.h.

Referenced by cleanBlob(), on_actionButton_clicked(), removeDev(), and saveBlob().

12.15.4.6 Ui::FwUpgradeDialog* FwUpgradeDialog::ui [private]

Definition at line 32 of file fwupgradedialog.h.

Referenced by exec(), fwUpdateFinished(), fwUpdateProgress(), FwUpgradeDialog(), on_actionButton_clicked(), and ~FwUpgradeDialog().

The documentation for this class was generated from the following files:

- src/ckb/fwupgradedialog.h
- src/ckb/fwupgradedialog.cpp

12.16 Ui::FwUpgradeDialog Class Reference

```
#include <src/ckb/ui_fwupgradedialog.h>
```

Inheritance diagram for Ui::FwUpgradeDialog:

Collaboration diagram for Ui::FwUpgradeDialog:

Public Member Functions

- void setupUi (QDialog *FwUpgradeDialog)
- void retranslateUi (QDialog *FwUpgradeDialog)

Data Fields

- QGridLayout * gridLayout_2
- QSpacerItem * horizontalSpacer
- QGridLayout * gridLayout
- QSpacerItem * horizontalSpacer_3
- QLabel * label_4
- QSpacerItem * horizontalSpacer_4
- QLabel * label_2
- QLabel * curLabel
- QLabel * newLabel
- QLabel * statusLabel
- QSpacerItem * horizontalSpacer_2
- QLabel * devLabel
- QProgressBar * progressBar
- QPushButton * actionButton
- QPushButton * cancelButton

12.16.1 Detailed Description

Definition at line 171 of file ui_fwupgradedialog.h.

12.16.2 Member Function Documentation

12.16.2.1 void Ui_FwUpgradeDialog::retranslateUi (QDialog * *FwUpgradeDialog*) [inline],[inherited]

Definition at line 155 of file ui_fwupgradedialog.h.

References Ui_FwUpgradeDialog::actionButton, Ui_FwUpgradeDialog::cancelButton, Ui_FwUpgradeDialog::curLabel, Ui_FwUpgradeDialog::devLabel, Ui_FwUpgradeDialog::label_2, Ui_FwUpgradeDialog::label_4, Ui_FwUpgradeDialog::newLabel, and Ui_FwUpgradeDialog::statusLabel.

Referenced by Ui_FwUpgradeDialog::setupUi().

```
156     {
157         FwUpgradeDialog->setWindowTitle(QApplication::translate("FwUpgradeDialog", "Firmware update",
    Q_NULLPTR));
158         label_4->setText(QApplication::translate("FwUpgradeDialog", "New:", Q_NULLPTR));
159         label_2->setText(QApplication::translate("FwUpgradeDialog", "Current:", Q_NULLPTR));
160         curLabel->setText(QApplication::translate("FwUpgradeDialog", "0.00", Q_NULLPTR));
161         newLabel->setText(QApplication::translate("FwUpgradeDialog", "0.00", Q_NULLPTR));
162         statusLabel->setText(QApplication::translate("FwUpgradeDialog", "Downloading new
     firmware, please wait...", Q_NULLPTR));
163         devLabel->setText(QApplication::translate("FwUpgradeDialog", "Device", Q_NULLPTR));
164         actionButton->setText(QApplication::translate("FwUpgradeDialog", "Start", Q_NULLPTR));
165         cancelButton->setText(QApplication::translate("FwUpgradeDialog", "Cancel", Q_NULLPTR));
166     } // retranslateUi
```

Here is the caller graph for this function:

12.16.2.2 void Ui_FwUpgradeDialog::setupUi (QDialog * *FwUpgradeDialog*) [inline],[inherited]

Definition at line 45 of file ui_fwupgradedialog.h.

References Ui_FwUpgradeDialog::actionButton, Ui_FwUpgradeDialog::cancelButton, Ui_FwUpgradeDialog::curLabel, Ui_FwUpgradeDialog::devLabel, Ui_FwUpgradeDialog::gridLayout, Ui_FwUpgradeDialog::gridLayout_2, Ui_FwUpgradeDialog::horizontalSpacer, Ui_FwUpgradeDialog::horizontalSpacer_2, Ui_FwUpgradeDialog::horizontalSpacer_3, Ui_FwUpgradeDialog::horizontalSpacer_4, Ui_FwUpgradeDialog::label_2, Ui_FwUpgradeDialog::label_4, Ui_FwUpgradeDialog::newLabel, Ui_FwUpgradeDialog::progressBar, Ui_FwUpgradeDialog::retranslateUi(), and Ui_FwUpgradeDialog::statusLabel.

Referenced by FwUpgradeDialog::FwUpgradeDialog().

```
46     {
47         if (FwUpgradeDialog->objectName().isEmpty())
48             FwUpgradeDialog->setObjectName(QStringLiteral("FwUpgradeDialog"));
49         FwUpgradeDialog->resize(420, 240);
50         QSizePolicy sizePolicy(QSizePolicy::Fixed, QSizePolicy::Fixed);
51         sizePolicy.setHorizontalStretch(0);
52         sizePolicy.setVerticalStretch(0);
53         sizePolicy.setHeightForWidth(FwUpgradeDialog->sizePolicy().hasHeightForWidth());
54         FwUpgradeDialog->setSizePolicy(sizePolicy);
55         gridLayout_2 = new QGridLayout(FwUpgradeDialog);
56         gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
57         horizontalSpacer = new QSpacerItem(127, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
58
59         gridLayout_2->addItem(horizontalSpacer, 1, 0, 1, 1);
60
61         gridLayout = new QGridLayout();
62         gridLayout->setObjectName(QStringLiteral("gridLayout"));
63         horizontalSpacer_3 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
```

```
        gridLayout->addItem(horizontalSpacer_3, 1, 0, 1, 1);

        label_4 = new QLabel(FwUpgradeDialog);
        label_4->setObjectName(QStringLiteral("label_4"));
        QFont font;
        font.setBold(true);
        font.setWeight(75);
        label_4->setFont(font);

        gridLayout->addWidget(label_4, 1, 4, 1, 1);

        horizontalSpacer_4 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_4, 1, 6, 1, 1);

        label_2 = new QLabel(FwUpgradeDialog);
        label_2->setObjectName(QStringLiteral("label_2"));
        label_2->setFont(font);

        gridLayout->addWidget(label_2, 1, 1, 1, 1);

        curLabel = new QLabel(FwUpgradeDialog);
        curLabel->setObjectName(QStringLiteral("curLabel"));

        gridLayout->addWidget(curLabel, 1, 2, 1, 1);

        newLabel = new QLabel(FwUpgradeDialog);
        newLabel->setObjectName(QStringLiteral("newLabel"));

        gridLayout->addWidget(newLabel, 1, 5, 1, 1);

        statusLabel = new QLabel(FwUpgradeDialog);
        statusLabel->setObjectName(QStringLiteral("statusLabel"));
        QSizePolicy sizePolicy1(QSizePolicy::Preferred, QSizePolicy::Expanding);
        sizePolicy1.setHorizontalStretch(0);
         sizePolicy1.setVerticalStretch(0);
         sizePolicy1.setHeightForWidth(statusLabel->sizePolicy().hasHeightForWidth());
         statusLabel->setSizePolicy(sizePolicy1);
         statusLabel->setAlignment(Qt::AlignCenter);
         statusLabel->setWordWrap(true);

         gridLayout->addWidget(statusLabel, 2, 0, 1, 7);

         horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

         gridLayout->addItem(horizontalSpacer_2, 1, 3, 1, 1);

         devLabel = new QLabel(FwUpgradeDialog);
         devLabel->setObjectName(QStringLiteral("devLabel"));
         QSizePolicy sizePolicy2(QSizePolicy::Preferred, QSizePolicy::Minimum);
         sizePolicy2.setHorizontalStretch(0);
         sizePolicy2.setVerticalStretch(0);
         sizePolicy2.setHeightForWidth(devLabel->sizePolicy().hasHeightForWidth());
         devLabel->setSizePolicy(sizePolicy2);
         devLabel->setFont(font);
         devLabel->setAlignment(Qt::AlignCenter);

         gridLayout->addWidget(devLabel, 0, 0, 1, 7);

         progressBar = new QProgressBar(FwUpgradeDialog);
         progressBar->setObjectName(QStringLiteral("progressBar"));
         progressBar->setMaximum(0);
         progressBar->setValue(0);

         gridLayout->addWidget(progressBar, 3, 0, 1, 7);


         gridLayout_2->addLayout(gridLayout, 0, 0, 1, 3);

         actionButton = new QPushButton(FwUpgradeDialog);
         actionButton->setObjectName(QStringLiteral("actionButton"));
         actionButton->setEnabled(false);

         gridLayout_2->addWidget(actionButton, 1, 2, 1, 1);

         cancelButton = new QPushButton(FwUpgradeDialog);
         cancelButton->setObjectName(QStringLiteral("cancelButton"));
         cancelButton->setEnabled(false);

         gridLayout_2->addWidget(cancelButton, 1, 1, 1, 1);


         retranslateUi(FwUpgradeDialog);

```

```
        actionButton->setDefault(true);


        QMetaObject::connectSlotsByName(FwUpgradeDialog);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.16.3 Field Documentation

12.16.3.1 QPushButton* Ui_FwUpgradeDialog::actionButton [inherited]

Definition at line 42 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::exec(), FwUpgradeDialog::fwUpdateFinished(), FwUpgradeDialog::on_action-Button_clicked(), Ui_FwUpgradeDialog::retranslateUi(), and Ui_FwUpgradeDialog::setupUi().

12.16.3.2 QPushButton* Ui_FwUpgradeDialog::cancelButton [inherited]

Definition at line 43 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::exec(), FwUpgradeDialog::on_actionButton_clicked(), Ui_FwUpgradeDialog-::retranslateUi(), and Ui_FwUpgradeDialog::setupUi().

12.16.3.3 QLabel* Ui_FwUpgradeDialog::curLabel [inherited]

Definition at line 36 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::FwUpgradeDialog(), Ui_FwUpgradeDialog::retranslateUi(), and Ui_FwUpgrade-Dialog::setupUi().

12.16.3.4 QLabel* Ui_FwUpgradeDialog::devLabel [inherited]

Definition at line 40 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::FwUpgradeDialog(), Ui_FwUpgradeDialog::retranslateUi(), and Ui_FwUpgrade-Dialog::setupUi().

12.16.3.5 QGridLayout* Ui_FwUpgradeDialog::gridLayout [inherited]

Definition at line 31 of file ui_fwupgradedialog.h.

Referenced by Ui_FwUpgradeDialog::setupUi().

12.16.3.6 QGridLayout* Ui_FwUpgradeDialog::gridLayout_2 [inherited]

Definition at line 29 of file ui_fwupgradedialog.h.

Referenced by Ui_FwUpgradeDialog::setupUi().

12.16.3.7 QSpacerItem* Ui_FwUpgradeDialog::horizontalSpacer [inherited]

Definition at line 30 of file ui_fwupgradedialog.h.

Referenced by Ui_FwUpgradeDialog::setupUi().

12.16.3.8 QSpacerItem* Ui_FwUpgradeDialog::horizontalSpacer_2 [inherited]

Definition at line 39 of file ui_fwupgradedialog.h.

Referenced by Ui_FwUpgradeDialog::setupUi().

12.16.3.9 QSpacerItem* Ui_FwUpgradeDialog::horizontalSpacer_3 [inherited]

Definition at line 32 of file ui_fwupgradedialog.h.

Referenced by Ui_FwUpgradeDialog::setupUi().

12.16.3.10 QSpacerItem* Ui_FwUpgradeDialog::horizontalSpacer_4 [inherited]

Definition at line 34 of file ui_fwupgradedialog.h.

Referenced by Ui_FwUpgradeDialog::setupUi().

12.16.3.11 QLabel* Ui_FwUpgradeDialog::label_2 [inherited]

Definition at line 35 of file ui_fwupgradedialog.h.

Referenced by Ui_FwUpgradeDialog::retranslateUi(), and Ui_FwUpgradeDialog::setupUi().

12.16.3.12 QLabel* Ui_FwUpgradeDialog::label_4 [inherited]

Definition at line 33 of file ui_fwupgradedialog.h.

Referenced by Ui_FwUpgradeDialog::retranslateUi(), and Ui_FwUpgradeDialog::setupUi().

12.16.3.13 QLabel* Ui_FwUpgradeDialog::newLabel [inherited]

Definition at line 37 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::exec(), FwUpgradeDialog::FwUpgradeDialog(), Ui_FwUpgradeDialog::retranslateUi(), and Ui_FwUpgradeDialog::setupUi().

12.16.3.14 QProgressBar* Ui_FwUpgradeDialog::progressBar [inherited]

Definition at line 41 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::exec(), FwUpgradeDialog::fwUpdateFinished(), FwUpgradeDialog::fwUpdateProgress(), FwUpgradeDialog::on_actionButton_clicked(), and Ui_FwUpgradeDialog::setupUi().

12.16.3.15 QLabel* Ui_FwUpgradeDialog::statusLabel [inherited]

Definition at line 38 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::exec(), FwUpgradeDialog::fwUpdateFinished(), FwUpgradeDialog::on_actionButton_clicked(), Ui_FwUpgradeDialog::retranslateUi(), and Ui_FwUpgradeDialog::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_fwupgradedialog.h

12.17 GradientButton Class Reference

`#include <src/ckb/gradientbutton.h>`

Inheritance diagram for GradientButton:

Collaboration diagram for GradientButton:

Signals

- void gradientChanged ()

Public Member Functions

- GradientButton (QWidget *parent=0, bool allowAlpha=false)
- void fromString (const QString &string)
- QString toString () const

Private Slots

- void pickGradient ()

Private Member Functions

- void updateImage ()

Private Attributes

- QGradientStops _stops
- bool _alpha

12.17.1 Detailed Description

Definition at line 6 of file gradientbutton.h.

12.17.2 Constructor & Destructor Documentation

12.17.2.1 GradientButton::GradientButton (QWidget * *parent* = 0, bool *allowAlpha* = false) [explicit]

Definition at line 7 of file gradientbutton.cpp.

References fromString(), and pickGradient().

```
7                                                                   :
8     QPushButton(parent), _alpha(allowAlpha)
9 {
10     connect(this, SIGNAL(clicked()), this, SLOT(pickGradient()));
11     setAutoDefault(false);
12     setDefault(false);
13     fromString("");
14     setText("");
15 }
```

Here is the call graph for this function:

12.17.3 Member Function Documentation

12.17.3.1 void GradientButton::fromString (const QString & *string*)

Definition at line 38 of file gradientbutton.cpp.

References _alpha, _stops, and updateImage().

Referenced by GradientButton().

```
38                                                          {
39     // Clear existing stops
40     _stops.clear();
41     // Parse string with sscanf
42     QByteArray cString = string.toLatin1();
43     const char* data = cString.data();
44     char pos = -1;
45     uchar a, r, g, b;
46     while(1){
47         int scanned = 0;
48         char newpos;
49         if(sscanf(data, "%hhd:%2hhx%2hhx%2hhx%2hhx%n", &newpos, &a, &r, &g, &b, &scanned) != 5)
50             break;
51         data += scanned;
52         // Don't allow stops out-of-order or past 100
53         if(newpos <= pos || newpos > 100)
54             break;
55         pos = newpos;
56         if(!_alpha)
57             a = 255;
58         _stops.append(QGradientStop(pos / 100., QColor(r, g, b, a)));
59     }
60     if(_stops.count() == 0){
61         // If nothing was read, try a single ARGB constant.
62         if(sscanf(data, "%2hhx%2hhx%2hhx%2hhx", &a, &r, &g, &b) == 4){
63             _stops.append(QGradientStop(0., QColor(r, g, b, a)));
64             _stops.append(QGradientStop(1., QColor(r, g, b, 0.)));
65         }
66     }
67     // If that still didn't work, fill with white
68     if(_stops.count() == 0){
69         _stops.append(QGradientStop(0., QColor(255, 255, 255)));
70         _stops.append(QGradientStop(1., QColor(255, 255, 255)));
71     }
72     // Make sure there are stops at 0 and at 100
73     if(_stops[0].first != 0.)
74         _stops.prepend(QGradientStop(0., _stops[0].second));
```

```
    if(_stops.last().first != 1.)
        _stops.prepend(QGradientStop(1., _stops.last().second));
    updateImage();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.17.3.2 void GradientButton::gradientChanged ( ) [signal]

Definition at line 132 of file moc_gradientbutton.cpp.

Referenced by pickGradient().

```
{
    QMetaObject::activate(this, &staticMetaObject, 0, Q_NULLPTR);
}
```

Here is the caller graph for this function:

12.17.3.3 void GradientButton::pickGradient ( ) [private],[slot]

Definition at line 90 of file gradientbutton.cpp.

References _stops, GradientDialog::getGradient(), gradientChanged(), and updateImage().

Referenced by GradientButton().

```
                                {
    GradientDialog dialog(this);
    _stops = dialog.getGradient(_stops);
    updateImage();
    emit gradientChanged();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.17.3.4 QString GradientButton::toString ( ) const

Definition at line 80 of file gradientbutton.cpp.

References _stops.

Referenced by AnimSettingDialog::updateParam().

```
                                    {
    QStringList result;
    foreach(const QGradientStop& stop, _stops){
        QString string;
        const QColor& color = stop.second;
        result << string.sprintf("%d:%02x%02x%02x%02x", (int)round(stop.first * 100.f), color.alpha(),
    color.red(), color.green(), color.blue());
    }
    return result.join(" ");
}
```

Here is the caller graph for this function:

12.17.3.5 void GradientButton::updateImage ( ) [private]

Definition at line 17 of file gradientbutton.cpp.

References _alpha, _stops, and x.

Referenced by fromString(), and pickGradient().

```
17                                {
18     const int w = 130, h = 16;
19     QImage image(w, h, QImage::Format_RGB888);
20     QPainter painter(&image);
21     painter.setPen(Qt::NoPen);
22     painter.fillRect(0, 0, w, h, QColor(0, 0, 0));
23     if(_alpha){
24         for(int x = 1; x < w - 1; x += h){
25             painter.fillRect(x, 1, h / 2, h / 2 - 1, QColor(255, 255, 255));
26             painter.fillRect(x + h / 2, 1, h / 2, h / 2 - 1, QColor(192, 192, 192));
27             painter.fillRect(x, h / 2, h / 2, h / 2 - 1, QColor(192, 192, 192));
28             painter.fillRect(x + h / 2, h / 2, h / 2, h / 2 - 1, QColor(255, 255, 255));
29         }
30     }
31     QLinearGradient gradient(1., 0., w - 1, 0.);
32     gradient.setStops(_stops);
33     painter.fillRect(1, 1, w - 2, h - 2, QBrush(gradient));
34     setIconSize(QSize(w, h));
35     setIcon(QIcon(QPixmap::fromImage(image)));
36 }
```

Here is the caller graph for this function:

12.17.4 Field Documentation

12.17.4.1 bool GradientButton::_alpha [private]

Definition at line 23 of file gradientbutton.h.

Referenced by fromString(), and updateImage().

12.17.4.2 QGradientStops GradientButton::_stops [private]

Definition at line 22 of file gradientbutton.h.

Referenced by fromString(), pickGradient(), toString(), and updateImage().

The documentation for this class was generated from the following files:

- src/ckb/gradientbutton.h
- src/ckb/gradientbutton.cpp
- src/ckb/release/moc_gradientbutton.cpp

12.18 Ui::GradientDialog Class Reference

```
#include <src/ckb/ui_gradientdialog.h>
```

Inheritance diagram for Ui::GradientDialog:

Collaboration diagram for Ui::GradientDialog:

Public Member Functions

- void setupUi (QDialog *GradientDialog)
- void retranslateUi (QDialog *GradientDialog)

Data Fields

- QGridLayout * gridLayout
- QSpacerItem * verticalSpacer
- QSpacerItem * verticalSpacer_2
- GradientDialogWidget * widget
- QDialogButtonBox * buttonBox
- QGroupBox * stopBox
- QGridLayout * gridLayout_2
- QHBoxLayout * horizontalLayout_2
- ColorButton * stopColor
- QSpinBox * stopOpacity
- QSpacerItem * horizontalSpacer_2
- QLabel * label
- QHBoxLayout * horizontalLayout
- QSpinBox * stopPos
- QSpacerItem * horizontalSpacer
- QLabel * label_2
- QSpacerItem * horizontalSpacer_3
- QGroupBox * groupBox_2
- QGridLayout * gridLayout_3
- QListWidget * presetList
- QLineEdit * presetName
- QPushButton * presetSave
- QPushButton * presetDelete

12.18.1 Detailed Description

Definition at line 225 of file ui_gradientdialog.h.

12.18.2 Member Function Documentation

12.18.2.1 void Ui_GradientDialog::retranslateUi (QDialog * *GradientDialog*) [inline],[inherited]

Definition at line 207 of file ui_gradientdialog.h.

References Ui_GradientDialog::groupBox_2, Ui_GradientDialog::label, Ui_GradientDialog::label_2, Ui_GradientDialog::presetDelete, Ui_GradientDialog::presetName, Ui_GradientDialog::presetSave, Ui_GradientDialog::stopBox, Ui_GradientDialog::stopColor, Ui_GradientDialog::stopOpacity, and Ui_GradientDialog::stopPos.

Referenced by Ui_GradientDialog::setupUi().

```
    {
        GradientDialog->setWindowTitle(QApplication::translate("GradientDialog", "Pick Gradient", Q_NULLPTR));
        stopBox->setTitle(QApplication::translate("GradientDialog", "Point X of Y", Q_NULLPTR));
        stopColor->setText(QApplication::translate("GradientDialog", "Pick Color...", Q_NULLPTR));
        stopOpacity->setSuffix(QApplication::translate("GradientDialog", "%", Q_NULLPTR));
        label->setText(QApplication::translate("GradientDialog", "Position:", Q_NULLPTR));
        stopPos->setSuffix(QApplication::translate("GradientDialog", "%", Q_NULLPTR));
        label_2->setText(QApplication::translate("GradientDialog", "Color:", Q_NULLPTR));
        groupBox_2->setTitle(QApplication::translate("GradientDialog", "Presets", Q_NULLPTR));
        presetName->setPlaceholderText(QApplication::translate("GradientDialog", "Name", Q_NULLPTR));
        presetSave->setText(QApplication::translate("GradientDialog", "Save", Q_NULLPTR));
        presetDelete->setText(QApplication::translate("GradientDialog", "Delete", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.18.2.2 void Ui_GradientDialog::setupUi (QDialog * *GradientDialog*) [inline],[inherited]

Definition at line 60 of file ui_gradientdialog.h.

References Ui_GradientDialog::buttonBox, Ui_GradientDialog::gridLayout, Ui_GradientDialog::gridLayout_2, Ui_GradientDialog::gridLayout_3, Ui_GradientDialog::groupBox_2, Ui_GradientDialog::horizontalLayout, Ui_GradientDialog::horizontalLayout_2, Ui_GradientDialog::horizontalSpacer, Ui_GradientDialog::horizontalSpacer_2, Ui_GradientDialog::horizontalSpacer_3, Ui_GradientDialog::label, Ui_GradientDialog::label_2, Ui_GradientDialog::presetDelete, Ui_GradientDialog::presetList, Ui_GradientDialog::presetName, Ui_GradientDialog::presetSave, Ui_GradientDialog::retranslateUi(), Ui_GradientDialog::stopBox, Ui_GradientDialog::stopColor, Ui_GradientDialog::stopOpacity, Ui_GradientDialog::stopPos, Ui_GradientDialog::verticalSpacer, Ui_GradientDialog::verticalSpacer_2, and Ui_GradientDialog::widget.

Referenced by GradientDialog::GradientDialog().

```
61     {
62         if (GradientDialog->objectName().isEmpty())
63             GradientDialog->setObjectName(QStringLiteral("GradientDialog"));
64         GradientDialog->resize(400, 440);
65         GradientDialog->setMinimumSize(QSize(400, 440));
66         GradientDialog->setMaximumSize(QSize(400, 440));
67         GradientDialog->setFocusPolicy(Qt::ClickFocus);
68         gridLayout = new QGridLayout(GradientDialog);
69         gridLayout->setObjectName(QStringLiteral("gridLayout"));
70         verticalSpacer = new QSpacerItem(0, 0, QSizePolicy::Minimum, QSizePolicy::Expanding);
71
72         gridLayout->addItem(verticalSpacer, 1, 0, 1, 1);
73
74         verticalSpacer_2 = new QSpacerItem(0, 15, QSizePolicy::Minimum, QSizePolicy::Fixed)
    ;
75
76         gridLayout->addItem(verticalSpacer_2, 3, 0, 1, 1);
77
78         widget = new GradientDialogWidget(GradientDialog);
79         widget->setObjectName(QStringLiteral("widget"));
80         QSizePolicy sizePolicy(QSizePolicy::Preferred, QSizePolicy::Fixed);
81         sizePolicy.setHorizontalStretch(0);
82         sizePolicy.setVerticalStretch(0);
83         sizePolicy.setHeightForWidth(widget->sizePolicy().hasHeightForWidth());
84         widget->setSizePolicy(sizePolicy);
85         widget->setMinimumSize(QSize(0, 74));
86         widget->setMaximumSize(QSize(16777215, 74));
87
88         gridLayout->addWidget(widget, 2, 0, 1, 1);
89
90         buttonBox = new QDialogButtonBox(GradientDialog);
91         buttonBox->setObjectName(QStringLiteral("buttonBox"));
92         buttonBox->setOrientation(Qt::Horizontal);
93         buttonBox->setStandardButtons(QDialogButtonBox::Cancel|QDialogButtonBox::Ok);
94
95         gridLayout->addWidget(buttonBox, 5, 0, 1, 1);
96
97         stopBox = new QGroupBox(GradientDialog);
98         stopBox->setObjectName(QStringLiteral("stopBox"));
99         sizePolicy.setHeightForWidth(stopBox->sizePolicy().hasHeightForWidth());
100         stopBox->setSizePolicy(sizePolicy);
101         gridLayout_2 = new QGridLayout(stopBox);
102         gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
103         horizontalLayout_2 = new QHBoxLayout();
104         horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
105         stopColor = new ColorButton(stopBox);
106         stopColor->setObjectName(QStringLiteral("stopColor"));
107
```

```
        horizontalLayout_2->addWidget(stopColor);

        stopOpacity = new QSpinBox(stopBox);
        stopOpacity->setObjectName(QStringLiteral("stopOpacity"));
        stopOpacity->setMaximum(100);

        horizontalLayout_2->addWidget(stopOpacity);

        horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer_2);


        gridLayout_2->addLayout(horizontalLayout_2, 1, 2, 1, 1);

        label = new QLabel(stopBox);
        label->setObjectName(QStringLiteral("label"));

        gridLayout_2->addWidget(label, 0, 0, 1, 1);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        stopPos = new QSpinBox(stopBox);
        stopPos->setObjectName(QStringLiteral("stopPos"));
        stopPos->setMaximum(100);

        horizontalLayout->addWidget(stopPos);

        horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout->addItem(horizontalSpacer);


        gridLayout_2->addLayout(horizontalLayout, 0, 2, 1, 1);

        label_2 = new QLabel(stopBox);
        label_2->setObjectName(QStringLiteral("label_2"));

        gridLayout_2->addWidget(label_2, 1, 0, 1, 1);

        horizontalSpacer_3 = new QSpacerItem(10, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_3, 0, 1, 1, 1);


        gridLayout->addWidget(stopBox, 4, 0, 1, 1);

        groupBox_2 = new QGroupBox(GradientDialog);
        groupBox_2->setObjectName(QStringLiteral("groupBox_2"));
        sizePolicy.setHeightForWidth(groupBox_2->sizePolicy().hasHeightForWidth());
        groupBox_2->setSizePolicy(sizePolicy);
        gridLayout_3 = new QGridLayout(groupBox_2);
        gridLayout_3->setObjectName(QStringLiteral("gridLayout_3"));
        presetList = new QListWidget(groupBox_2);
        presetList->setObjectName(QStringLiteral("presetList"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Preferred);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(presetList->sizePolicy().hasHeightForWidth());
        presetList->setSizePolicy(sizePolicy1);
        presetList->setFrameShadow(QFrame::Plain);
        presetList->setHorizontalScrollBarPolicy(Qt::ScrollBarAlwaysOn);
        presetList->setIconSize(QSize(64, 64));
        presetList->setHorizontalScrollMode(QAbstractItemView::ScrollPerPixel);
        presetList->setFlow(QListView::TopToBottom);
        presetList->setViewMode(QListView::IconMode);
        presetList->setUniformItemSizes(true);

        gridLayout_3->addWidget(presetList, 0, 0, 3, 1);

        presetName = new QLineEdit(groupBox_2);
        presetName->setObjectName(QStringLiteral("presetName"));
        presetName->setMaxLength(30);

        gridLayout_3->addWidget(presetName, 0, 1, 1, 1);

        presetSave = new QPushButton(groupBox_2);
        presetSave->setObjectName(QStringLiteral("presetSave"));
        presetSave->setAutoDefault(false);

        gridLayout_3->addWidget(presetSave, 1, 1, 1, 1);

        presetDelete = new QPushButton(groupBox_2);
        presetDelete->setObjectName(QStringLiteral("presetDelete"));
```

```
        presetDelete->setAutoDefault(false);

        gridLayout_3->addWidget(presetDelete, 2, 1, 1, 1);


        gridLayout->addWidget(groupBox_2, 0, 0, 1, 1);


        retranslateUi(GradientDialog);
        QObject::connect(buttonBox, SIGNAL(accepted()), GradientDialog, SLOT(accept()));
        QObject::connect(buttonBox, SIGNAL(rejected()), GradientDialog, SLOT(reject()));

        QMetaObject::connectSlotsByName(GradientDialog);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.18.3 Field Documentation

12.18.3.1 QDialogButtonBox* Ui_GradientDialog::buttonBox [inherited]

Definition at line 40 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::setupUi().

12.18.3.2 QGridLayout* Ui_GradientDialog::gridLayout [inherited]

Definition at line 36 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::setupUi().

12.18.3.3 QGridLayout* Ui_GradientDialog::gridLayout_2 [inherited]

Definition at line 42 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::setupUi().

12.18.3.4 QGridLayout* Ui_GradientDialog::gridLayout_3 [inherited]

Definition at line 54 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::setupUi().

12.18.3.5 QGroupBox* Ui_GradientDialog::groupBox_2 [inherited]

Definition at line 53 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::retranslateUi(), and Ui_GradientDialog::setupUi().

12.18.3.6 QHBoxLayout* Ui_GradientDialog::horizontalLayout [inherited]

Definition at line 48 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::setupUi().

12.18.3.7 QHBoxLayout* Ui_GradientDialog::horizontalLayout_2 [inherited]

Definition at line 43 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::setupUi().

12.18.3.8 QSpacerItem* Ui_GradientDialog::horizontalSpacer [inherited]

Definition at line 50 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::setupUi().

12.18.3.9 QSpacerItem* Ui_GradientDialog::horizontalSpacer_2 [inherited]

Definition at line 46 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::setupUi().

12.18.3.10 QSpacerItem* Ui_GradientDialog::horizontalSpacer_3 [inherited]

Definition at line 52 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::setupUi().

12.18.3.11 QLabel* Ui_GradientDialog::label [inherited]

Definition at line 47 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::retranslateUi(), and Ui_GradientDialog::setupUi().

12.18.3.12 QLabel* Ui_GradientDialog::label_2 [inherited]

Definition at line 51 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::retranslateUi(), and Ui_GradientDialog::setupUi().

12.18.3.13 QPushButton* Ui_GradientDialog::presetDelete [inherited]

Definition at line 58 of file ui_gradientdialog.h.

Referenced by GradientDialog::getGradient(), GradientDialog::on_presetDelete_clicked(), GradientDialog::on_presetSave_clicked(), Ui_GradientDialog::retranslateUi(), GradientDialog::setPreset(), and Ui_GradientDialog::setupUi().

12.18.3.14 QListWidget* Ui_GradientDialog::presetList [inherited]

Definition at line 55 of file ui_gradientdialog.h.

Referenced by GradientDialog::setPreset(), Ui_GradientDialog::setupUi(), and GradientDialog::updatePresets().

12.18.3.15 QLineEdit* Ui_GradientDialog::presetName [inherited]

Definition at line 56 of file ui_gradientdialog.h.

Referenced by GradientDialog::on_presetSave_clicked(), Ui_GradientDialog::retranslateUi(), GradientDialog::setPreset(), and Ui_GradientDialog::setupUi().

12.18.3.16 QPushButton* Ui_GradientDialog::presetSave [inherited]

Definition at line 57 of file ui_gradientdialog.h.

Referenced by GradientDialog::getGradient(), GradientDialog::on_presetDelete_clicked(), GradientDialog::on_presetSave_clicked(), Ui_GradientDialog::retranslateUi(), GradientDialog::setPreset(), and Ui_GradientDialog::setupUi().

12.18.3.17 QGroupBox* Ui_GradientDialog::stopBox [inherited]

Definition at line 41 of file ui_gradientdialog.h.

Referenced by GradientDialog::currentChanged(), Ui_GradientDialog::retranslateUi(), and Ui_GradientDialog::setupUi().

12.18.3.18 ColorButton* Ui_GradientDialog::stopColor [inherited]

Definition at line 44 of file ui_gradientdialog.h.

Referenced by GradientDialog::currentChanged(), GradientDialog::GradientDialog(), GradientDialog::on_stopOpacity_valueChanged(), Ui_GradientDialog::retranslateUi(), and Ui_GradientDialog::setupUi().

12.18.3.19 QSpinBox* Ui_GradientDialog::stopOpacity [inherited]

Definition at line 45 of file ui_gradientdialog.h.

Referenced by GradientDialog::colorChanged(), GradientDialog::currentChanged(), Ui_GradientDialog::retranslateUi(), and Ui_GradientDialog::setupUi().

12.18.3.20 QSpinBox* Ui_GradientDialog::stopPos [inherited]

Definition at line 49 of file ui_gradientdialog.h.

Referenced by GradientDialog::currentChanged(), GradientDialog::on_stopPos_valueChanged(), Ui_GradientDialog::retranslateUi(), and Ui_GradientDialog::setupUi().

12.18.3.21 QSpacerItem* Ui_GradientDialog::verticalSpacer [inherited]

Definition at line 37 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::setupUi().

12.18.3.22 QSpacerItem* Ui_GradientDialog::verticalSpacer_2 [inherited]

Definition at line 38 of file ui_gradientdialog.h.

Referenced by Ui_GradientDialog::setupUi().

12.18.3.23 GradientDialogWidget* Ui_GradientDialog::widget [inherited]

Definition at line 39 of file ui_gradientdialog.h.

Referenced by GradientDialog::colorChanged(), GradientDialog::currentChanged(), GradientDialog::getGradient(), GradientDialog::GradientDialog(), GradientDialog::on_presetSave_clicked(), GradientDialog::on_stopPos_valueChanged(), GradientDialog::setPreset(), and Ui_GradientDialog::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_gradientdialog.h

12.19 GradientDialog Class Reference

```
#include <src/ckb/gradientdialog.h>
```

Inheritance diagram for GradientDialog:

Collaboration diagram for GradientDialog:

Data Structures

- struct Preset

Public Member Functions

- GradientDialog (QWidget ∗parent=0)
- ∼GradientDialog ()
- QGradientStops getGradient (const QGradientStops &prevGradient)

Private Slots

- void currentChanged (QColor color, bool spontaneous, int position)
- void colorChanged (QColor color)
- void on_presetList_currentItemChanged (QListWidgetItem ∗current, QListWidgetItem ∗previous)
- void on_presetName_textEdited (const QString &arg1)
- void on_presetSave_clicked ()
- void on_presetDelete_clicked ()
- void on_stopPos_valueChanged (int arg1)
- void on_stopOpacity_valueChanged (int arg1)

Private Member Functions

- void addPreset (const Preset &preset)
- QIcon makeIcon (const Preset &preset)
- void updatePresets ()
- void setPreset (const QString &newPreset)

Private Attributes

- QMap< QString, Preset > presets
- QString currentPreset
- Ui::GradientDialog * ui

12.19.1 Detailed Description

Definition at line 12 of file gradientdialog.h.

12.19.2 Constructor & Destructor Documentation

12.19.2.1 GradientDialog::GradientDialog (QWidget * *parent* = 0) [explicit]

Definition at line 11 of file gradientdialog.cpp.

References addPreset(), CkbSettings::childGroups(), CkbSettings::childKeys(), colorChanged(), currentChanged(), GradientDialog::Preset::gradient, prefsPath, presets, Ui_GradientDialog::setupUi(), Ui_GradientDialog::stopColor, ui, updatePresets(), CkbSettings::value(), and Ui_GradientDialog::widget.

```
11                                                  :
12     QDialog(parent),
13     ui(new Ui::GradientDialog)
14 {
15     ui->setupUi(this);
16     connect(ui->widget, SIGNAL(currentChanged(QColor,bool,int)), this, SLOT(
       currentChanged(QColor,bool,int)));
17     connect(ui->stopColor, SIGNAL(colorChanged(QColor)), this, SLOT(
       colorChanged(QColor)));
18
19     // Add built-in presets
20     Preset blackAndWhite("B & W", true);
21     blackAndWhite.gradient.append(QGradientStop(0., QColor(0, 0, 0)));
22     blackAndWhite.gradient.append(QGradientStop(1., QColor(255, 255, 255)));
23     Preset fade("Fade", true);
24     fade.gradient.append(QGradientStop(0., QColor(255, 255, 255)));
25     fade.gradient.append(QGradientStop(1., QColor(255, 255, 255, 0)));
26     Preset rainbow("Rainbow", true);
27     rainbow.gradient.append(QGradientStop(0.00, QColor(255, 0, 0)));
28     rainbow.gradient.append(QGradientStop(0.17, QColor(255, 255, 0)));
29     rainbow.gradient.append(QGradientStop(0.33, QColor(0, 255, 0)));
30     rainbow.gradient.append(QGradientStop(0.50, QColor(0, 255, 255)));
31     rainbow.gradient.append(QGradientStop(0.67, QColor(0, 0, 255)));
32     rainbow.gradient.append(QGradientStop(0.83, QColor(255, 0, 255)));
33     rainbow.gradient.append(QGradientStop(1.00, QColor(255, 0, 0)));
34     addPreset(blackAndWhite);
35     addPreset(fade);
36     addPreset(rainbow);
37
38     // Load stored presets
39     CkbSettings settings(prefsPath);
40     foreach(const QString& name, settings.childGroups()){
41         QString pName = name.toLower();
42         if(presets.contains(pName))
43             continue;
44         SGroup group(settings, name);
45         // Create keys in a map to ensure correct order and no duplicates
46         QMap<int, QColor> colors;
47         foreach(const QString& position, settings.childKeys()){
48             int pos = position.toInt();
49             if(pos < 0 || pos > 100)
50                 continue;
51             colors[pos] = settings.value(position).value<QColor>();
52         }
53         if(colors.count() < 2)
54             continue;
55         Preset preset(name);
56         QMapIterator<int, QColor> i(colors);
57         while(i.hasNext()){
58             i.next();
59             preset.gradient.append(QGradientStop(i.key() / 100., i.value()));
60         }
61         presets[pName] = preset;
62     }
63
```

```
    updatePresets();
}
```

Here is the call graph for this function:

12.19.2.2 GradientDialog::~GradientDialog ( )

Definition at line 77 of file gradientdialog.cpp.

References GradientDialog::Preset::builtIn, GradientDialog::Preset::gradient, GradientDialog::Preset::name, prefsPath, presets, CkbSettings::setValue(), and ui.

```
77                                  {
78     // Save presets
79     CkbSettings settings(prefsPath, true);
80     QMapIterator<QString, Preset> i(presets);
81     while(i.hasNext()){
82         Preset preset = i.next().value();
83         if(!preset.builtIn){
84             SGroup group(settings, preset.name);
85             foreach(const QGradientStop& stop, preset.gradient)
86                 settings.setValue(QString::number((int)(stop.first * 100.)), stop.second);
87         }
88     }
89     delete ui;
90 }
```

Here is the call graph for this function:

12.19.3 Member Function Documentation

12.19.3.1 void GradientDialog::addPreset (const Preset & *preset*) [inline],[private]

Definition at line 34 of file gradientdialog.h.

References GradientDialog::Preset::name, and presets.

Referenced by GradientDialog().

```
34 { presets[preset.name.toLower()] = preset; }
```

Here is the caller graph for this function:

12.19.3.2 void GradientDialog::colorChanged (QColor *color*) [private],[slot]

Definition at line 234 of file gradientdialog.cpp.

References GradientDialogWidget::setCurrentColor(), setPreset(), Ui_GradientDialog::stopOpacity, ui, and Ui_GradientDialog::widget.

Referenced by GradientDialog(), and on_stopOpacity_valueChanged().

```
234                                                 {
235     color.setAlphaF(ui->stopOpacity->value() / 100.f);
236     ui->widget->setCurrentColor(color);
237     setPreset("");
238 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.19.3.3 void GradientDialog::currentChanged (QColor *color,* bool *spontaneous,* int *position*) [private],[slot]

Definition at line 128 of file gradientdialog.cpp.

References ColorButton::color(), setPreset(), Ui_GradientDialog::stopBox, Ui_GradientDialog::stopColor, GradientDialogWidget::stopCount(), Ui_GradientDialog::stopOpacity, Ui_GradientDialog::stopPos, ui, and Ui_GradientDialog::widget.

Referenced by GradientDialog().

```
128                                                                                 {
129     int pCount = ui->widget->stopCount();
130     if(pCount == 1)
131         ui->stopBox->setTitle("1 point");
132     else
133         ui->stopBox->setTitle(QString("%1 points").arg(pCount));
134     if(!color.isValid()){
135         ui->stopBox->setEnabled(false);
136         ui->stopPos->setValue(0);
137         ui->stopColor->color(QColor(0, 0, 0));
138         ui->stopOpacity->setValue(0);
139     } else {
140         ui->stopBox->setEnabled(true);
141         ui->stopPos->setValue(position);
142         ui->stopColor->color(color);
143         ui->stopOpacity->setValue(round(color.alphaF() * 100.f));
144     }
145     // Un-set current preset
146     if(spontaneous)
147         setPreset("");
148     setFocus();
149 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.19.3.4 QGradientStops GradientDialog::getGradient (const QGradientStops & *prevGradient*)

Definition at line 67 of file gradientdialog.cpp.

References Ui_GradientDialog::presetDelete, Ui_GradientDialog::presetSave, GradientDialogWidget::setStops(), GradientDialogWidget::stops(), ui, and Ui_GradientDialog::widget.

Referenced by GradientButton::pickGradient().

```
67                                                                                  {
68     ui->presetDelete->setEnabled(false);
69     ui->presetSave->setEnabled(true);
70     ui->widget->setStops(prevGradient);
```

```
    exec();
    if(result() != QDialog::Accepted)
        return prevGradient;
    return ui->widget->stops();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.19.3.5 QIcon GradientDialog::makeIcon (const Preset & *preset*) [private]

Definition at line 92 of file gradientdialog.cpp.

References GradientDialog::Preset::gradient, x, and y.

Referenced by updatePresets().

```
92                                                  {
93     // Paint gradient into a square
94     int w = 60, h = 60;
95     QImage image(w, h, QImage::Format_RGB888);
96     QPainter painter(&image);
97     // Draw background
98     for(int x = 0; x < w; x += 30){
99         for(int y = 0; y < h; y += 30){
100            painter.fillRect(x, y, 15, 15, QColor(255, 255, 255));
101            painter.fillRect(x + 15, y, 15, 15, QColor(192, 192, 192));
102            painter.fillRect(x, y + 15, 15, 15, QColor(192, 192, 192));
103            painter.fillRect(x + 15, y + 15, 15, 15, QColor(255, 255, 255));
104        }
105    }
106    // Draw gradient
107    painter.setPen(QColor(0, 0, 0));
108    QLinearGradient gradient(1., 1., w - 1., h - 1.);
109    gradient.setStops(preset.gradient);
110    painter.setBrush(gradient);
111    painter.drawRect(0, 0, w - 1, h - 1);
112    return QPixmap::fromImage(image);
113 }
```

Here is the caller graph for this function:

12.19.3.6 void GradientDialog::on_presetDelete_clicked ( ) [private],[slot]

Definition at line 211 of file gradientdialog.cpp.

References GradientDialog::Preset::builtIn, current, currentPreset, GradientDialog::Preset::name, Ui_GradientDialog::presetDelete, presets, Ui_GradientDialog::presetSave, ui, and updatePresets().

```
211                                                 {
212     Preset current = presets.value(currentPreset);
213     if(current.name == "" || current.builtIn)
214         return;
215     if(QMessageBox::warning(this, "Warning", QString("Delete preset \"%1\"?").arg(current.name),
      QMessageBox::StandardButtons(QMessageBox::Yes | QMessageBox::No)) != QMessageBox::Yes){
216         setFocus();
217         return;
218     }
219     presets.remove(currentPreset);
220     currentPreset = "";
221     ui->presetDelete->setEnabled(false);
222     ui->presetSave->setEnabled(true);
223     updatePresets();
224     setFocus();
225 }
```

Here is the call graph for this function:

12.19.3.7 void GradientDialog::on_presetList_currentItemChanged (QListWidgetItem * *current*, QListWidgetItem * *previous*) [private],[slot]

Definition at line 174 of file gradientdialog.cpp.

References setPreset().

```
174                                                                                                 {
175     setPreset(current ? current->text().toLower() : "");
176 }
```

Here is the call graph for this function:

12.19.3.8 void GradientDialog::on_presetName_textEdited (const QString & *arg1*) [private],[slot]

Definition at line 178 of file gradientdialog.cpp.

References currentPreset, presets, and setPreset().

```
178                                                                 {
179     if(currentPreset != "" && arg1.trimmed() != presets[
      currentPreset].name)
180         setPreset("");
181 }
```

Here is the call graph for this function:

12.19.3.9 void GradientDialog::on_presetSave_clicked ( ) [private],[slot]

Definition at line 183 of file gradientdialog.cpp.

References GradientDialog::Preset::builtIn, currentPreset, GradientDialog::Preset::name, Ui_GradientDialog-::presetDelete, Ui_GradientDialog::presetName, presets, Ui_GradientDialog::presetSave, GradientDialogWidget-::stops(), ui, updatePresets(), and Ui_GradientDialog::widget.

```
183                                                 {
184     if(currentPreset != "")
185         return;
186     QString name = ui->presetName->text().trimmed();
187     if(name == "")
188         ui->presetName->setText(name = "Custom");
189     QString pName = name.toLower();
190     // Make sure not to overwrite a built-in preset
191     Preset previous = presets[pName];
192     if(previous.builtIn){
193         QMessageBox::warning(this, "Error", "Can't overwrite a built-in preset. Please choose a different
      name.");
194         setFocus();
195         return;
196     } else if(previous.name != ""){
197         // Warn when overwriting an existing preset
198         if(QMessageBox::warning(this, "Warning", QString("Preset \"%1\" already exists. Replace?").arg(name
      ), QMessageBox::StandardButtons(QMessageBox::Save | QMessageBox::Cancel)) != QMessageBox::Save){
199             setFocus();
200             return;
201         }
202     }
203     presets[pName] = Preset(name, ui->widget->stops());
204     currentPreset = pName;
205     ui->presetDelete->setEnabled(true);
206     ui->presetSave->setEnabled(false);
207     updatePresets();
208     setFocus();
209 }
```

Here is the call graph for this function:

12.19.3.10 void GradientDialog::on_stopOpacity_valueChanged (int *arg1*) [private],[slot]

Definition at line 240 of file gradientdialog.cpp.

References ColorButton::color(), colorChanged(), setPreset(), Ui_GradientDialog::stopColor, and ui.

```
240                                                     {
241     colorChanged(ui->stopColor->color());
242     setPreset("");
243 }
```

Here is the call graph for this function:

12.19.3.11 void GradientDialog::on_stopPos_valueChanged (int *arg1*) [private],[slot]

Definition at line 227 of file gradientdialog.cpp.

References GradientDialogWidget::moveCurrent(), setPreset(), Ui_GradientDialog::stopPos, ui, and Ui_GradientDialog::widget.

```
227                                                     {
228     int res = ui->widget->moveCurrent(arg1);
229     if(res != arg1)
230         ui->stopPos->setValue(res);
231     setPreset("");
232 }
```

Here is the call graph for this function:

12.19.3.12 void GradientDialog::setPreset (const QString & *newPreset*) [private]

Definition at line 151 of file gradientdialog.cpp.

References GradientDialog::Preset::builtIn, current, currentPreset, GradientDialog::Preset::gradient, GradientDialog::Preset::name, Ui_GradientDialog::presetDelete, Ui_GradientDialog::presetList, Ui_GradientDialog::presetName, presets, Ui_GradientDialog::presetSave, GradientDialogWidget::setStops(), ui, and Ui_GradientDialog::widget.

Referenced by colorChanged(), currentChanged(), on_presetList_currentItemChanged(), on_presetName_textEdited(), on_stopOpacity_valueChanged(), and on_stopPos_valueChanged().

```
151                                                 {
152     if(currentPreset == newPreset)
153         return;
154     if(newPreset == ""){
155         ui->presetList->clearSelection();
156         ui->presetList->setCurrentItem(0);
157         Preset current = presets.value(currentPreset);
158         QString curName = ui->presetName->text().trimmed();
159         if(curName == "" || (curName == current.name && current.builtIn))
160             ui->presetName->setText("Custom");
161         ui->presetDelete->setEnabled(false);
162         ui->presetSave->setEnabled(true);
163     } else {
164         Preset current = presets.value(newPreset);
165         ui->presetName->setText(current.name);
166         ui->presetDelete->setEnabled(!current.builtIn);
167         ui->presetSave->setEnabled(false);
168         ui->widget->setStops(current.gradient);
169     }
170     currentPreset = newPreset;
171     setFocus();
172 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.19.3.13 void GradientDialog::updatePresets ( ) [private]

Definition at line 115 of file gradientdialog.cpp.

References currentPreset, makeIcon(), GradientDialog::Preset::name, Ui_GradientDialog::presetList, presets, and ui.

Referenced by GradientDialog(), on_presetDelete_clicked(), and on_presetSave_clicked().

```
115                                 {
116     ui->presetList->clear();
117     QMapIterator<QString, Preset> i(presets);
118     while(i.hasNext()){
119         i.next();
120         const Preset& preset = i.value();
121         QListWidgetItem* item = new QListWidgetItem(makeIcon(preset), preset.name,
      ui->presetList);
122         if(currentPreset == i.key())
123             item->setSelected(true);
124         ui->presetList->addItem(item);
125     }
126 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.19.4 Field Documentation

12.19.4.1 QString GradientDialog::currentPreset [private]

Definition at line 32 of file gradientdialog.h.

Referenced by on_presetDelete_clicked(), on_presetName_textEdited(), on_presetSave_clicked(), setPreset(), and updatePresets().

12.19.4.2 QMap<QString, Preset> GradientDialog::presets [private]

Definition at line 31 of file gradientdialog.h.

Referenced by addPreset(), GradientDialog(), on_presetDelete_clicked(), on_presetName_textEdited(), on_presetSave_clicked(), setPreset(), updatePresets(), and ~GradientDialog().

12.19.4.3 Ui::GradientDialog* GradientDialog::ui [private]

Definition at line 39 of file gradientdialog.h.

Referenced by colorChanged(), currentChanged(), getGradient(), GradientDialog(), on_presetDelete_clicked(), on_presetSave_clicked(), on_stopOpacity_valueChanged(), on_stopPos_valueChanged(), setPreset(), updatePresets(), and ~GradientDialog().

The documentation for this class was generated from the following files:

- src/ckb/gradientdialog.h
- src/ckb/gradientdialog.cpp

12.20 GradientDialogWidget Class Reference

```
#include <src/ckb/gradientdialogwidget.h>
```

Inheritance diagram for GradientDialogWidget:

Collaboration diagram for GradientDialogWidget:

Signals

- void currentChanged (QColor color, bool spontaneous, int position)

Public Member Functions

- GradientDialogWidget (QWidget ∗parent=0)
- void setStops (const QGradientStops &stops)
- QGradientStops stops ()
- int stopCount ()
- QColor colorAt (int position)
- int current ()
- int moveCurrent (int to)
- void setCurrentColor (const QColor &color)

Private Member Functions

- QRect fillRect ()
- QRect stopRect (int pos)
- int selectedStop ()
- QMap< int, QColor > selectionColors ()
- void makeStops ()
- void paintEvent (QPaintEvent ∗)
- void mousePressEvent (QMouseEvent ∗event)
- void mouseMoveEvent (QMouseEvent ∗event)
- void mouseReleaseEvent (QMouseEvent ∗event)

Private Attributes

- QColor selected
- int selectedPos
- int selectedOffset
- int _current
- QMap< int, QColor > _colors
- QGradientStops _stops

12.20.1 Detailed Description

Definition at line 8 of file gradientdialogwidget.h.

12.20.2 Constructor & Destructor Documentation

12.20.2.1 GradientDialogWidget::GradientDialogWidget (QWidget * *parent* = 0) [explicit]

Definition at line 6 of file gradientdialogwidget.cpp.

```
6                                                       :
7     QWidget(parent), selectedPos(-1), _current(-1)
8 {
9     setMouseTracking(true);
10 }
```

12.20.3 Member Function Documentation

12.20.3.1 QColor GradientDialogWidget::colorAt (int *position*)

Definition at line 65 of file gradientdialogwidget.cpp.

References _stops.

Referenced by mousePressEvent().

```
65                                              {
66     // Find which stops the position is between
67     qreal pos = position / 100.;
68     QVectorIterator<QGradientStop> i(_stops);
69     QGradientStop previous = i.next();
70     while(i.hasNext()){
71         QGradientStop next = i.next();
72         if(next.first >= pos){
73             // Get color by linear interpolation. Premultiply the alpha value so that it returns the
       expected color
74             // (i.e. stops with zero opacity won't contribute to color)
75             QColor c1 = next.second, c2 = previous.second;
76             qreal distance = next.first - previous.first;
77             qreal dx = (pos - previous.first) / distance;
78             qreal a1 = c1.alphaF(), a2 = c2.alphaF();
79             qreal a3 = a1 * dx + a2 * (1.f - dx);
80             if(a3 == 0.){
81                 c2.setAlpha(0);
82                 return c2;
83             }
84             qreal r = (c1.redF() * a1 * dx + c2.redF() * a2 * (1.f - dx)) / a3;
85             qreal g = (c1.greenF() * a1 * dx + c2.greenF() * a2 * (1.f - dx)) / a3;
86             qreal b = (c1.blueF() * a1 * dx + c2.blueF() * a2 * (1.f - dx)) / a3;
87             return QColor::fromRgbF(r, g, b, a3);
88         }
89         previous = next;
90     }
91     return QColor();
92 }
```

Here is the caller graph for this function:

12.20.3.2 int GradientDialogWidget::current ( ) [inline]

Definition at line 20 of file gradientdialogwidget.h.

References _current.

```
20 { return _current; }
```

12.20.3.3 void GradientDialogWidget::currentChanged (QColor *color*, bool *spontaneous*, int *position*) [signal]

Definition at line 126 of file moc_gradientdialogwidget.cpp.

Referenced by mouseReleaseEvent(), and setStops().

```
127 {
128     void *_a[] = { Q_NULLPTR, const_cast<void*>(reinterpret_cast<const void*>(&_t1)), const_cast<void*>(
      reinterpret_cast<const void*>(&_t2)), const_cast<void*>(reinterpret_cast<const void*>(&_t3)) };
129     QMetaObject::activate(this, &staticMetaObject, 0, _a);
130 }
```

Here is the caller graph for this function:

12.20.3.4 QRect GradientDialogWidget::fillRect ( ) [private]

Definition at line 138 of file gradientdialogwidget.cpp.

References width, x, and y.

Referenced by mouseMoveEvent(), mousePressEvent(), paintEvent(), selectedStop(), and stopRect().

```
{
    int x = 8, y = 1;
    int w = (width() - x * 2) / 16 * 16, h = (height() - 24) / 16 * 16;
    return QRect(x, y, w, h);
}
```

Here is the caller graph for this function:

12.20.3.5 void GradientDialogWidget::makeStops ( ) [private]

Definition at line 30 of file gradientdialogwidget.cpp.

References _stops, and selectionColors().

Referenced by mouseMoveEvent(), mousePressEvent(), mouseReleaseEvent(), moveCurrent(), and setCurrentColor().

```
{
    _stops.clear();
    QMap<int, QColor> colors = selectionColors();
    // If there's only a single color, put it at the beginning and end
    if(colors.count() == 1){
#if QT_VERSION >= QT_VERSION_CHECK(5, 2, 0)
        QColor color = colors.first();
#else
        QColor color = colors.value(colors.keys().first());
#endif
        _stops.append(QGradientStop(0., color));
        _stops.append(QGradientStop(1., color));
        update();
        return;
    }
    // Add colors at 0 and 100 if needed
#if QT_VERSION >= QT_VERSION_CHECK(5, 2, 0)
    if(!colors.contains(0))
        colors[0] = colors.first();
    if(!colors.contains(100))
        colors[100] = colors.last();
#else
    if(!colors.contains(0))
        colors[0] = colors.value(colors.keys().first());
    if(!colors.contains(100))
        colors[100] = colors.value(colors.keys().last());
#endif
    QMapIterator<int, QColor> i(colors);
    while(i.hasNext()){
        i.next();
        _stops.append(QGradientStop(i.key() / 100., i.value()));
    }
    update();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.20.3.6 void GradientDialogWidget::mouseMoveEvent (QMouseEvent * *event*) [private]

Definition at line 255 of file gradientdialogwidget.cpp.

References _colors, fillRect(), left, makeStops(), right(), selected, selectedOffset, selectedPos, and top.

```
255                                                                 {
256     if(!selected.isValid()){
257         if(event->y() >= height() - 24)
258             setCursor(QCursor(Qt::PointingHandCursor));
259         else
260             setCursor(QCursor(Qt::ArrowCursor));
261         return;
262     }
263     // Move selected point (if any)
264     setCursor(QCursor(Qt::ClosedHandCursor));
265     selectedPos = event->x() + selectedOffset;
266     // Allow the point to be deleted as long as there is at least 1 other point
267     bool last = (_colors.count() == 0);
268     // Hug the left/right edges
269     QRect rect = fillRect();
270     int left = rect.left(), right = rect.right();
271     if(selectedPos < left && (last || selectedPos >= left - 30))
272         selectedPos = left;
273     else if(selectedPos > right && (last || selectedPos <=
    right + 30))
274         selectedPos = right;
275     // Remove point if it's too far above/below the widget
276     int top = -30, bottom = height() + 30;
277     if(!last && (event->y() < top || event->y() > bottom))
278         selectedPos = -1;
279     makeStops();
280 }
```

Here is the call graph for this function:

12.20.3.7 void GradientDialogWidget::mousePressEvent (QMouseEvent * *event*) [private]

Definition at line 222 of file gradientdialogwidget.cpp.

References _colors, colorAt(), fillRect(), makeStops(), mouseReleaseEvent(), selected, selectedOffset, selectedPos, selectedStop(), stopRect(), x, and y.

```
222                                                                 {
223     int x = event->x(), y = event->y();
224     if(y < height() - 24)
225         return;
226     QMapIterator<int, QColor> i(_colors);
227     while(i.hasNext()){
228         i.next();
229         // If a point was selected, remove it from the color map and set it as the selected point
230         QRect stop = stopRect(i.key());
231         if(x >= stop.left() - 1 && x <= stop.right() + 1){
232             selected = i.value();
233             selectedPos = stop.x() + stop.width() / 2;
234             selectedOffset = selectedPos - x;
235             _colors.remove(i.key());
236             // On right click, delete the point
237             if(event->button() == Qt::RightButton && _colors.count() > 1){
238                 selectedPos = -1;
239                 mouseReleaseEvent(event);
240             } else
241                 update();
242             return;
243         }
244     }
245     // If nothing was selected, create a new point
246     QRect fill = fillRect();
247     if(x > fill.left() && x < fill.right() && event->button() != Qt::RightButton){
248         selectedPos = x;
249         selectedOffset = 0;
250         selected = colorAt(selectedStop());
251         makeStops();
252     }
253 }
```

Here is the call graph for this function:

12.20.3.8 void GradientDialogWidget::mouseReleaseEvent (QMouseEvent * *event*) [private]

Definition at line 282 of file gradientdialogwidget.cpp.

References _colors, _current, currentChanged(), makeStops(), selected, selectedPos, selectedStop(), and selectionColors().

Referenced by mousePressEvent().

```
282                                                                 {
283     if(selected.isValid()){
284         // Rejoin selection with gradient
285         _current = selectedStop();
286         _colors = selectionColors();
287         emit currentChanged(_colors.value(_current), true,
      _current);
288         selectedPos = -1;
289         selected = QColor();
290         makeStops();
291     }
292     if(event->y() >= height() - 24)
293         setCursor(QCursor(Qt::PointingHandCursor));
294     else
295         setCursor(QCursor(Qt::ArrowCursor));
296 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.20.3.9 int GradientDialogWidget::moveCurrent (int *to*)

Definition at line 94 of file gradientdialogwidget.cpp.

References _colors, _current, makeStops(), and selected.

Referenced by GradientDialog::on_stopPos_valueChanged().

```
94                                                  {
95     if(_current < 0 || to == _current || selected.isValid())
96         return _current;
97     // If there's a point in the way, skip past it by continuing in the current direction
98     if(_current < to){
99         while(_colors.contains(to)){
100             to++;
101             if(to > 100)
```

```
                return _current;
        }
    } else {
        while(_colors.contains(to)){
            to--;
            if(to < 0)
                return _current;
        }
    }
    _colors[to] = _colors.take(_current);
    _current = to;
    makeStops();
    return to;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.20.3.10 void GradientDialogWidget::paintEvent (QPaintEvent *) [private]

Definition at line 172 of file gradientdialogwidget.cpp.

References _colors, _current, _stops, fillRect(), selected, selectedPos, stopRect(), x, and y.

```
172                                                 {
173     QPainter painter(this);
174     QRect fill = fillRect();
175     int x = fill.x(), y = fill.y(), w = fill.width(), h = fill.height();
176
177     // Draw border around gradient
178     painter.setPen(palette().color(QPalette::Dark));
179     painter.drawLine(x - 1, y - 1, x + w, y - 1);
180     painter.drawLine(x - 1, y - 1, x - 1, y + h);
181     painter.setPen(palette().color(QPalette::Light));
182     painter.drawLine(x - 1, y + h, x + w, y + h);
183     painter.drawLine(x + w, y - 1, x + w, y + h);
184     // Draw background grid
185     for(int i = 0; i < w; i += 16){
186         for(int iy = 0; iy < h; iy += 16){
187             if(i % 32 != iy % 32)
188                 painter.fillRect(x + i, y + iy, 16, 16, QColor(192, 192, 192));
189             else
190                 painter.fillRect(x + i, y + iy, 16, 16, QColor(255, 255, 255));
191         }
192     }
193     // Draw gradient
194     painter.setRenderHint(QPainter::Antialiasing);
195     QLinearGradient gradient(x, 0, x + w, 0);
196     gradient.setStops(_stops);
197     painter.fillRect(fill, QBrush(gradient));
198
199     // Draw stops
```

```
    QMapIterator<int, QColor> i(_colors);
    painter.setPen(palette().color(QPalette::Shadow));
    while(i.hasNext()){
        i.next();
        painter.setBrush(QBrush(i.value()));
        int index = i.key();
        if(index == _current){
            // Highlight currently-edited stop
            painter.setPen(QPen(palette().color(QPalette::Highlight), 2));
            painter.drawRoundedRect(stopRect(index), 4, 4);
            painter.setPen(palette().color(QPalette::Shadow));
        } else
            painter.drawRoundedRect(stopRect(index), 4, 4);
    }
    // Draw selection (if any)
    if(selected.isValid() && selectedPos >= x && selectedPos <= x + w){
        painter.setPen(QPen(palette().color(QPalette::Highlight), 2.5));
        painter.setBrush(selected);
        painter.drawRoundedRect(selectedPos - 6, height() - 18 - 2, 12, 18, 4, 4);
    }
}
```

Here is the call graph for this function:

12.20.3.11 int GradientDialogWidget::selectedStop ( ) [private]

Definition at line 152 of file gradientdialogwidget.cpp.

References fillRect(), and selectedPos.

Referenced by mousePressEvent(), mouseReleaseEvent(), and selectionColors().

```
                                        {
    QRect rect = fillRect();
    int res = round((selectedPos - rect.x()) * 100. / rect.width());
    if(res < 0 || res > 100)
        return -1;
    return res;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.20.3.12 QMap< int, QColor > GradientDialogWidget::selectionColors ( ) [private]

Definition at line 160 of file gradientdialogwidget.cpp.

References _colors, selected, and selectedStop().

Referenced by makeStops(), and mouseReleaseEvent().

```
160                                                     {
161     if(!selected.isValid())
162         return _colors;
163     // Determine selected stop position
164     int selPos = selectedStop();
165     // Re-add if in range
166     QMap<int, QColor> res = _colors;
167     if(selPos >= 0 && selPos <= 100)
168         res[selPos] = selected;
169     return res;
170 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.20.3.13 void GradientDialogWidget::setCurrentColor (const QColor & *color*)

Definition at line 117 of file gradientdialogwidget.cpp.

References _colors, _current, makeStops(), and selected.

Referenced by GradientDialog::colorChanged().

```
117                                                                 {
118     if(_current < 0 || selected.isValid())
119         return;
120     QRgb rgb = _colors.value(_current).rgb();
121     _colors[_current] = color;
122     // If any points follow with the same color but different opacity, change them to match
123     QMutableMapIterator<int, QColor> i(_colors);
124     while(i.hasNext()){
125         i.next();
126         if(i.key() <= _current)
127             continue;
128         QColor& value = i.value();
129         if(value.rgb() != rgb)
130             break;
131         int alpha = value.alpha();
132         value = color;
133         value.setAlpha(alpha);
134     }
135     makeStops();
136 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.20.3.14 void GradientDialogWidget::setStops (const QGradientStops & *stops*)

Definition at line 12 of file gradientdialogwidget.cpp.

References _colors, _current, _stops, currentChanged(), and stops().

Referenced by GradientDialog::getGradient(), and GradientDialog::setPreset().

```
12                                                                  {
13     _stops = stops;
14     _colors.clear();
15     foreach(const QGradientStop& stop, stops){
16         double pos = stop.first;
17         if(pos < 0. || pos > 1.)
18             continue;
19         _colors[round(pos * 100.)] = stop.second;
20     }
21     _current = 0;
```

```
#if QT_VERSION >= QT_VERSION_CHECK(5, 2, 0)
    emit currentChanged(_colors.first(), false, 0);
#else
    emit currentChanged(_colors.value(_colors.keys().first()), false, 0);
#endif
    update();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.20.3.15 int GradientDialogWidget::stopCount ( ) [inline]

Definition at line 16 of file gradientdialogwidget.h.

References _stops.

Referenced by GradientDialog::currentChanged().

```
16 { return _stops.count(); }
```

Here is the caller graph for this function:

12.20.3.16 QRect GradientDialogWidget::stopRect (int *pos*) [private]

Definition at line 144 of file gradientdialogwidget.cpp.

References fillRect().

Referenced by mousePressEvent(), and paintEvent().

```
144                                                 {
145     QRect fill = fillRect();
146     int sx = round(pos / 100. * fill.width()) + fill.x() - 6;
147     int sw = 12, sh = 18;
148     int sy = height() - sh - 2;
149     return QRect(sx, sy, sw, sh);
150 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.20.3.17 QGradientStops GradientDialogWidget::stops ( ) [inline]

Definition at line 15 of file gradientdialogwidget.h.

References _stops.

Referenced by GradientDialog::getGradient(), GradientDialog::on_presetSave_clicked(), and setStops().

```
15 { return _stops; }
```

Here is the caller graph for this function:

12.20.4 Field Documentation

12.20.4.1 QMap<int, QColor> GradientDialogWidget::_colors [private]

Definition at line 31 of file gradientdialogwidget.h.

Referenced by mouseMoveEvent(), mousePressEvent(), mouseReleaseEvent(), moveCurrent(), paintEvent(), selectionColors(), setCurrentColor(), and setStops().

12.20.4.2 int GradientDialogWidget::_current [private]

Definition at line 30 of file gradientdialogwidget.h.

Referenced by current(), mouseReleaseEvent(), moveCurrent(), paintEvent(), setCurrentColor(), and setStops().

12.20.4.3 QGradientStops GradientDialogWidget::_stops [private]

Definition at line 32 of file gradientdialogwidget.h.

Referenced by colorAt(), makeStops(), paintEvent(), setStops(), stopCount(), and stops().

12.20.4.4 QColor GradientDialogWidget::selected [private]

Definition at line 28 of file gradientdialogwidget.h.

Referenced by mouseMoveEvent(), mousePressEvent(), mouseReleaseEvent(), moveCurrent(), paintEvent(), selectionColors(), and setCurrentColor().

12.20.4.5 int GradientDialogWidget::selectedOffset [private]

Definition at line 29 of file gradientdialogwidget.h.

Referenced by mouseMoveEvent(), and mousePressEvent().

12.20.4.6 int GradientDialogWidget::selectedPos [private]

Definition at line 29 of file gradientdialogwidget.h.

Referenced by mouseMoveEvent(), mousePressEvent(), mouseReleaseEvent(), paintEvent(), and selectedStop().

The documentation for this class was generated from the following files:

- src/ckb/gradientdialogwidget.h
- src/ckb/gradientdialogwidget.cpp
- src/ckb/release/moc_gradientdialogwidget.cpp

12.21 JlCompress Class Reference

Utility class for typical operations.

`#include <src/ckb/quazip/JlCompress.h>`

Collaboration diagram for JlCompress:

Static Public Member Functions

- static bool compressFile (QString fileCompressed, QString file)

  Compress a single file.
- static bool compressFiles (QString fileCompressed, QStringList files)

  Compress a list of files.
- static bool compressDir (QString fileCompressed, QString dir=QString(), bool recursive=true)

  Compress a whole directory.
- static QString extractFile (QString fileCompressed, QString fileName, QString fileDest=QString())

  Extract a single file.
- static QStringList extractFiles (QString fileCompressed, QStringList files, QString dir=QString())

  Extract a list of files.
- static QStringList extractDir (QString fileCompressed, QString dir=QString())

  Extract a whole archive.
- static QStringList getFileList (QString fileCompressed)

  Get the file list.

Static Private Member Functions

- static bool compressFile (QuaZip *zip, QString fileName, QString fileDest)

  Compress a single file.
- static bool compressSubDir (QuaZip *parentZip, QString dir, QString parentDir, bool recursive=true)

  Compress a subdirectory.
- static bool extractFile (QuaZip *zip, QString fileName, QString fileDest)

  Extract a single file.
- static bool removeFile (QStringList listFile)

  Remove some files.

12.21.1 Detailed Description

This class contains a number of useful static functions to perform simple operations, such as mass ZIP packing or extraction.

Definition at line 42 of file JlCompress.h.

12.21.2 Member Function Documentation

12.21.2.1 bool JlCompress::compressDir (QString *fileCompressed*, QString *dir* = `QString()`, bool *recursive* = `true`) `[static]`

OK Comprime la cartella dir nel file fileCompressed, se recursive e true allora comprime anche le sotto cartelle.

Parameters

fileCompressed	The name of the archive.
dir	The directory to compress.
recursive	Whether to pack the subdirectories as well, or just regular files.

Returns

true if success, false otherwise.

Se la funzione fallisce restituisce false e cancella il file che si e tentato di creare.

La funzione fallisce se:

- non si riesce ad aprire l'oggetto zip;
- la compressione di un file fallisce;
- non si riesce a chiudere l'oggetto zip;

Definition at line 338 of file JlCompress.cpp.

References QuaZip::close(), compressSubDir(), QuaZip::getZipError(), QuaZip::mdCreate, and QuaZip::open().

```
338                                                                                 {
339     // Creo lo zip
340     QuaZip zip(fileCompressed);
341     QDir().mkpath(QFileInfo(fileCompressed).absolutePath());
342     if(!zip.open(QuaZip::mdCreate)) {
343         QFile::remove(fileCompressed);
344         return false;
345     }
346
347     // Aggiungo i file e le sotto cartelle
348     if (!compressSubDir(&zip,dir,dir,recursive)) {
349         QFile::remove(fileCompressed);
350         return false;
```

```
    }

    // Chiudo il file zip
    zip.close();
    if(zip.getZipError()!=0) {
        QFile::remove(fileCompressed);
        return false;
    }

    return true;
}
```

Here is the call graph for this function:

12.21.2.2 bool JICompress::compressFile (QuaZip * *zip*, QString *fileName*, QString *fileDest*) [static], [private]

OK Comprime il file fileName, nell'oggetto zip, con il nome fileDest.

Parameters

zip	Opened zip to compress the file to.
fileName	The full path to the source file.
fileDest	The full name of the file inside the archive.

Returns

true if success, false otherwise.

La funzione fallisce se:

- zip==NULL;
- l'oggetto zip e stato aperto in una modalita non compatibile con l'aggiunta di file;
- non e possibile aprire il file d'origine;
- non e possibile creare il file all'interno dell'oggetto zip;
- si e rilevato un errore nella copia dei dati;
- non e stato possibile chiudere il file all'interno dell'oggetto zip;

Definition at line 53 of file JICompress.cpp.

References QuaZipFile::close(), copyData(), QuaZip::getMode(), QuaZipFile::getZipError(), QuaZip::mdAdd, QuaZip::mdAppend, QuaZip::mdCreate, QuaZipFile::open(), and UNZ_OK.

Referenced by compressFile(), compressFiles(), and compressSubDir().

```
53                                                                                  {
54     // zip: oggetto dove aggiungere il file
55     // fileName: nome del file reale
56     // fileDest: nome del file all'interno del file compresso
57
58     // Controllo l'apertura dello zip
59     if (!zip) return false;
60     if (zip->getMode()!=QuaZip::mdCreate &&
61         zip->getMode()!=QuaZip::mdAppend &&
62         zip->getMode()!=QuaZip::mdAdd) return false;
63
64     // Apro il file originale
65     QFile inFile;
66     inFile.setFileName(fileName);
67     if(!inFile.open(QIODevice::ReadOnly)) return false;
68
69     // Apro il file risulato
70     QuaZipFile outFile(zip);
71     if(!outFile.open(QIODevice::WriteOnly, QuaZipNewInfo(fileDest, inFile.fileName()))) return
       false;
72
73     // Copio i dati
74     if (!copyData(inFile, outFile) || outFile.getZipError()!=UNZ_OK) {
75         return false;
76     }
77
78     // Chiudo i file
79     outFile.close();
80     if (outFile.getZipError()!=UNZ_OK) return false;
81     inFile.close();
82
83     return true;
84 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.21.2.3 bool JICompress::compressFile (QString *fileCompressed*, QString *file*) [static]

OK Comprime il file fileName nel file fileCompressed.

Parameters

fileCompressed	The name of the archive.
file	The file to compress.

Returns

true if success, false otherwise.

Se la funzione fallisce restituisce false e cancella il file che si e tentato di creare.

La funzione fallisce se:

- non si riesce ad aprire l'oggetto zip;
- la compressione del file fallisce;
- non si riesce a chiudere l'oggetto zip;

Definition at line 263 of file JICompress.cpp.

References QuaZip::close(), compressFile(), QuaZip::getZipError(), QuaZip::mdCreate, and QuaZip::open().

```
263                                                                 {
264     // Creo lo zip
265     QuaZip zip(fileCompressed);
266     QDir().mkpath(QFileInfo(fileCompressed).absolutePath());
267     if(!zip.open(QuaZip::mdCreate)) {
268         QFile::remove(fileCompressed);
269         return false;
270     }
271
272     // Aggiungo il file
273     if (!compressFile(&zip,file,QFileInfo(file).fileName())) {
274         QFile::remove(fileCompressed);
275         return false;
276     }
277
278     // Chiudo il file zip
279     zip.close();
280     if(zip.getZipError()!=0) {
281         QFile::remove(fileCompressed);
282         return false;
283     }
284
285     return true;
286 }
```

Here is the call graph for this function:

12.21.2.4 bool JlCompress::compressFiles (QString *fileCompressed*, QStringList *files*) [static]

OK Comprime i file specificati in files nel file fileCompressed.

Parameters

fileCompressed	The name of the archive.
files	The file list to compress.

Returns

true if success, false otherwise.

Se la funzione fallisce restituisce false e cancella il file che si e tentato di creare.

La funzione fallisce se:

- non si riesce ad aprire l'oggetto zip;
- la compressione di un file fallisce;
- non si riesce a chiudere l'oggetto zip;

Definition at line 298 of file JICompress.cpp.

References QuaZip::close(), compressFile(), QuaZip::getZipError(), QuaZip::mdCreate, and QuaZip::open().

```
298                                                                     {
299     // Creo lo zip
300     QuaZip zip(fileCompressed);
301     QDir().mkpath(QFileInfo(fileCompressed).absolutePath());
302     if(!zip.open(QuaZip::mdCreate)) {
303         QFile::remove(fileCompressed);
304         return false;
305     }
306
307     // Comprimo i file
308     QFileInfo info;
309     Q_FOREACH (QString file, files) {
310         info.setFile(file);
311         if (!info.exists() || !compressFile(&zip,file,info.fileName())) {
312             QFile::remove(fileCompressed);
313             return false;
314         }
315     }
316
317     // Chiudo il file zip
318     zip.close();
319     if(zip.getZipError()!=0) {
320         QFile::remove(fileCompressed);
321         return false;
322     }
323
324     return true;
325 }
```

Here is the call graph for this function:

12.21.2.5 bool JlCompress::compressSubDir (QuaZip * *zip,* QString *dir,* QString *origDir,* bool *recursive* = `true`) [static],[private]

OK Comprime la cartella dir nel file fileCompressed, se recursive e true allora comprime anche le sotto cartelle.

Parameters

parentZip	Opened zip containing the parent directory.
dir	The full path to the directory to pack.
parentDir	The full path to the directory corresponding to the root of the ZIP.
recursive	Whether to pack sub-directories as well or only files.

Returns

true if success, false otherwise.

I nomi dei file preceduti dal path creato togliendo il pat della cartella origDir al path della cartella dir. Se la funzione fallisce restituisce false e cancella il file che si e tentato di creare.

La funzione fallisce se:

- zip==NULL;
- l'oggetto zip e stato aperto in una modalita non compatibile con l'aggiunta di file;
- la cartella dir non esiste;
- la compressione di una sotto cartella fallisce (1);
- la compressione di un file fallisce; (1) La funzione si richiama in maniera ricorsiva per comprimere le sotto cartelle dunque gli errori di compressione di una sotto cartella sono gli stessi di questa funzione.

Definition at line 103 of file JlCompress.cpp.

References QuaZipFile::close(), compressFile(), QuaZip::getMode(), QuaZip::getZipName(), QuaZip::mdAdd, QuaZip::mdAppend, QuaZip::mdCreate, and QuaZipFile::open().

Referenced by compressDir().

```
103                                                                                                    {
104     // zip: oggetto dove aggiungere il file
105     // dir: cartella reale corrente
106     // origDir: cartella reale originale
107     // (path(dir)-path(origDir)) = path interno all'oggetto zip
108
109     // Controllo l'apertura dello zip
110     if (!zip) return false;
111     if (zip->getMode()!=QuaZip::mdCreate &&
112         zip->getMode()!=QuaZip::mdAppend &&
113         zip->getMode()!=QuaZip::mdAdd) return false;
114
115     // Controllo la cartella
116     QDir directory(dir);
117     if (!directory.exists()) return false;
118
119     QDir origDirectory(origDir);
120     if (dir != origDir) {
121         QuaZipFile dirZipFile(zip);
122         if (!dirZipFile.open(QIODevice::WriteOnly,
123             QuaZipNewInfo(origDirectory.relativeFilePath(dir) + "/", dir), 0, 0, 0)) {
124                 return false;
125         }
126         dirZipFile.close();
127     }
128
129
130     // Se comprimo anche le sotto cartelle
131     if (recursive) {
132         // Per ogni sotto cartella
133         QFileInfoList files = directory.entryInfoList(QDir::AllDirs|QDir::NoDotAndDotDot);
134         Q_FOREACH (QFileInfo file, files) {
135             // Comprimo la sotto cartella
136             if(!compressSubDir(zip,file.absoluteFilePath(),origDir,recursive)) return false;
137         }
138     }
139
140     // Per ogni file nella cartella
141     QFileInfoList files = directory.entryInfoList(QDir::Files);
142     Q_FOREACH (QFileInfo file, files) {
143         // Se non e un file o e il file compresso che sto creando
```

```
        if(!file.isFile()||file.absoluteFilePath()==zip->getZipName()) continue;

        // Creo il nome relativo da usare all'interno del file compresso
        QString filename = origDirectory.relativeFilePath(file.absoluteFilePath());

        // Comprimo il file
        if (!compressFile(zip,file.absoluteFilePath(),filename)) return false;
    }

    return true;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.21.2.6 QStringList JICompress::extractDir (QString *fileCompressed*, QString *dir* = `QString()`) [static]

OK Estrae il file fileCompressed nella cartella dir.

Parameters

fileCompressed	The name of the archive.
dir	The directory to extract to, the current directory if left empty.

Returns

The list of the full paths of the files extracted, empty on failure.

Se dir = "" allora il file viene estratto nella cartella corrente. Se la funzione fallisce cancella i file che si e tentato di estrarre. Restituisce i nomi assoluti dei file estratti.

La funzione fallisce se:

- non si riesce ad aprire l'oggetto zip;
- la compressione di un file fallisce;
- non si riesce a chiudere l'oggetto zip;

Definition at line 451 of file JlCompress.cpp.

References QuaZip::close(), extractFile(), QuaZip::getCurrentFileName(), QuaZip::getZipError(), QuaZip::goToFirstFile(), QuaZip::goToNextFile(), QuaZip::mdUnzip, QuaZip::open(), and removeFile().

```
451                                                                 {
452     // Apro lo zip
453     QuaZip zip(fileCompressed);
454     if(!zip.open(QuaZip::mdUnzip)) {
455         return QStringList();
456     }
457
458     QDir directory(dir);
459     QStringList extracted;
460     if (!zip.goToFirstFile()) {
461         return QStringList();
462     }
463     do {
464         QString name = zip.getCurrentFileName();
465         QString absFilePath = directory.absoluteFilePath(name);
466         if (!extractFile(&zip, "", absFilePath)) {
467             removeFile(extracted);
468             return QStringList();
469         }
470         extracted.append(absFilePath);
471     } while (zip.goToNextFile());
472
473     // Chiudo il file zip
474     zip.close();
475     if(zip.getZipError()!=0) {
476         removeFile(extracted);
477         return QStringList();
478     }
479
480     return extracted;
481 }
```

Here is the call graph for this function:

12.21.2.7 bool JlCompress::extractFile (QuaZip * *zip*, QString *fileName*, QString *fileDest*) [static],[private]

OK Estrae il file fileName, contenuto nell'oggetto zip, con il nome fileDest.

Parameters

zip	The opened zip archive to extract from.
fileName	The full name of the file to extract.
fileDest	The full path to the destination file.

Returns

true if success, false otherwise.

Se la funzione fallisce restituisce false e cancella il file che si e tentato di estrarre.

La funzione fallisce se:

- zip==NULL;
- l'oggetto zip e stato aperto in una modalita non compatibile con l'estrazione di file;
- non e possibile aprire il file all'interno dell'oggetto zip;
- non e possibile creare il file estratto;
- si e rilevato un errore nella copia dei dati (1);
- non e stato possibile chiudere il file all'interno dell'oggetto zip (1);

(1): prima di uscire dalla funzione cancella il file estratto.

Definition at line 170 of file JlCompress.cpp.

References QuaZipFile::close(), copyData(), QuaZip::getCurrentFileInfo(), QuaZip::getMode(), QuaZipFileInfo64::getPermissions(), QuaZipFile::getZipError(), QuaZip::mdUnzip, QuaZipFile::open(), removeFile(), QuaZip::setCurrentFile(), and UNZ_OK.

Referenced by extractDir(), extractFile(), and extractFiles().

```
170                                                                                 {
171     // zip: oggetto dove aggiungere il file
172     // filename: nome del file reale
173     // fileincompress: nome del file all'interno del file compresso
174
175     // Controllo l'apertura dello zip
176     if (!zip) return false;
177     if (zip->getMode()!=QuaZip::mdUnzip) return false;
178
179     // Apro il file compresso
180     if (!fileName.isEmpty())
181         zip->setCurrentFile(fileName);
182     QuaZipFile inFile(zip);
183     if(!inFile.open(QIODevice::ReadOnly) || inFile.getZipError()!=UNZ_OK) return false;
184
185     // Controllo esistenza cartella file risultato
186     QDir curDir;
187     if (fileDest.endsWith('/')) {
188         if (!curDir.mkpath(fileDest)) {
189             return false;
190         }
191     } else {
192         if (!curDir.mkpath(QFileInfo(fileDest).absolutePath())) {
193             return false;
194         }
195     }
196
197     QuaZipFileInfo64 info;
198     if (!zip->getCurrentFileInfo(&info))
199         return false;
200
201     QFile::Permissions srcPerm = info.getPermissions();
202     if (fileDest.endsWith('/') && QFileInfo(fileDest).isDir()) {
203         if (srcPerm != 0) {
```

```
            QFile(fileDest).setPermissions(srcPerm);
        }
        return true;
    }

    // Apro il file risultato
    QFile outFile;
    outFile.setFileName(fileDest);
    if(!outFile.open(QIODevice::WriteOnly)) return false;

    // Copio i dati
    if (!copyData(inFile, outFile) || inFile.getZipError()!=UNZ_OK) {
        outFile.close();
        removeFile(QStringList(fileDest));
        return false;
    }
    outFile.close();

    // Chiudo i file
    inFile.close();
    if (inFile.getZipError()!=UNZ_OK) {
        removeFile(QStringList(fileDest));
        return false;
    }

    if (srcPerm != 0) {
        outFile.setPermissions(srcPerm);
    }
    return true;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.21.2.8 QString JlCompress::extractFile (QString *fileCompressed*, QString *fileName*, QString *fileDest* = `QString()`) `[static]`

OK Estrae il file fileName, contenuto nel file fileCompressed, con il nome fileDest.

Parameters

fileCompressed	The name of the archive.
fileName	The file to extract.
fileDest	The destination file, assumed to be identical to *file* if left empty.

Returns

The list of the full paths of the files extracted, empty on failure.

Se fileDest = "" allora il file viene estratto con lo stesso nome con cui e stato compresso. Se la funzione fallisce cancella il file che si e tentato di estrarre. Restituisce il nome assoluto del file estratto.

La funzione fallisce se:

- non si riesce ad aprire l'oggetto zip;
- l'estrazione del file fallisce;
- non si riesce a chiudere l'oggetto zip;

Definition at line 377 of file JlCompress.cpp.

References QuaZip::close(), extractFile(), QuaZip::getZipError(), QuaZip::mdUnzip, QuaZip::open(), and removeFile().

```
377                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
378     // Apro lo zip
379     QuaZip zip(fileCompressed);
380     if(!zip.open(QuaZip::mdUnzip)) {
381         return QString();
382     }
383
384     // Estraggo il file
385     if (fileDest.isEmpty())
386         fileDest = fileName;
387     if (!extractFile(&zip,fileName,fileDest)) {
388         return QString();
389     }
390
391     // Chiudo il file zip
392     zip.close();
393     if(zip.getZipError()!=0) {
394         removeFile(QStringList(fileDest));
395         return QString();
396     }
397     return QFileInfo(fileDest).absoluteFilePath();
398 }
```

Here is the call graph for this function:

12.21.2.9 QStringList JICompress::extractFiles (QString *fileCompressed*, QStringList *files*, QString *dir* = `QString()`) `[static]`

OK Estrae i file specificati in files, contenuti nel file fileCompressed, nella cartella dir.

Parameters

fileCompressed	The name of the archive.
files	The file list to extract.
dir	The directory to put the files to, the current directory if left empty.

Returns

The list of the full paths of the files extracted, empty on failure.

La struttura a cartelle del file compresso viene rispettata. Se dir = "" allora il file viene estratto nella cartella corrente. Se la funzione fallisce cancella i file che si e tentato di estrarre. Restituisce i nomi assoluti dei file estratti.

La funzione fallisce se:

- non si riesce ad aprire l'oggetto zip;
- l'estrazione di un file fallisce;
- non si riesce a chiudere l'oggetto zip;

Definition at line 412 of file JICompress.cpp.

References QuaZip::close(), extractFile(), QuaZip::getZipError(), QuaZip::mdUnzip, QuaZip::open(), and removeFile().

```
                                                                                                                    {
    // Creo lo zip
    QuaZip zip(fileCompressed);
    if(!zip.open(QuaZip::mdUnzip)) {
        return QStringList();
    }

    // Estraggo i file
    QStringList extracted;
    for (int i=0; i<files.count(); i++) {
        QString absPath = QDir(dir).absoluteFilePath(files.at(i));
        if (!extractFile(&zip, files.at(i), absPath)) {
            removeFile(extracted);
            return QStringList();
        }
        extracted.append(absPath);
    }

    // Chiudo il file zip
    zip.close();
    if(zip.getZipError()!=0) {
        removeFile(extracted);
        return QStringList();
    }

    return extracted;
}
```

Here is the call graph for this function:

12.21.2.10 QStringList JlCompress::getFileList (QString *fileCompressed*) [static]

OK Restituisce la lista dei file resenti nel file compresso fileCompressed.

Returns

The list of the files in the archive, or, more precisely, the list of the entries, including both files and directories if they are present separately.

Se la funzione fallisce, restituisce un elenco vuoto.

La funzione fallisce se:

- non si riesce ad aprire l'oggetto zip;
- la richiesta di informazioni di un file fallisce;
- non si riesce a chiudere l'oggetto zip;

Definition at line 492 of file JICompress.cpp.

References QuaZip::close(), QuaZip::getCurrentFileInfo(), QuaZip::getZipError(), QuaZip::goToFirstFile(), QuaZip::goToNextFile(), QuaZip::mdUnzip, QuaZipFileInfo64::name, and QuaZip::open().

```
492                                                         {
493     // Apro lo zip
494     QuaZip* zip = new QuaZip(QFileInfo(fileCompressed).absoluteFilePath());
495     if(!zip->open(QuaZip::mdUnzip)) {
496         delete zip;
497         return QStringList();
498     }
499
500     // Estraggo i nomi dei file
501     QStringList lst;
502     QuaZipFileInfo64 info;
503     for(bool more=zip->goToFirstFile(); more; more=zip->
      goToNextFile()) {
504       if(!zip->getCurrentFileInfo(&info)) {
505           delete zip;
506           return QStringList();
507       }
508       lst << info.name;
509       //info.name.toLocal8Bit().constData()
510     }
511
512     // Chiudo il file zip
513     zip->close();
514     if(zip->getZipError()!=0) {
515         delete zip;
516         return QStringList();
517     }
518     delete zip;
519
520     return lst;
521 }
```

Here is the call graph for this function:

12.21.2.11 bool JlCompress::removeFile (QStringList *listFile*) [static],[private]

Rimuove i file il cui nome e specificato all'interno di listFile.

Parameters

listFile	The list of files to remove.

Returns

true if success, false otherwise.

Restituisce true se tutti i file sono stati cancellati correttamente, attenzione perche puo restituire false anche se alcuni file non esistevano e si e tentato di cancellarli.

Definition at line 241 of file JlCompress.cpp.

Referenced by extractDir(), extractFile(), and extractFiles().

```
241                                                 {
242     bool ret = true;
243     // Per ogni file
244     for (int i=0; i<listFile.count(); i++) {
245         // Lo elimino
246         ret = ret && QFile::remove(listFile.at(i));
247     }
248     return ret;
249 }
```

Here is the caller graph for this function:

The documentation for this class was generated from the following files:

- src/ckb/quazip/JlCompress.h
- src/ckb/quazip/JlCompress.cpp

12.22 Kb Class Reference

```
#include <src/ckb/kb.h>
```

Inheritance diagram for Kb:

Collaboration diagram for Kb:

Public Slots

- void frameUpdate ()
- void autoSave ()

Signals

- void infoUpdated ()
- void profileAdded ()
- void profileRenamed ()
- void modeRenamed ()
- void profileChanged ()
- void modeChanged (bool spontaneous)
- void fwUpdateProgress (int current, int total)
- void fwUpdateFinished (bool succeeded)

Public Member Functions

- KeyMap::Model model () const
- bool isKeyboard () const
- bool isMouse () const
- KbProfile ∗ hwProfile ()
- void hwProfile (KbProfile ∗newHwProfile)
- void fwUpdate (const QString &path)
- KbProfile ∗ currentProfile ()
- const QList< KbProfile ∗ > & profiles () const
- void profiles (const QList< KbProfile ∗ > &newProfiles)
- void appendProfile (KbProfile ∗newProfile)
- int indexOf (KbProfile ∗profile)
- KbProfile ∗ find (const QUuid &id)
- KbMode ∗ currentMode ()

- KbLight ∗ currentLight ()
- KbBind ∗ currentBind ()
- KbPerf ∗ currentPerf ()
- void setCurrentProfile (KbProfile ∗profile, bool spontaneous=true)
- void setCurrentMode (KbProfile ∗profile, KbMode ∗mode, bool spontaneous=true)
- void setCurrentMode (KbProfile ∗profile, int index, bool spontaneous=true)
- void setCurrentMode (KbMode ∗mode, bool spontaneous=true)
- KbProfile ∗ newProfile ()
- KbProfile ∗ newProfile (KbProfile ∗other)
- KbMode ∗ newMode ()
- KbMode ∗ newMode (KbMode ∗other)
- void load ()
- void save ()
- bool needsSave () const
- void hwSave ()
- int getMacroNumber ()

  For usage with macro definions, these two params must only be readable. So there are no setters.
- QString getMacroPath ()

  getMacroPath returns the macroPath (e.g. /dev/input/ckb1/notify), which we have saved in the constructor. For usage with macro definions, this param must only be readable. So there is no setter.
- ∼Kb ()

Static Public Member Functions

- static int frameRate ()
- static void frameRate (int newFrameRate)
- static KeyMap::Layout layout ()
- static void layout (KeyMap::Layout newLayout)
- static bool dither ()
- static void dither (bool newDither)
- static bool macroDelay ()
- static void macroDelay (bool flag)

  Kb::macroDelay handles the UI-Element macroBox. Sends a command to the keyboard to switch on or off the delay function on very large macros.
- static bool mouseAccel ()
- static void mouseAccel (bool newAccel)
- static int scrollSpeed ()
- static void scrollSpeed (int newSpeed)

Data Fields

- QString usbModel
- QString usbSerial
- QString features
- QString firmware
- QString pollrate
- bool monochrome
- int hwModeCount

Static Public Attributes

- static const int HWMODE_MAX = 3

Private Slots

- void readNotify (QString line)
- void deleteHw ()
- void deletePrevious ()

Private Member Functions

- Kb (QObject *parent, const QString &path)
- bool isOpen () const
- bool matches (const QString &path, const QString &serial)
- void updateLayout ()
- void writeProfileHeader ()
- KeyMap getKeyMap ()
- void run ()

Private Attributes

- QString devpath

  pathVars devpath is the device root path (e.g. /dev/device/ckb1), cmdpath leads to the daemon input pipe for daemon commands, notifyPath is the standard input monitor for general purpose, macroPath added for a second thread to read macro input.
- QString cmdpath
- QString notifyPath
- QString macroPath
- KbProfile * _currentProfile
- QList< KbProfile * > _profiles
- KbMode * _currentMode
- KeyMap::Model _model
- bool iState [KbPerf::HW_I_COUNT]
- QString prefsPath
- quint64 lastAutoSave
- QString fwUpdPath
- KbProfile * _hwProfile
- KbProfile * prevProfile
- KbMode * prevMode
- QFile cmd
- int notifyNumber

  notifyNumber is the trailing number in the device path.
- int macroNumber
- bool _needsSave
- bool hwLoading [HWMODE_MAX+1]

Static Private Attributes

- static KeyMap::Layout _layout = KeyMap::NO_LAYOUT
- static int _frameRate = 30
- static int _scrollSpeed = 0
- static bool _dither = false
- static bool _mouseAccel = true
- static bool _delay = false

Friends

- class KbManager

12.22.1 Detailed Description

Definition at line 11 of file kb.h.

12.22.2 Constructor & Destructor Documentation

12.22.2.1 Kb::~Kb ( )

<

Todo I don't think, that notifypaths is used somewhere. So why do we have it? If we do not need it, searching for an ununsed notify channel can easy be refactored to a private member function.

Definition at line 141 of file kb.cpp.

References activeDevices, isOpen(), macroPath, notifyNumber, notifyPaths, and save().

```
141         {
142     // Save settings first
143     save();
144
145     // remove the notify channel from the list of notifyPaths.
148     notifyPaths.remove(macroPath);
149
150     // Kill notification thread and remove node
151     activeDevices.remove(this);
152     if(!isOpen()){
153         terminate();
154         wait(1000);
155         return;
156     }
157     if(notifyNumber > 0)
158         cmd.write(QString("idle\nnotifyoff %1\n").arg(notifyNumber).toLatin1());
159     cmd.flush();
160     terminate();
161     wait(1000);
162     cmd.close();
163 }
```

Here is the call graph for this function:

12.22.2.2 Kb::Kb (QObject * *parent*, const QString & *path*) [private]

<

Todo Is adding notify2 to the notifypaths neccessary?

Definition at line 19 of file kb.cpp.

References _delay, _dither, _frameRate, _layout, _mouseAccel, _scrollSpeed, activeDevices, cmdpath, features, firmware, KeyMap::getModel(), hwLoading, hwModeCount, infoUpdated(), KeyMap::isISO(), iState, KeyMap::K95, macroNumber, macroPath, monochrome, KeyMap::NO_MODEL, notifyNumber, notifyPath, notifyPathMutex, notifyPaths, pollrate, prefsPath, usbModel, and usbSerial.

```
19                                          :
20     QThread(parent), features("N/A"), firmware("N/A"),
      pollrate("N/A"), monochrome(false),
21     devpath(path), cmdpath(path + "/cmd"), notifyPath(path + "/notify1"),
      macroPath(path + "/notify2"),
22     _currentProfile(0), _currentMode(0), _model(
      KeyMap::NO_MODEL),
23     lastAutoSave(QDateTime::currentMSecsSinceEpoch()),
24     _hwProfile(0), prevProfile(0), prevMode(0),
25     cmd(cmdpath), notifyNumber(1), macroNumber(2),
      _needsSave(false)
26 {
27     memset(iState, 0, sizeof(iState));
28     memset(hwLoading, 0, sizeof(hwLoading));
29
30     // Get the features, model, serial number, FW version (if available), and poll rate (if available) from
       /dev nodes
31     QFile ftpath(path + "/features"), mpath(path + "/model"), spath(path + "/serial"), fwpath(path + "
      /fwversion"), ppath(path + "/pollrate");
32     if(ftpath.open(QIODevice::ReadOnly)){
33         features = ftpath.read(1000);
34         features = features.trimmed();
35         ftpath.close();
36         // Read model from features (first word: vendor, second word: product)
37         QStringList list = features.split(" ");
38         if(list.length() < 2)
39             return;
40         _model = KeyMap::getModel(list[1]);
41         if(_model == KeyMap::NO_MODEL)
42             return;
43     } else
44         // Bail if features aren't readable
45         return;
46     if(features.contains("monochrome"))
47         monochrome = true;
48     if(mpath.open(QIODevice::ReadOnly)){
49         usbModel = mpath.read(100);
50         usbModel = usbModel.remove("Corsair").remove("Gaming").remove("Keyboard").remove("
      Mouse").remove("Bootloader").trimmed();
51         mpath.close();
52     }
53     if(usbModel == "")
54         usbModel = "Keyboard";
55     if(spath.open(QIODevice::ReadOnly)){
56         usbSerial = spath.read(100);
57         usbSerial = usbSerial.trimmed().toUpper();
58         spath.close();
59     }
60     if(usbSerial == "")
61         usbSerial = "Unknown-" + usbModel;
62     if(features.contains("fwversion") && fwpath.open(QIODevice::ReadOnly)){
63         firmware = fwpath.read(100);
64         firmware = QString::number(firmware.trimmed().toInt() / 100., 'f', 2);
65         fwpath.close();
66     }
67     if(features.contains("pollrate") && ppath.open(QIODevice::ReadOnly)){
68         pollrate = ppath.read(100);
69         pollrate = pollrate.trimmed();
70         ppath.close();
71     }
72
73     prefsPath = "Devices/" + usbSerial;
74
75     hwModeCount = (_model == KeyMap::K95) ? 3 : 1;
76     // Open cmd in non-blocking mode so that it doesn't lock up if nothing is reading
77     // (e.g. if the daemon crashed and didn't clean up the node)
78     int fd = open(cmdpath.toLatin1().constData(), O_WRONLY | O_NONBLOCK);
79     if(!cmd.open(fd, QIODevice::WriteOnly, QFileDevice::AutoCloseHandle))
80         return;
```

```

    // Find an available notification node (if none is found, take notify1)
    {
        QMutexLocker locker(&notifyPathMutex);
        for(int i = 1; i < 10; i++){
            QString notify = QString(path + "/notify%1").arg(i);
            if(!QFile::exists(notify) && !notifyPaths.contains(notify)){
                notifyNumber = i;
                notifyPath = notify;
                break;
            }
        }
        notifyPaths.insert(notifyPath);
    }
    cmd.write(QString("notifyon %1\n").arg(notifyNumber).toLatin1());
    cmd.flush();

    // Again, find an available notification node for macro definition
    // (if none is found, take notify2)
    {
        QMutexLocker locker(&notifyPathMutex);
        for(int i = 1; i < 10; i++){
            QString notify = QString(path + "/notify%1").arg(i);
            if(!QFile::exists(notify) && !notifyPaths.contains(notify)){
                macroNumber = i;
                macroPath = notify;
                break;
            }
        }
        notifyPaths.insert(notifyPath);
    }
    // Activate device, apply settings, and ask for hardware profile
    cmd.write(QString("fps %1\n").arg(_frameRate).toLatin1());
    cmd.write(QString("dither %1\n").arg(static_cast<int>(_dither)).toLatin1());
    cmd.write(QString("\ndelay %1\n").arg(_delay? "on" : "off").toLatin1());
#ifdef Q_OS_MACX
    // Write ANSI/ISO flag to daemon (OSX only)
    cmd.write("layout ");
    cmd.write(KeyMap::isISO(_layout) ? "iso" : "ansi");
    // Also OSX only: scroll speed and mouse acceleration
    cmd.write(QString("accel %1\n").arg(QString(_mouseAccel ? "on" : "off")).toLatin1());
    cmd.write(QString("scrollspeed %1\n").arg(_scrollSpeed).toLatin1());
#endif
    cmd.write(QString("\nactive\n@%1 get :hwprofileid").arg(notifyNumber).toLatin1());
    hwLoading[0] = true;
    for(int i = 0; i < hwModeCount; i++){
        cmd.write(QString(" mode %1 get :hwid").arg(i + 1).toLatin1());
        hwLoading[i + 1] = true;
    }
    // Ask for current indicator and key state
    cmd.write(" get :i :keys\n");
    cmd.flush();

    emit infoUpdated();
    activeDevices.insert(this);

    // Start a separate thread to read from the notification node
    start();
}
```

Here is the call graph for this function:

12.22.3 Member Function Documentation

12.22.3.1 void Kb::appendProfile (KbProfile * *newProfile*) [inline]

Definition at line 60 of file kb.h.

References _needsSave, and _profiles.

Referenced by KbProfileDialog::on_profileList_itemClicked().

```
60 { _needsSave = true; _profiles.append(newProfile); }
```

Here is the caller graph for this function:

12.22.3.2 void Kb::autoSave ( ) [slot]

Definition at line 289 of file kb.cpp.

References CkbSettings::isBusy(), lastAutoSave, needsSave(), and save().

```
289                 {
290     quint64 now = QDateTime::currentMSecsSinceEpoch();
291     if(needsSave() && now >= lastAutoSave + 15 * 1000 && !
      CkbSettings::isBusy()){
292         save();
293         lastAutoSave = now;
294     }
295 }
```

Here is the call graph for this function:

12.22.3.3 KbBind* Kb::currentBind ( ) [inline]

Definition at line 67 of file kb.h.

References _currentMode, and KbMode::bind().

Referenced by KbWidget::modeChanged().

```
67 { return !_currentMode ? 0 : _currentMode->bind(); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.4 KbLight* Kb::currentLight ( ) [inline]

Definition at line 66 of file kb.h.

References _currentMode, and KbMode::light().

Referenced by KbWidget::modeChanged().

```
66 { return !_currentMode ? 0 : _currentMode->light(); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.5 KbMode* Kb::currentMode ( ) [inline]

Definition at line 65 of file kb.h.

References _currentMode.

Referenced by KbWidget::modeChanged().

```
65 { return _currentMode; }
```

Here is the caller graph for this function:

12.22.3.6 KbPerf* Kb::currentPerf ( ) [inline]

Definition at line 68 of file kb.h.

References _currentMode, and KbMode::perf().

Referenced by KbWidget::modeChanged().

```
68 { return !_currentMode ? 0 : _currentMode->perf(); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.7 KbProfile* Kb::currentProfile ( ) [inline]

Definition at line 56 of file kb.h.

References _currentProfile.

Referenced by KeyAction::keyEvent(), KbWidget::modeChanged(), KbWidget::modeIcon(), KbWidget::modesList_reordered(), KbWidget::on_modesList_currentItemChanged(), KbWidget::on_modesList_customContextMenuRequested(), KbWidget::on_modesList_itemClicked(), KbProfileDialog::on_profileList_customContextMenuRequested(), KbProfileDialog::on_profileList_itemChanged(), KbWidget::profileChanged(), KbProfileDialog::repopulate(), and KbWidget::updateProfileList().

```
56 { return _currentProfile; }
```

Here is the caller graph for this function:

12.22.3.8 void Kb::deleteHw ( ) [private],[slot]

Definition at line 441 of file kb.cpp.

References _hwProfile.

Referenced by hwProfile().

```
441                 {
442     disconnect(_hwProfile, SIGNAL(destroyed()), this, SLOT(deleteHw()));
443     _hwProfile = 0;
444 }
```

Here is the caller graph for this function:

12.22.3.9 void Kb::deletePrevious ( ) [private],[slot]

Definition at line 426 of file kb.cpp.

References prevMode.

Referenced by frameUpdate(), and hwSave().

```
426                         {
427     disconnect(prevMode, SIGNAL(destroyed()), this, SLOT(deletePrevious()));
428     prevMode = 0;
429 }
```

Here is the caller graph for this function:

12.22.3.10 static bool Kb::dither ( ) [inline],[static]

Definition at line 33 of file kb.h.

References _dither.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), and ExtraSettingsWidget::on_ditherBox_clicked().

```
33 { return _dither; }
```

Here is the caller graph for this function:

12.22.3.11 void Kb::dither (bool *newDither*) [static]

Definition at line 204 of file kb.cpp.

References _dither, activeDevices, and cmd.

```
204                                 {
205     if(newDither == _dither)
206         return;
207     _dither = newDither;
208     // Update all devices
209     foreach(Kb* kb, activeDevices){
210         kb->cmd.write(QString("dither %1\n").arg(static_cast<int>(newDither)).toLatin1());
211         kb->cmd.flush();
212     }
213 }
```

12.22.3.12 KbProfile* Kb::find (const QUuid & *id*) [inline]

Definition at line 62 of file kb.h.

References _profiles, UsbId::guid, and KbProfile::id().

Referenced by KbProfileDialog::on_profileList_currentItemChanged(), KbProfileDialog::on_profileList_customContextMenuRequested(), and KbProfileDialog::profileList_reordered().

```
62 { foreach(KbProfile* profile, _profiles) { if(profile->id().
      guid == id) return profile; } return 0; }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.13 static int Kb::frameRate ( ) [inline], [static]

Definition at line 27 of file kb.h.

References _frameRate.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), and ExtraSettingsWidget::on_fpsBox_valueChanged().

```
27 { return _frameRate; }
```

Here is the caller graph for this function:

12.22.3.14 void Kb::frameRate (int *newFrameRate*) [static]

Definition at line 165 of file kb.cpp.

References _frameRate, activeDevices, cmd, and KbManager::fps().

```
165                                 {
166     KbManager::fps(newFrameRate);
167     // If the rate has changed, send to all devices
168     if(newFrameRate == _frameRate)
169         return;
170     _frameRate = newFrameRate;
171     foreach(Kb* kb, activeDevices){
172         kb->cmd.write(QString("fps %1\n").arg(newFrameRate).toLatin1());
173         kb->cmd.flush();
174     }
175 }
```

Here is the call graph for this function:

12.22.3.15 void Kb::frameUpdate ( ) [slot]

Definition at line 375 of file kb.cpp.

References _currentMode, _currentProfile, KbPerf::applyIndicators(), KbMode::bind(), KbLight::close(), deletePrevious(), KbLight::frameUpdate(), KbProfile::indexOf(), KbLight::isStarted(), iState, KbMode::light(), monochrome, notifyNumber, KbLight::open(), KbMode::perf(), prevMode, prevProfile, KbBind::update(), KbPerf::update(), and writeProfileHeader().

```
375                     {
376     // Advance animation frame
377     if(!_currentMode)
378         return;
379     KbLight* light = _currentMode->light();
380     KbBind* bind = _currentMode->bind();
381     KbPerf* perf = _currentMode->perf();
382     if(!light->isStarted()){
383         // Don't do anything until the animations are started
384         light->open();
385         return;
386     }
387
388     // Stop animations on the previously active mode (if any)
389     bool changed = false;
390     if(prevMode != _currentMode){
391         if(prevMode){
392             prevMode->light()->close();
393             disconnect(prevMode, SIGNAL(destroyed()), this, SLOT(
      deletePrevious()));
394         }
395         prevMode = _currentMode;
396         connect(prevMode, SIGNAL(destroyed()), this, SLOT(deletePrevious()));
397         changed = true;
398     }
399
400     // If the profile has changed, update it
401     if(prevProfile != _currentProfile){
402         writeProfileHeader();
403         cmd.write(" ");
404         prevProfile = _currentProfile;
405     }
406
407     // Update current mode
408     int index = _currentProfile->indexOf(_currentMode);
409     // ckb-daemon only has 6 modes: 3 hardware, 3 non-hardware. Beyond mode six, switch back to four.
410     // e.g. 1, 2, 3, 4, 5, 6, 4, 5, 6, 4, 5, 6 ...
411     if(index >= 6)
412         index = 3 + index % 3;
413
414     // Send lighting/binding to driver
415     cmd.write(QString("mode %1 switch ").arg(index + 1).toLatin1());
416     perf->applyIndicators(index, iState);
417     light->frameUpdate(cmd, monochrome);
418     cmd.write(QString("\n@%1 ").arg(notifyNumber).toLatin1());
419     bind->update(cmd, changed);
420     cmd.write(" ");
421     perf->update(cmd, changed);
422     cmd.write("\n");
423     cmd.flush();
424 }
```

Here is the call graph for this function:

12.22.3.16 void Kb::fwUpdate (const QString & *path*)

Definition at line 365 of file kb.cpp.

References fwUpdPath, and notifyNumber.

Referenced by FwUpgradeDialog::on_actionButton_clicked().

```
365                                     {
366     fwUpdPath = path;
367     // Write the active command to ensure it's not ignored
368     cmd.write("active");
369     cmd.write(QString(" @%1 ").arg(notifyNumber).toLatin1());
370     cmd.write("fwupdate ");
371     cmd.write(path.toLatin1());
372     cmd.write("\n");
373 }
```

Here is the caller graph for this function:

12.22.3.17 void Kb::fwUpdateFinished (bool *succeeded*) [signal]

Definition at line 277 of file moc_kb.cpp.

Referenced by readNotify().

```
278 {
279     void *_a[] = { Q_NULLPTR, const_cast<void*>(reinterpret_cast<const void*>(&_t1)) };
280     QMetaObject::activate(this, &staticMetaObject, 7, _a);
281 }
```

Here is the caller graph for this function:

12.22.3.18 void Kb::fwUpdateProgress (int *current*, int *total*) [signal]

Definition at line 270 of file moc_kb.cpp.

Referenced by readNotify().

```
271 {
272     void *_a[] = { Q_NULLPTR, const_cast<void*>(reinterpret_cast<const void*>(&_t1)), const_cast<void*>(
      reinterpret_cast<const void*>(&_t2)) };
273     QMetaObject::activate(this, &staticMetaObject, 6, _a);
274 }
```

Here is the caller graph for this function:

12.22.3.19 KeyMap Kb::getKeyMap ( ) [private]

Definition at line 756 of file kb.cpp.

References _layout.

Referenced by hwSave(), load(), newMode(), newProfile(), readNotify(), setCurrentProfile(), and updateLayout().

```
756                     {
757     return KeyMap(_model, _layout);
758 }
```

Here is the caller graph for this function:

12.22.3.20 int Kb::getMacroNumber ( ) [inline]

getMacroNumber returns the macroNumber, which we have saved in the constructor. For usage with macro definions, this param must only be readable. So there is no setter.

Returns

The Number is returned as int.

Definition at line 97 of file kb.h.

References macroNumber.

Referenced by KbBind::getMacroNumber().

```
97 { return macroNumber; }
```

Here is the caller graph for this function:

12.22.3.21 QString Kb::getMacroPath ( ) [inline]

Returns

The absolute path as String

Definition at line 106 of file kb.h.

References macroPath.

Referenced by KbBind::getMacroPath().

```
106 { return macroPath; }
```

Here is the caller graph for this function:

12.22.3.22 KbProfile* Kb::hwProfile ( ) [inline]

Definition at line 46 of file kb.h.

References _hwProfile.

Referenced by hwSave(), KbWidget::modeIcon(), KbProfileDialog::on_profileList_customContextMenuRequested(), readNotify(), KbProfileDialog::repopulate(), and KbWidget::updateProfileList().

```
46 { return _hwProfile; }
```

Here is the caller graph for this function:

12.22.3.23 void Kb::hwProfile (KbProfile * *newHwProfile*)

Definition at line 431 of file kb.cpp.

References _hwProfile, and deleteHw().

```
{
    if(_hwProfile == newHwProfile)
        return;
    if(_hwProfile)
        disconnect(_hwProfile, SIGNAL(destroyed()), this, SLOT(deleteHw()));
    _hwProfile = newHwProfile;
    if(_hwProfile)
        connect(_hwProfile, SIGNAL(destroyed()), this, SLOT(deleteHw()));
}
```

Here is the call graph for this function:

12.22.3.24 void Kb::hwSave ( )

Definition at line 297 of file kb.cpp.

References _currentMode, _currentProfile, _hwProfile, KbProfile::append(), KbLight::base(), KbLight::close(), deletePrevious(), getKeyMap(), UsbId::guidString(), hwModeCount, UsbId::hwModified, hwProfile(), KbProfile::id(), KbMode::id(), KbMode::light(), KbProfile::modeCount(), KbProfile::modes(), UsbId::modified, UsbId::modifiedString(), monochrome, KbMode::name(), KbMode::perf(), prevMode, KbProfile::setNeedsSave(), KbMode::setNeedsSave(), KbPerf::update(), and writeProfileHeader().

Referenced by KbWidget::on_hwSaveButton_clicked(), and KbProfileDialog::on_profileList_customContextMenuRequested().

```
{
    if(!_currentProfile)
        return;
    // Close active lighting (if any)
    if(prevMode){
        prevMode->light()->close();
        deletePrevious();
    }
    hwProfile(_currentProfile);
    _hwProfile->id().hwModified = _hwProfile->id().modified;
    _hwProfile->setNeedsSave();
    // Re-send the current profile from scratch to ensure consistency
    writeProfileHeader();
    // Make sure there are enough modes
    while(_currentProfile->modeCount() < hwModeCount)
        _currentProfile->append(new KbMode(this, getKeyMap()));
    // Write only the base colors of each mode, no animations
    for(int i = 0; i < hwModeCount; i++){
        KbMode* mode = _currentProfile->modes()[i];
        cmd.write(QString("\nmode %1").arg(i + 1).toLatin1());
        KbLight* light = mode->light();
        KbPerf* perf = mode->perf();
        if(mode == _currentMode)
            cmd.write(" switch");
        // Write the mode name and ID
        cmd.write(" name ");
        cmd.write(QUrl::toPercentEncoding(mode->name()));
        cmd.write(" id ");
        cmd.write(mode->id().guidString().toLatin1());
        cmd.write(" ");
        cmd.write(mode->id().modifiedString().toLatin1());
        cmd.write(" ");
        // Write lighting and performance
        light->base(cmd, true, monochrome);
```

```
        cmd.write(" ");
        perf->update(cmd, true, false);
        // Update mode ID
        mode->id().hwModified = mode->id().modified;
        mode->setNeedsSave();
    }
    cmd.write("\n");

    // Save the profile to memory
    cmd.write("hwsave\n");
    cmd.flush();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.25 int Kb::indexOf (KbProfile * *profile*) [inline]

Definition at line 61 of file kb.h.

References _profiles.

Referenced by KbProfileDialog::on_profileList_customContextMenuRequested().

```
61 { return _profiles.indexOf(profile); }
```

Here is the caller graph for this function:

12.22.3.26 void Kb::infoUpdated ( ) [signal]

Definition at line 233 of file moc_kb.cpp.

Referenced by Kb(), load(), and updateLayout().

```
234 {
235     QMetaObject::activate(this, &staticMetaObject, 0, Q_NULLPTR);
236 }
```

Here is the caller graph for this function:

12.22.3.27 bool Kb::isKeyboard ( ) const [inline]

Definition at line 23 of file kb.h.

References KeyMap::isKeyboard().

Referenced by KbWidget::KbWidget().

```
23 { return KeyMap::isKeyboard(_model); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.28 bool Kb::isMouse ( ) const [inline]

Definition at line 24 of file kb.h.

References KeyMap::isMouse().

Referenced by KbWidget::KbWidget(), and readNotify().

```
24 { return KeyMap::isMouse(_model); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.29 bool Kb::isOpen ( ) const [inline], [private]

Definition at line 147 of file kb.h.

Referenced by KbManager::scanKeyboards(), and ~Kb().

```
147 { return cmd.isOpen(); }
```

Here is the caller graph for this function:

12.22.3.30 static KeyMap::Layout Kb::layout ( ) [inline], [static]

Definition at line 30 of file kb.h.

References _layout.

Referenced by LayoutDialog::LayoutDialog(), SettingsWidget::on_layoutBox_activated(), and SettingsWidget::~SettingsWidget().

```
30 { return _layout; }
```

Here is the caller graph for this function:

12.22.3.31 void Kb::layout (KeyMap::Layout *newLayout*) [static]

Definition at line 177 of file kb.cpp.

References _layout, activeDevices, KeyMap::NO_LAYOUT, and updateLayout().

```
177                                     {
178     if(newLayout == KeyMap::NO_LAYOUT || newLayout == _layout)
179         return;
180     _layout = newLayout;
181     // Update all devices
182     foreach(Kb* kb, activeDevices)
183         kb->updateLayout();
184 }
```

Here is the call graph for this function:

12.22.3.32 void Kb::load ( )

Definition at line 241 of file kb.cpp.

References _needsSave, _profiles, current, getKeyMap(), infoUpdated(), prefsPath, profileAdded(), setCurrentProfile(), and CkbSettings::value().

Referenced by KbManager::scanKeyboards().

```
241             {
242     if(prefsPath.isEmpty())
243         return;
244     _needsSave = false;
245     CkbSettings settings(prefsPath);
246     // Read profiles
247     KbProfile* newCurrentProfile = 0;
248     QString current = settings.value("CurrentProfile").toString().trimmed().toUpper();
249     foreach(QString guid, settings.value("Profiles").toString().split(" ")){
250         guid = guid.trimmed().toUpper();
251         if(guid != ""){
252             KbProfile* profile = new KbProfile(this, getKeyMap(), settings, guid
    );
253             _profiles.append(profile);
254             if(guid == current || !newCurrentProfile)
255                 newCurrentProfile = profile;
256         }
257     }
258     if(newCurrentProfile)
259         setCurrentProfile(newCurrentProfile);
260     else {
261         // If nothing was loaded, load the demo profile
262         QSettings demoSettings(":/txt/demoprofile.conf", QSettings::IniFormat, this);
263         CkbSettings cSettings(demoSettings);
264         KbProfile* demo = new KbProfile(this, getKeyMap(), cSettings, "
    {BA7FC152-2D51-4C26-A7A6-A036CC93D924}");
265         _profiles.append(demo);
266         setCurrentProfile(demo);
267     }
268
269     emit infoUpdated();
270     emit profileAdded();
271 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.33 static bool Kb::macroDelay ( ) [inline], [static]

Definition at line 36 of file kb.h.

References _delay.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), and ExtraSettingsWidget::on_delayBox_clicked().

```
36 { return _delay; }
```

Here is the caller graph for this function:

12.22.3.34 void Kb::macroDelay (bool *flag*) [static]

Parameters

flag	true: Switch on delay function, else switch off

Definition at line 787 of file kb.cpp.

References _delay, activeDevices, and cmd.

```
787                                 {
788     _delay = flag;
789
790     foreach(Kb* kb, activeDevices){
791         kb->cmd.write(QString("\ndelay %1\n").arg(flag? "on" : "off").toLatin1());
792     }
793 }
```

12.22.3.35 bool Kb::matches (const QString & *path,* const QString & *serial*) [inline],[private]

Definition at line 157 of file kb.h.

References devpath, and usbSerial.

Referenced by KbManager::scanKeyboards().

```
157 { return path.trimmed() == devpath.trimmed() && usbSerial == serial.trimmed().toUpper(); }
```

Here is the caller graph for this function:

12.22.3.36 void Kb::modeChanged (bool *spontaneous*) [signal]

Definition at line 263 of file moc_kb.cpp.

Referenced by setCurrentMode().

```
264 {
265     void *_a[] = { Q_NULLPTR, const_cast<void*>(reinterpret_cast<const void*>(&_t1)) };
266     QMetaObject::activate(this, &staticMetaObject, 5, _a);
267 }
```

Here is the caller graph for this function:

12.22.3.37 KeyMap::Model Kb::model ( ) const [inline]

Definition at line 22 of file kb.h.

References _model.

```
22 { return _model; }
```

12.22.3.38 void Kb::modeRenamed ( ) [signal]

Definition at line 251 of file moc_kb.cpp.

Referenced by readNotify().

```
252 {
253     QMetaObject::activate(this, &staticMetaObject, 3, Q_NULLPTR);
254 }
```

Here is the caller graph for this function:

12.22.3.39 static bool Kb::mouseAccel ( ) [inline],[static]

Definition at line 39 of file kb.h.

References _mouseAccel.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), and ExtraSettingsWidget::on_mAccelBox_clicked().

```
39 { return _mouseAccel; }
```

Here is the caller graph for this function:

12.22.3.40 void Kb::mouseAccel (bool *newAccel*) [static]

Definition at line 215 of file kb.cpp.

References _mouseAccel, activeDevices, and cmd.

```
215                                 {
216     if(newAccel == _mouseAccel)
217         return;
218     _mouseAccel = newAccel;
219 #ifdef Q_OS_MACX
220     // Update all devices
221     foreach(Kb* kb, activeDevices){
222         kb->cmd.write(QString("accel %1\n").arg(QString(newAccel ? "on" : "off")).toLatin1());
223         kb->cmd.flush();
224     }
225 #endif
226 }
```

12.22.3.41 bool Kb::needsSave ( ) const

Definition at line 344 of file kb.cpp.

References _needsSave, _profiles, and KbProfile::needsSave().

Referenced by autoSave().

```
344                         {
345     if(_needsSave)
346         return true;
347     foreach(const KbProfile* profile, _profiles){
348         if(profile->needsSave())
349             return true;
350     }
351     return false;
352 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.42 KbMode* Kb::newMode ( ) [inline]

Definition at line 79 of file kb.h.

References getKeyMap().

Referenced by KbWidget::on_modesList_customContextMenuRequested(), and KbWidget::on_modesList_itemClicked().

```
79 { return new KbMode(this, getKeyMap()); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.43 KbMode* Kb::newMode (KbMode * *other*) [inline]

Definition at line 80 of file kb.h.

References getKeyMap().

```
80 { return new KbMode(this, getKeyMap(), *other); }
```

Here is the call graph for this function:

12.22.3.44 KbProfile* Kb::newProfile ( ) [inline]

Definition at line 77 of file kb.h.

References getKeyMap().

Referenced by KbProfileDialog::on_profileList_customContextMenuRequested(), KbProfileDialog::on_profileList_-itemClicked(), and readNotify().

```
77 { return new KbProfile(this, getKeyMap()); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.45 KbProfile* Kb::newProfile (KbProfile * *other*) [inline]

Definition at line 78 of file kb.h.

References getKeyMap().

```
78 { return new KbProfile(this, getKeyMap(), *other); }
```

Here is the call graph for this function:

12.22.3.46 void Kb::profileAdded ( ) [signal]

Definition at line 239 of file moc_kb.cpp.

Referenced by load(), and readNotify().

```
240 {
241     QMetaObject::activate(this, &staticMetaObject, 1, Q_NULLPTR);
242 }
```

Here is the caller graph for this function:

12.22.3.47 void Kb::profileChanged ( ) [signal]

Definition at line 257 of file moc_kb.cpp.

Referenced by readNotify(), and setCurrentMode().

```
258 {
259     QMetaObject::activate(this, &staticMetaObject, 4, Q_NULLPTR);
260 }
```

Here is the caller graph for this function:

12.22.3.48 void Kb::profileRenamed ( ) [signal]

Definition at line 245 of file moc_kb.cpp.

Referenced by readNotify().

```
246 {
247     QMetaObject::activate(this, &staticMetaObject, 2, Q_NULLPTR);
248 }
```

Here is the caller graph for this function:

12.22.3.49 const QList<KbProfile*>& Kb::profiles ( ) const [inline]

Definition at line 58 of file kb.h.

References _profiles.

Referenced by KbWidget::on_profileBox_activated(), KbProfileDialog::on_profileList_customContextMenuRequested(), KbProfileDialog::profileList_reordered(), KbProfileDialog::repopulate(), and KbWidget::updateProfileList().

```
58 { return _profiles; }
```

Here is the caller graph for this function:

12.22.3.50 void Kb::profiles (const QList< KbProfile * > & *newProfiles*) [inline]

Definition at line 59 of file kb.h.

References _needsSave, and _profiles.

```
59 { _needsSave = true; _profiles = newProfiles; }
```

12.22.3.51 void Kb::readNotify (QString *line*) [private], [slot]

Definition at line 471 of file kb.cpp.

References _currentMode, _currentProfile, _hwProfile, _needsSave, _profiles, KbPerf::angleSnap(), KbLight::animKeypress(), KbProfile::append(), KbMode::bind(), KbLight::color(), KbPerf::curDpiIdx(), KbPerf::dpi(), KbPerf::DPI_COUNT, KbPerf::dpiColor(), KbPerf::dpiEnabled(), fwUpdateFinished(), fwUpdateProgress(), fwUpdPath, getKeyMap(), UsbId::guid, hwLoading, HWMODE_MAX, hwModeCount, UsbId::hwModifiedString(), hwProfile(), KbProfile::id(), KbMode::id(), KbProfile::indexOf(), isMouse(), iState, KbBind::keyEvent(), KbPerf::liftHeight(), KbMode::light(), KbProfile::modeCount(), modeRenamed(), KbProfile::modes(), UsbId::modifiedString(), KbProfile::move(), KbProfile::name(), KbMode::name(), newProfile(), notifyNumber, KbMode::perf(), profileAdded(), profileChanged(), profileRenamed(), setCurrentProfile(), KbProfile::setNeedsSave(), KbMode::setNeedsSave(), x, and y.

```
471                                 {
472     QStringList components = line.trimmed().split(" ");
473     if(components.count() < 2)
474         return;
475     if(components[0] == "key"){
476         // Key event
477         QString key = components[1];
478         if(key.length() < 2)
479             return;
480         QString keyName = key.mid(1);
481         bool keyPressed = (key[0] == '+');
482         KbMode* mode = _currentMode;
483         if(mode){
484             mode->light()->animKeypress(keyName, keyPressed);
485             mode->bind()->keyEvent(keyName, keyPressed);
486         }
487     } else if(components[0] == "i"){
488         // Indicator event
489         QString i = components[1];
490         if(i.length() < 2)
491             return;
492         QString iName = i.mid(1);
493         bool on = (i[0] == '+');
494         if(iName == "num")
495             iState[0] = on;
496         else if(iName == "caps")
497             iState[1] = on;
498         else if(iName == "scroll")
499             iState[2] = on;
500     } else if(components[0] == "hwprofileid"){
501         // Hardware profile ID
502         if(components.count() < 3)
503             return;
504         // Find the hardware profile in the list of profiles
505         QString guid = components[1];
506         QString modified = components[2];
507         KbProfile* newProfile = 0;
508         foreach(KbProfile* profile, _profiles){
509             if(profile->id().guid == guid){
510                 newProfile = profile;
511                 break;
512             }
513         }
514         // If it wasn't found, create it
515         if(!newProfile){
516             newProfile = new KbProfile(this, getKeyMap(), guid, modified);
517             hwLoading[0] = true;
518             cmd.write(QString("@%1 get :hwprofilename\n").arg(notifyNumber).toLatin1());
519             cmd.flush();
520         } else {
521             // If it's been updated, fetch its name
522             if(newProfile->id().hwModifiedString() != modified){
523                 newProfile->id().modifiedString(modified);
524                 newProfile->id().hwModifiedString(modified);
525                 newProfile->setNeedsSave();
```

```
                if(hwLoading[0]){
                    cmd.write(QString("@%1 get :hwprofilename\n").arg(notifyNumber).toLatin1());
                    cmd.flush();
                }
            } else {
                hwLoading[0] = false;
            }
        }
        hwProfile(newProfile);
        emit profileAdded();
        if(_hwProfile == _currentProfile)
            emit profileChanged();
    } else if(components[0] == "hwprofilename"){
        // Hardware profile name
        QString name = QUrl::fromPercentEncoding(components[1].toUtf8());
        if(!_hwProfile || !hwLoading[0])
            return;
        QString oldName = _hwProfile->name();
        if(!(oldName.length() >= name.length() && oldName.left(name.length()) == name)){
            // Don't change the name if it's a truncated version of what we already have
            _hwProfile->name(name);
            emit profileRenamed();
        }
    } else if(components[0] == "mode"){
        // Mode-specific data
        if(components.count() < 4)
            return;
        int mode = components[1].toInt() - 1;
        if(components[2] == "hwid"){
            if(components.count() < 5 || mode >= HWMODE_MAX || !_hwProfile)
                return;
            // Hardware mode ID
            QString guid = components[3];
            QString modified = components[4];
            // Look for this mode in the hardware profile
            KbMode* hwMode = 0;
            bool isUpdated = false;
            foreach(KbMode* kbMode, _hwProfile->modes()){
                if(kbMode->id().guid == guid){
                    hwMode = kbMode;
                    if(kbMode->id().hwModifiedString() != modified){
                        // Update modification time
                        hwMode->id().modifiedString(modified);
                        hwMode->id().hwModifiedString(modified);
                        hwMode->setNeedsSave();
                        isUpdated = true;
                    } else {
                        hwLoading[mode + 1] = false;
                    }
                    break;
                }
            }
            // If it wasn't found, add it
            if(!hwMode){
                isUpdated = true;
                hwMode = new KbMode(this, getKeyMap(), guid, modified);
                _hwProfile->append(hwMode);
                // If the hardware profile now contains enough modes to be added to the list, do so
                if(!_profiles.contains(_hwProfile) && _hwProfile->modeCount() >= hwModeCount){
                    _profiles.append(_hwProfile);
                    _needsSave = true;
                    emit profileAdded();
                    if(!_currentProfile)
                        setCurrentProfile(_hwProfile);
                }
            }
            if(hwLoading[mode + 1] && isUpdated){
                // If the mode isn't in the right place, move it
                int index = _hwProfile->indexOf(hwMode);
                if(mode < _hwProfile->modeCount() && index != mode)
                    _hwProfile->move(index, mode);
                // Fetch the updated data
                cmd.write(QString("@%1 mode %2 get :hwname :hwrgb").arg(notifyNumber).arg(mode + 1).toLatin1());
                if(isMouse())
                    cmd.write(" :hwdpi :hwdpisel :hwlift :hwsnap");
                cmd.write("\n");
                cmd.flush();
            }
        } else if(components[2] == "hwname"){
            // Mode name - update list
            if(!_hwProfile || _hwProfile->modeCount() <= mode || mode >= HWMODE_MAX || !hwLoading[mode + 1])
                return;
```

```
            KbMode* hwMode = _hwProfile->modes()[mode];
            QString name = QUrl::fromPercentEncoding(components[3].toUtf8());
            QString oldName = hwMode->name();
            if(!(oldName.length() >= name.length() && oldName.left(name.length()) == name)){
                // Don't change the name if it's a truncated version of what we already have
                hwMode->name(name);
                if(_hwProfile == _currentProfile)
                    emit modeRenamed();
            }
        } else if(components[2] == "hwrgb"){
            // RGB - set mode lighting
            if(!_hwProfile || _hwProfile->modeCount() <= mode || mode >= HWMODE_MAX || !hwLoading[mode + 1])
                return;
            KbMode* kbmode = _hwProfile->modes()[mode];
            KbLight* light = kbmode->light();
            // Scan the input for colors
            QColor lightColor = QColor();
            for(int i = 3; i < components.count(); i++){
                QString comp = components[i];
                if(comp.indexOf(":") < 0){
                    // No ":" - single hex constant
                    bool ok;
                    int rgb = comp.toInt(&ok, 16);
                    if(ok)
                        light->color(QColor::fromRgb((QRgb)rgb));
                } else {
                    // List of keys ("a,b:xxxxxx"). Parse color first
                    QStringList set = comp.split(":");
                    bool ok;
                    int rgb = set[1].toInt(&ok, 16);
                    if(ok){
                        QColor color = QColor::fromRgb((QRgb)rgb);
                        // Parse keys
                        QStringList keys = set[0].split(",");
                        foreach(QString key, keys){
                            if(key == "light")
                                // Extrapolate the Light key to the M-keys and Lock key, since those will be set to black on hwsave
                                lightColor = color;
                            if(key.startsWith("dpi") && key.length() > 3){
                                // DPI levels go to the KbPerf object instead of KbLight
                                bool ok = false;
                                int index = key.mid(3).toInt(&ok);
                                if(ok)
                                    kbmode->perf()->dpiColor(index, color);
                                continue;
                            }
                            light->color(key, color);
                        }
                    }
                }
            }
            if(lightColor.isValid()){
                light->color("mr", lightColor);
                light->color("m1", lightColor);
                light->color("m2", lightColor);
                light->color("m3", lightColor);
                light->color("lock", lightColor);
            }
        } else if(components[2] == "hwdpi"){
            // DPI settings
            if(!_hwProfile || _hwProfile->modeCount() <= mode || mode >= HWMODE_MAX || !hwLoading[mode + 1])
                return;
            KbPerf* perf = _hwProfile->modes()[mode]->perf();
            // Read the rest of the line as stage:x,y
            foreach(QString comp, components.mid(3)){
                QStringList dpi = comp.split(':');
                if(dpi.length() != 2)
                    continue;
                QStringList xy = dpi[1].split(',');
                int x, y;
                bool off = false;
                if(xy.length() < 2){
                    // If the right side only has one parameter, set both X and Y
                    if(xy[0] == "off")
                        off = true;
                    else
                        x = y = xy[0].toInt();
                } else {
                    x = xy[0].toInt();
                    y = xy[1].toInt();
                }
                // Set DPI for this stage
                int index = dpi[0].toInt();
                if(off){
```

```
                    perf->dpiEnabled(index, false);
                    // If all DPIs have been disabled, turn them back on
                    bool allOff = true;
                    for(int i = 1; i < KbPerf::DPI_COUNT; i++){
                        if(perf->dpiEnabled(i)){
                            allOff = false;
                            break;
                        }
                    }
                    if(allOff){
                        for(int i = 1; i < KbPerf::DPI_COUNT; i++)
                            perf->dpiEnabled(i, true);
                    }
                } else {
                    perf->dpiEnabled(index, true);
                    perf->dpi(index, QPoint(x, y));
                }
            }
        } else if(components[2] == "hwdpisel"){
            // Hardware DPI selection (0...5)
            if(!_hwProfile || _hwProfile->modeCount() <= mode || mode >= HWMODE_MAX || !hwLoading[mode + 1])
                return;
            KbPerf* perf = _hwProfile->modes()[mode]->perf();
            int idx = components[3].toInt();
            if(idx < 1)
                idx = 1;
            if(idx >= KbPerf::DPI_COUNT)
                idx = KbPerf::DPI_COUNT - 1;
            perf->curDpiIdx(idx);
        } else if(components[2] == "hwlift"){
            // Mouse lift height (1...5)
            if(!_hwProfile || _hwProfile->modeCount() <= mode || mode >= HWMODE_MAX || !hwLoading[mode + 1])
                return;
            KbPerf* perf = _hwProfile->modes()[mode]->perf();
            perf->liftHeight((KbPerf::height)components[3].toInt());
        } else if(components[3] == "hwsnap"){
            // Mouse angle snapping ("on" or "off")
            if(!_hwProfile || _hwProfile->modeCount() <= mode || mode >= HWMODE_MAX || !hwLoading[mode + 1])
                return;
            KbPerf* perf = _hwProfile->modes()[mode]->perf();
            perf->angleSnap(components[3] == "on");
        }
    } else if(components[0] == "fwupdate"){
        // Firmware update progress
        if(components.count() < 3)
            return;
        // Make sure path is the same
        if(components[1] != fwUpdPath)
            return;
        QString res = components[2];
        if(res == "invalid" || res == "fail")
            emit fwUpdateFinished(false);
        else if(res == "ok")
            emit fwUpdateFinished(true);
        else {
            // "xx/yy" indicates progress
            if(!res.contains("/"))
                return;
            QStringList numbers = res.split("/");
            emit fwUpdateProgress(numbers[0].toInt(), numbers[1].toInt());
        }
    }
}
```

Here is the call graph for this function:

12.22.3.52 void Kb::run ( ) [private]

Definition at line 446 of file kb.cpp.

References notifyPath, notifyPathMutex, and notifyPaths.

```
446             {
447     QFile notify(notifyPath);
448     // Wait a small amount of time for the node to open (100ms)
```

```
    QThread::usleep(100000);
    if(!notify.open(QIODevice::ReadOnly)){
        // If it's still not open, try again before giving up (1s at a time, 10s total)
        QThread::usleep(900000);
        for(int i = 1; i < 10; i++){
            if(notify.open(QIODevice::ReadOnly))
                break;
            QThread::sleep(1);
        }
        if(!notify.isOpen())
            return;
    }
    // Read data from notification node
    QByteArray line;
    while(notify.isOpen() && (line = notify.readLine()).length() > 0){
        QString text = QString::fromUtf8(line);
        metaObject()->invokeMethod(this, "readNotify", Qt::QueuedConnection, Q_ARG(QString, text));
    }
    QMutexLocker locker(&notifyPathMutex);
    notifyPaths.remove(notifyPath);
}
```

12.22.3.53 void Kb::save ( )

Definition at line 273 of file kb.cpp.

References _currentProfile, _needsSave, _profiles, UsbId::guidString(), KbProfile::id(), prefsPath, KbProfile::save(), and CkbSettings::setValue().

Referenced by autoSave(), KbWidget::on_hwSaveButton_clicked(), KbManager::scanKeyboards(), and ~Kb().

```
            {
    if(prefsPath.isEmpty())
        return;
    _needsSave = false;
    CkbSettings settings(prefsPath, true);
    QString guids, currentGuid;
    foreach(KbProfile* profile, _profiles){
        guids.append(" " + profile->id().guidString());
        if(profile == _currentProfile)
            currentGuid = profile->id().guidString();
        profile->save(settings);
    }
    settings.setValue("CurrentProfile", currentGuid);
    settings.setValue("Profiles", guids.trimmed());
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.54 static int Kb::scrollSpeed ( ) [inline],[static]

Definition at line 42 of file kb.h.

References _scrollSpeed.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), ExtraSettingsWidget::on_sAccelBox_clicked(), and ExtraSettingsWidget::on_sSpeedBox_valueChanged().

```
42 { return _scrollSpeed; }
```

Here is the caller graph for this function:

12.22.3.55 void Kb::scrollSpeed (int *newSpeed*) [static]

Definition at line 228 of file kb.cpp.

References _scrollSpeed, activeDevices, and cmd.

```
228                                 {
229     if(newSpeed == _scrollSpeed)
230         return;
231     _scrollSpeed = newSpeed;
232 #ifdef Q_OS_MACX
233     // Update all devices
234     foreach(Kb* kb, activeDevices){
235         kb->cmd.write(QString("scrollspeed %1\n").arg(newSpeed).toLatin1());
```

```
        kb->cmd.flush();
    }
#endif
}
```

12.22.3.56 void Kb::setCurrentMode (KbProfile * *profile*, KbMode * *mode*, bool *spontaneous* = `true`)

Definition at line 769 of file kb.cpp.

References _currentMode, _currentProfile, _needsSave, KbProfile::currentMode(), modeChanged(), and profileChanged().

Referenced by KeyAction::keyEvent(), KbWidget::on_modesList_currentItemChanged(), KbWidget::on_modesList_customContextMenuRequested(), KbWidget::on_modesList_itemClicked(), and setCurrentProfile().

```
769                                                                 {
770     if(_currentProfile != profile){
771         _currentProfile = profile;
772         _needsSave = true;
773         emit profileChanged();
774     }
775     if(_currentMode != mode || _currentProfile->
      currentMode() != mode){
776         _currentProfile->currentMode(_currentMode = mode);
777         _needsSave = true;
778         emit modeChanged(spontaneous);
779     }
780 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.57 void Kb::setCurrentMode (KbProfile * *profile*, int *index*, bool *spontaneous* = `true`) `[inline]`

Definition at line 73 of file kb.h.

References KbProfile::modes(), and setCurrentMode().

Referenced by setCurrentMode().

```
73 { setCurrentMode(profile, profile->modes()[index], spontaneous); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.58 void Kb::setCurrentMode (KbMode * *mode*, bool *spontaneous* = `true`) [inline]

Definition at line 74 of file kb.h.

References _currentProfile, and setCurrentMode().

Referenced by setCurrentMode().

```
74 { setCurrentMode(_currentProfile, mode, spontaneous); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.59 void Kb::setCurrentProfile (KbProfile * *profile*, bool *spontaneous* = `true`)

Definition at line 760 of file kb.cpp.

References KbProfile::append(), KbProfile::currentMode(), getKeyMap(), hwModeCount, KbProfile::modeCount(), KbProfile::modes(), and setCurrentMode().

Referenced by load(), KbWidget::on_profileBox_activated(), KbProfileDialog::on_profileList_currentItemChanged(), KbProfileDialog::on_profileList_customContextMenuRequested(), KbProfileDialog::on_profileList_itemClicked(), and readNotify().

```
760                                                                 {
761     while(profile->modeCount() < hwModeCount)
762         profile->append(new KbMode(this, getKeyMap()));
763     KbMode* mode = profile->currentMode();
764     if(!mode)
765         profile->currentMode(mode = profile->modes().first());
766     setCurrentMode(profile, mode, spontaneous);
767 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.60 void Kb::updateLayout ( ) [private]

Definition at line 186 of file kb.cpp.

References _currentProfile, _hwProfile, _layout, _profiles, KbLight::close(), getKeyMap(), infoUpdated(), KeyMap::isISO(), KbProfile::keyMap(), KbMode::light(), and KbProfile::modes().

Referenced by layout().

```
186                     {
187 #ifdef Q_OS_MACX
188     // Write ANSI/ISO flag to daemon (OSX only)
189     cmd.write("layout ");
190     cmd.write(KeyMap::isISO(_layout) ? "iso" : "ansi");
191     cmd.write("\n");
192     cmd.flush();
193 #endif
194     foreach(KbProfile* profile, _profiles)
195         profile->keyMap(getKeyMap());
196     if(_hwProfile && !_profiles.contains(_hwProfile))
197         _hwProfile->keyMap(getKeyMap());
198     // Stop all animations as they'll need to be restarted
199     foreach(KbMode* mode, _currentProfile->modes())
200         mode->light()->close();
201     emit infoUpdated();
202 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.3.61 void Kb::writeProfileHeader ( ) [private]

Definition at line 354 of file kb.cpp.

References _currentProfile, UsbId::guidString(), KbProfile::id(), UsbId::modifiedString(), and KbProfile::name().

Referenced by frameUpdate(), and hwSave().

```
354                             {
355     cmd.write("eraseprofile");
356     // Write the profile name and ID
357     cmd.write(" profilename ");
358     cmd.write(QUrl::toPercentEncoding(_currentProfile->name()));
359     cmd.write(" profileid ");
360     cmd.write(_currentProfile->id().guidString().toLatin1());
361     cmd.write(" ");
362     cmd.write(_currentProfile->id().modifiedString().toLatin1());
363 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.22.4 Friends And Related Function Documentation

12.22.4.1 friend class KbManager [friend]

Definition at line 142 of file kb.h.

12.22.5 Field Documentation

12.22.5.1 KbMode* Kb::_currentMode [private]

Definition at line 169 of file kb.h.

Referenced by currentBind(), currentLight(), currentMode(), currentPerf(), frameUpdate(), hwSave(), readNotify(), and setCurrentMode().

12.22.5.2 KbProfile* Kb::_currentProfile [private]

Definition at line 167 of file kb.h.

Referenced by currentProfile(), frameUpdate(), hwSave(), readNotify(), save(), setCurrentMode(), updateLayout(), and writeProfileHeader().

12.22.5.3 bool Kb::_delay = false [static], [private]

Definition at line 198 of file kb.h.

Referenced by Kb(), and macroDelay().

12.22.5.4 bool Kb::_dither = false [static], [private]

Definition at line 165 of file kb.h.

Referenced by dither(), and Kb().

12.22.5.5 int Kb::_frameRate = 30 [static], [private]

Definition at line 164 of file kb.h.

Referenced by frameRate(), and Kb().

12.22.5.6 KbProfile* Kb::_hwProfile [private]

Definition at line 183 of file kb.h.

Referenced by deleteHw(), hwProfile(), hwSave(), readNotify(), and updateLayout().

12.22.5.7 KeyMap::Layout Kb::_layout = KeyMap::NO_LAYOUT [static], [private]

Definition at line 161 of file kb.h.

Referenced by getKeyMap(), Kb(), layout(), and updateLayout().

12.22.5.8 KeyMap::Model Kb::_model [private]

Definition at line 171 of file kb.h.

Referenced by model().

12.22.5.9 bool Kb::_mouseAccel = true [static], [private]

Definition at line 165 of file kb.h.

Referenced by Kb(), and mouseAccel().

12.22.5.10 bool Kb::_needsSave [private]

Definition at line 201 of file kb.h.

Referenced by appendProfile(), load(), needsSave(), profiles(), readNotify(), save(), and setCurrentMode().

12.22.5.11 QList<KbProfile*> Kb::_profiles [private]

Definition at line 168 of file kb.h.

Referenced by appendProfile(), find(), indexOf(), load(), needsSave(), profiles(), readNotify(), save(), and updateLayout().

12.22.5.12 int Kb::_scrollSpeed = 0 [static], [private]

Definition at line 164 of file kb.h.

Referenced by Kb(), and scrollSpeed().

12.22.5.13 QFile Kb::cmd [private]

Definition at line 191 of file kb.h.

Referenced by dither(), frameRate(), macroDelay(), mouseAccel(), and scrollSpeed().

12.22.5.14 QString Kb::cmdpath [private]

Definition at line 155 of file kb.h.

Referenced by Kb().

12.22.5.15 QString Kb::devpath [private]

Definition at line 155 of file kb.h.

Referenced by matches().

12.22.5.16 QString Kb::features

Definition at line 18 of file kb.h.

Referenced by MainWindow::checkFwUpdates(), FwUpgradeDialog::exec(), Kb(), KbWidget::KbWidget(), KbWidget::on_fwUpdButton_clicked(), and KbWidget::updateFwButton().

12.22.5.17 QString Kb::firmware

Definition at line 18 of file kb.h.

Referenced by MainWindow::checkFwUpdates(), KbWidget::devUpdate(), FwUpgradeDialog::FwUpgradeDialog(), Kb(), KbWidget::on_fwUpdButton_clicked(), and KbWidget::updateFwButton().

12.22.5.18 QString Kb::fwUpdPath [private]

Definition at line 181 of file kb.h.

Referenced by fwUpdate(), and readNotify().

12.22.5.19 bool Kb::hwLoading[HWMODE_MAX+1] [private]

Definition at line 205 of file kb.h.

Referenced by Kb(), and readNotify().

12.22.5.20 const int Kb::HWMODE_MAX = 3 [static]

Definition at line 50 of file kb.h.

Referenced by KbPerf::applyIndicators(), and readNotify().

12.22.5.21 int Kb::hwModeCount

Definition at line 49 of file kb.h.

Referenced by hwSave(), Kb(), KbWidget::modeIcon(), KbWidget::on_modesList_customContextMenuRequested(), readNotify(), and setCurrentProfile().

12.22.5.22 bool Kb::iState[KbPerf::HW_I_COUNT] [private]

Definition at line 174 of file kb.h.

Referenced by frameUpdate(), Kb(), and readNotify().

12.22.5.23 quint64 Kb::lastAutoSave [private]

Definition at line 178 of file kb.h.

Referenced by autoSave().

12.22.5.24 int Kb::macroNumber [private]

Definition at line 196 of file kb.h.

Referenced by getMacroNumber(), and Kb().

12.22.5.25 QString Kb::macroPath [private]

Definition at line 155 of file kb.h.

Referenced by getMacroPath(), Kb(), and ~Kb().

12.22.5.26 bool Kb::monochrome

Definition at line 19 of file kb.h.

Referenced by frameUpdate(), hwSave(), Kb(), and KbWidget::KbWidget().

12.22.5.27 int Kb::notifyNumber [private]

Definition at line 194 of file kb.h.

Referenced by frameUpdate(), fwUpdate(), Kb(), readNotify(), and ~Kb().

12.22.5.28 QString Kb::notifyPath [private]

Definition at line 155 of file kb.h.

Referenced by Kb(), and run().

12.22.5.29 QString Kb::pollrate

Definition at line 18 of file kb.h.

Referenced by KbWidget::devUpdate(), and Kb().

12.22.5.30 QString Kb::prefsPath [private]

Definition at line 177 of file kb.h.

Referenced by Kb(), load(), and save().

12.22.5.31 KbMode* Kb::prevMode [private]

Definition at line 186 of file kb.h.

Referenced by deletePrevious(), frameUpdate(), and hwSave().

12.22.5.32 KbProfile* Kb::prevProfile [private]

Definition at line 185 of file kb.h.

Referenced by frameUpdate().

12.22.5.33 QString Kb::usbModel

Definition at line 16 of file kb.h.

Referenced by FwUpgradeDialog::FwUpgradeDialog(), Kb(), KbWidget::name(), and MainWindow::showFwUpdateNotification().

12.22.5.34 QString Kb::usbSerial

Definition at line 16 of file kb.h.

Referenced by KbWidget::devUpdate(), Kb(), and matches().

The documentation for this class was generated from the following files:

- src/ckb/kb.h
- src/ckb/kb.cpp
- src/ckb/release/moc_kb.cpp

12.23 KbAnim Class Reference

```
#include <src/ckb/kbanim.h>
```

Inheritance diagram for KbAnim:

Collaboration diagram for KbAnim:

Public Types

- enum Mode {
  Normal, Add, Subtract, Multiply,
  Divide }

Public Member Functions

- KbAnim (QObject ∗parent, const KeyMap &map, const QUuid id, CkbSettings &settings)
- void save (CkbSettings &settings)
- bool needsSave () const
- KbAnim (QObject ∗parent, const KeyMap &map, const QString &name, const QStringList &keys, const AnimScript ∗script)
- KbAnim (QObject ∗parent, const KeyMap &map, const KbAnim &other)
- const KeyMap & map ()
- void map (const KeyMap &newMap)
- const QStringList & keys ()
- void keys (const QStringList &newKeys)
- bool hasParameter (const QString &name) const
- QVariant parameter (const QString &name) const
- void parameter (const QString &name, const QVariant &value)
- void commitParams ()
- void resetParams ()
- void reInit ()
- void trigger (quint64 timestamp, bool ignoreParameter=false)
- void keypress (const QString &key, bool pressed, quint64 timestamp)
- void stop ()
- bool isActive () const
- bool isRunning () const
- void blend (ColorMap &animMap, quint64 timestamp)
- const QUuid & guid () const

- void newId ()
- const QString & name () const
- void name (const QString &newName)
- float opacity () const
- void opacity (float newOpacity)
- Mode mode () const
- void mode (Mode newMode)
- const AnimScript * script () const
- const QString & scriptName () const

Private Member Functions

- QMap< QString, QVariant > effectiveParams ()
- void updateParams ()
- void catchUp (quint64 timestamp)

Private Attributes

- AnimScript * _script
- QUuid _scriptGuid
- QString _scriptName
- KeyMap _map
- QStringList _keys
- QMap< QString, QVariant > _parameters
- QMap< QString, QVariant > _tempParameters
- QString repeatKey
- quint64 repeatTime
- quint64 kpRepeatTime
- quint64 stopTime
- quint64 kpStopTime
- int repeatMsec
- int kpRepeatMsec
- QUuid _guid
- QString _name
- float _opacity
- Mode _mode
- bool _isActive
- bool _isActiveKp
- bool _needsSave

12.23.1 Detailed Description

Definition at line 11 of file kbanim.h.

12.23.2 Member Enumeration Documentation

12.23.2.1 enum KbAnim::Mode

Enumerator

Normal

Add

Subtract

Multiply

Divide

Definition at line 17 of file kbanim.h.

```
17              {
18          Normal,
19          Add,
20          Subtract,
21          Multiply,
22          Divide
23      };
```

12.23.3 Constructor & Destructor Documentation

12.23.3.1 KbAnim::KbAnim (QObject * *parent,* const KeyMap & *map,* const QUuid *id,* CkbSettings & *settings*)

Definition at line 8 of file kbanim.cpp.

References _guid, _keys, _map, _mode, _name, _opacity, _parameters, _script, _scriptGuid, _scriptName, CkbSettings::childKeys(), AnimScript::copy(), AnimScript::Param::defaultValue, KeyMap::fromStorage(), AnimScript::Param::INVALID, AnimScript::Param::LABEL, AnimScript::Param::name, AnimScript::name(), name(), Normal, AnimScript::param(), AnimScript::paramIterator(), reInit(), AnimScript::Param::type, and CkbSettings::value().

```
8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                :
9       QObject(parent), _script(0), _map(map),
10       repeatTime(0), kpRepeatTime(0), stopTime(0),
        kpStopTime(0), repeatMsec(0), kpRepeatMsec(0),
11       _guid(id), _isActive(false), _isActiveKp(false),
        _needsSave(false)
12 {
13       SGroup group(settings, _guid.toString().toUpper());
14       _keys = settings.value("Keys").toStringList();
15       // Convert key list from storage names if needed
16       if(!settings.value("UseRealNames").toBool()){
17           QMutableListIterator<QString> i(_keys);
18           while(i.hasNext()){
19               i.next();
20               QString& key = i.value();
21               key = _map.fromStorage(key);
22           }
23       }
24       _name = settings.value("Name").toString().trimmed();
25       _opacity = settings.value("Opacity").toString().toDouble();
26       if(_opacity < 0.)
27           _opacity = 0.;
28       else if(_opacity > 1.)
29           _opacity = 1.;
30       bool modeOk = false;
31       _mode = (Mode)metaObject()->enumerator(metaObject()->indexOfEnumerator("Mode")).keysToValue(
        settings.value("BlendMode").toString().toLatin1(), &modeOk);
32       if(!modeOk)
33           _mode = Normal;
34       _scriptName = settings.value("ScriptName").toString().trimmed();
35       _scriptGuid = settings.value("ScriptGuid").toString();
36       {
37           SGroup group(settings, "Parameters");
38           foreach(const QString& param, settings.childKeys())
39               _parameters[param.toLower()] = settings.value(param);
40       }
41
42       if(!_scriptGuid.isNull()){
43           _script = AnimScript::copy(this, _scriptGuid);
44           if(_script){
45               // Remove nonexistant parameters
46               foreach(const QString& name, _parameters.keys()){
47                   AnimScript::Param param = _script->param(name);
48                   if(param.type == AnimScript::Param::INVALID || param.
        type == AnimScript::Param::LABEL)
49                       _parameters.remove(name);
50               }
51               // Add defaults for unset parameters
52               QListIterator<AnimScript::Param> i = _script->paramIterator();
53               while(i.hasNext()){
54                   AnimScript::Param param = i.next();
55                   if(!_parameters.contains(param.name) && param.
        type != AnimScript::Param::LABEL)
```

```
                    _parameters[param.name] = param.defaultValue;
            }
            _scriptName = _script->name();
            reInit();
        }
    }
}
```

Here is the call graph for this function:

12.23.3.2 KbAnim::KbAnim (QObject * *parent,* const KeyMap & *map,* const QString & *name,* const QStringList & *keys,* const AnimScript * *script*)

Definition at line 84 of file kbanim.cpp.

References _parameters, _script, _scriptGuid, _scriptName, AnimScript::Param::defaultValue, AnimScript::guid(), AnimScript::Param::LABEL, AnimScript::Param::name, AnimScript::name(), AnimScript::paramIterator(), reInit(), and AnimScript::Param::type.

```
                    :
    QObject(parent),
    _script(AnimScript::copy(this, script->guid())),
   _map(map), _keys(keys),
    repeatTime(0), kpRepeatTime(0), stopTime(0),
   kpStopTime(0), repeatMsec(0), kpRepeatMsec(0),
    _guid(QUuid::createUuid()), _name(name), _opacity(1.),
   _mode(Normal), _isActive(false), _isActiveKp(false),
   _needsSave(true)
{
    if(_script){
        // Set default parameters
        QListIterator<AnimScript::Param> i = _script->paramIterator();
        while(i.hasNext()){
            AnimScript::Param param = i.next();
            if(param.type != AnimScript::Param::LABEL)
                _parameters[param.name] = param.defaultValue;
        }
        _scriptGuid = script->guid();
        _scriptName = script->name();
         reInit();
     }
}
```

Here is the call graph for this function:

12.23.3.3 KbAnim::KbAnim (QObject * *parent,* const KeyMap & *map,* const KbAnim & *other*)

Definition at line 104 of file kbanim.cpp.

References reInit().

```
104                                                                                    :
105     QObject(parent),
106     _script(AnimScript::copy(this, other.script()->
      guid())), _scriptGuid(_script->guid()), _scriptName(
      _script->name()),
107     _map(map), _keys(other._keys), _parameters(other.
      _parameters),
108     repeatTime(0), kpRepeatTime(0), stopTime(0),
      kpStopTime(0), repeatMsec(0), kpRepeatMsec(0),
109     _guid(other._guid), _name(other._name), _opacity(other.
      _opacity), _mode(other._mode), _isActive(false),
      _isActiveKp(false), _needsSave(true)
110 {
111     reInit();
112 }
```

Here is the call graph for this function:

12.23.4 Member Function Documentation

12.23.4.1 void KbAnim::blend (ColorMap & *animMap,* quint64 *timestamp*)

Definition at line 365 of file kbanim.cpp.

References _mode, _opacity, _script, catchUp(), ColorMap::colors(), AnimScript::colors(), ColorMap::count(), AnimScript::frame(), and functions.

Referenced by KbLight::frameUpdate().

```
365                                                    {
366     if(!_script)
367         return;
368
369     // Fetch the next frame from the script
370     catchUp(timestamp);
```

```
    _script->frame(timestamp);

    // Blend the script's map with the current map
    int blendMode = (int)_mode;
    blendFunc blend = functions[blendMode];
    float fOpacity = _opacity / 255.f;  // save some math by pre-dividing the 255 for qAlpha

    const ColorMap& scriptMap = _script->colors();
    int count = animMap.count();
    if(scriptMap.count() != count){
        qDebug() << "Script map didn't match base map (" << count << " vs " << scriptMap.count() << "). This should never happen.";
        return;
    }
    QRgb* background = animMap.colors();
    const QRgb* foreground = scriptMap.colors();
    for(int i = 0; i < count; i++){
        // Mix the colors in with the color map according to blend mode and alpha
        QRgb& bg = background[i];
        QRgb fg = foreground[i];
        int alpha = qAlpha(fg);
        if(alpha == 0)
            continue;
        if(blendMode == 0){
            // Blend: normal
            // This is the most common use case and it requires much less arithmetic
            if(alpha == 255){
                bg = fg;
            } else {
                float r = qRed(bg), g = qGreen(bg), b = qBlue(bg);
                float a = alpha * fOpacity;
                r = r * (1.f - a) + qRed(fg) * a;
                g = g * (1.f - a) + qGreen(fg) * a;
                b = b * (1.f - a) + qBlue(fg) * a;
                bg = qRgb(round(r), round(g), round(b));
            }
        } else {
            // Use blend function
            float r = qRed(bg) / 255.f, g = qGreen(bg) / 255.f, b = qBlue(bg) / 255.f;
            float a = alpha * fOpacity;
            r = r * (1.f - a) + blend(r, qRed(fg) / 255.f) * a;
            g = g * (1.f - a) + blend(g, qGreen(fg) / 255.f) * a;
            b = b * (1.f - a) + blend(b, qBlue(fg) / 255.f) * a;
            bg = qRgb(round(r * 255.f), round(g * 255.f), round(b * 255.f));
        }
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.23.4.2 void KbAnim::catchUp (quint64 *timestamp*) [private]

Definition at line 166 of file kbanim.cpp.

References _isActive, _isActiveKp, _script, effectiveParams(), AnimScript::end(), AnimScript::keypress(), kpRepeatMsec, kpRepeatTime, kpStopTime, repeatKey, repeatMsec, repeatTime, AnimScript::retrigger(), and stopTime.

Referenced by blend(), keypress(), and trigger().

```
166                                     {
167     QMap<QString, QVariant> parameters = effectiveParams();
168     // Stop the animation if its time has run out
169     if(stopTime != 0 && timestamp >= stopTime){
170         repeatMsec = repeatTime = 0;
171         if(!parameters.contains("repeat")){
172             // If repeats aren't allowed, stop the animation entirely
173             _script->end();
174             _isActive = false;
175             return;
176         } else
177             // Otherwise, simply stop repeating
178             stopTime = 0;
179     }
180     if(kpStopTime != 0 && timestamp >= kpStopTime){
181         kpRepeatMsec = kpRepeatTime = 0;
182         if(!parameters.contains("kprepeat")){
183             _script->end();
184             _isActiveKp = false;
185             return;
186         } else
187             kpStopTime = 0;
188     }
189
190     // Restart (or start, if there was a delay) the animation if its repeat time is up
191     while(repeatTime > 0 && timestamp >= repeatTime){
192         _script->retrigger(repeatTime);
193         if(repeatMsec <= 0){
194             repeatTime = 0;
195             break;
196         }
197         repeatTime += repeatMsec;
198     }
199     while(kpRepeatTime > 0 && timestamp >= kpRepeatTime){
200         _script->keypress(repeatKey, 1, kpRepeatTime);
201         if(kpRepeatMsec <= 0){
202             kpRepeatTime = 0;
203             break;
204         }
205         kpRepeatTime += kpRepeatMsec;
206     }
207 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.23.4.3 void KbAnim::commitParams ( )

Definition at line 121 of file kbanim.cpp.

References _needsSave, _parameters, _tempParameters, and effectiveParams().

Referenced by KbLight::addAnim(), KbAnimWidget::on_propertyButton_clicked(), and KbLight::previewAnim().

```
121                                 {
122     _needsSave = true;
123     _parameters = effectiveParams();
124     _tempParameters.clear();
125 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.23.4.4 QMap< QString, QVariant > KbAnim::effectiveParams ( ) [private]

Definition at line 138 of file kbanim.cpp.

References _parameters, and _tempParameters.

Referenced by catchUp(), commitParams(), keypress(), reInit(), trigger(), and updateParams().

```
138                                                 {
139     QMap<QString, QVariant> res = _parameters;
140     // Apply all uncommited parameters
141     QMapIterator<QString, QVariant> i(_tempParameters);
142     while(i.hasNext()){
143         i.next();
144         res[i.key()] = i .value();
145     }
146     return res;
147 }
```

Here is the caller graph for this function:

12.23.4.5 const QUuid& KbAnim::guid ( ) const [inline]

Definition at line 71 of file kbanim.h.

References _guid.

Referenced by KbAnimWidget::addAnim(), RebindWidget::applyChanges(), KbLight::findAnim(), KbAnimWidget::on_deleteButton_clicked(), KbAnimWidget::refreshList(), and KbLight::save().

```
71 { return _guid; }
```

Here is the caller graph for this function:

12.23.4.6 bool KbAnim::hasParameter (const QString & *name*) const [inline]

Definition at line 44 of file kbanim.h.

References _parameters.

Referenced by AnimSettingDialog::AnimSettingDialog().

```
44 { return _parameters.contains(name); }
```

Here is the caller graph for this function:

12.23.4.7 bool KbAnim::isActive ( ) const [inline]

Definition at line 63 of file kbanim.h.

References _isActive, and _isActiveKp.

Referenced by KeyAction::keyEvent(), and keypress().

```
63 { return _isActive || _isActiveKp; }
```

Here is the caller graph for this function:

12.23.4.8 bool KbAnim::isRunning ( ) const

Definition at line 325 of file kbanim.cpp.

References _script, and AnimScript::hasFrame().

Referenced by KbLight::isStarted().

```
325                                 {
326     if(!_script)
327         return true;    // If the script wasn't loaded, pretend it's running anyway so it won't lock up
328     return _script->hasFrame();
329 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.23.4.9 void KbAnim::keypress (const QString & *key*, bool *pressed*, quint64 *timestamp*)

Definition at line 250 of file kbanim.cpp.

References _isActive, _isActiveKp, _script, catchUp(), effectiveParams(), AnimScript::frame(), isActive(), AnimScript::keypress(), kpRepeatMsec, kpRepeatTime, kpStopTime, repeatKey, repeatMsec, repeatTime, stop(), AnimScript::stop(), and stopTime.

Referenced by KbLight::animKeypress().

```
250                                                                                 {
251     if(!_script)
252         return;
253     QMap<QString, QVariant> parameters = effectiveParams();
254     if(pressed && parameters.value("kpmodestop").toBool()){
255         // If stop on key press is enabled, stop mode-wide animation
256         catchUp(timestamp);
257         _script->stop(timestamp);
258         stopTime = repeatTime = repeatMsec = 0;
259         _isActive = false;
260     } else {
261         if(!parameters.value("kptrigger").toBool())
262             return;
263         catchUp(timestamp);
264     }
265
266     if(pressed){
267         // Key pressed
268         _isActiveKp = true;
269         if(parameters.value("kpmode", 0).toInt() == 2 && isActive())
270             // If mode is start once and a key has already been pressed, do nothing
271             return;
272         int delay = round(parameters.value("kpdelay").toDouble() * 1000.);
273         if(delay > 0){
274             // If delay is enabled, wait to trigger the event
275             timestamp += delay;
276             kpRepeatTime = timestamp;
277         } else
278             _script->keypress(key, pressed, timestamp);
279
280         int repeat = round(parameters.value("kprepeat").toDouble() * 1000.);
281         if(repeat <= 0){
282             // If no repeat allowed, calculate stop time in seconds
283             kpRepeatMsec = -1;
284             double stop = parameters.value("kpstop").toDouble();
285             if(stop <= 0.)
```

```
                kpStopTime = 0;
            else
                kpStopTime = timestamp + round(stop * 1000.);
        } else {
            // If repeat is allowed, calculate stop time in repetitions
            kpRepeatMsec = repeat;
            if(delay <= 0)
                kpRepeatTime = timestamp + repeat;
            int stop = parameters.value("kpstop").toInt();
            if(stop < 0)
                kpStopTime = 0;
            else
                kpStopTime = timestamp + repeat * (1 + stop);
        }
        repeatKey = key;
    } else {
        // Key released
        _isActiveKp = false;
        _script->keypress(key, pressed, timestamp);
        if(parameters.value("kprelease").toBool())
            // Stop repeating keypress if "Stop on key release" is enabled
            kpStopTime = timestamp;
    }
    _script->frame(timestamp);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.23.4.10 const QStringList& KbAnim::keys ( ) [inline]

Definition at line 40 of file kbanim.h.

References _keys.

Referenced by KbLight::animKeypress(), KbLightWidget::changeAnim(), KbAnimWidget::on_keyButton_clicked(), and KbAnimWidget::setCurrent().

```
40 { return _keys; }
```

Here is the caller graph for this function:

12.23.4.11 void KbAnim::keys (const QStringList & *newKeys*)

Definition at line 161 of file kbanim.cpp.

References _keys, and reInit().

```
161                                                 {
162     _keys = newKeys;
163     reInit();
164 }
```

Here is the call graph for this function:

12.23.4.12 const KeyMap& KbAnim::map ( ) [inline]

Definition at line 37 of file kbanim.h.

References _map.

Referenced by KbLight::map().

```
37 { return _map; }
```

Here is the caller graph for this function:

12.23.4.13 void KbAnim::map (const KeyMap & *newMap*)

Definition at line 156 of file kbanim.cpp.

References _map, and reInit().

```
156                                     {
157     _map = newMap;
158     reInit();
159 }
```

Here is the call graph for this function:

12.23.4.14 Mode KbAnim::mode ( ) const [inline]

Definition at line 77 of file kbanim.h.

References _mode.

Referenced by KbAnimWidget::on_blendBox_activated(), and KbAnimWidget::setCurrent().

```
77 { return _mode; }
```

Here is the caller graph for this function:

12.23.4.15 void KbAnim::mode (Mode *newMode*) [inline]

Definition at line 78 of file kbanim.h.

References _mode, and _needsSave.

```
78 { _needsSave = true; _mode = newMode; }
```

12.23.4.16 const QString& KbAnim::name ( ) const [inline]

Definition at line 73 of file kbanim.h.

References _name.

Referenced by KbAnimWidget::addAnim(), AnimSettingDialog::AnimSettingDialog(), KbAnim(), KbAnimWidget::on_animList_itemChanged(), KbAnimWidget::on_nameBox_textEdited(), parameter(), KbAnimWidget::refreshList(), KbAnimWidget::setCurrent(), and RebindWidget::setSelection().

```
73 { return _name; }
```

Here is the caller graph for this function:

12.23.4.17 void KbAnim::name (const QString & *newName*) [inline]

Definition at line 74 of file kbanim.h.

References _name, and _needsSave.

```
74 { _needsSave = true; _name = newName; }
```

12.23.4.18 bool KbAnim::needsSave ( ) const [inline]

Definition at line 29 of file kbanim.h.

References _needsSave.

Referenced by KbLight::needsSave().

```
29 { return _needsSave; }
```

Here is the caller graph for this function:

12.23.4.19 void KbAnim::newId ( ) [inline]

Definition at line 72 of file kbanim.h.

References _guid, and _needsSave.

Referenced by KbLight::duplicateAnim(), and KbMode::newId().

```
72 { _needsSave = true; _guid = QUuid::createUuid(); }
```

Here is the caller graph for this function:

12.23.4.20 float KbAnim::opacity ( ) const [inline]

Definition at line 75 of file kbanim.h.

References _opacity.

Referenced by KbAnimWidget::on_opacityBox_valueChanged(), and KbAnimWidget::setCurrent().

```
75 { return _opacity; }
```

Here is the caller graph for this function:

12.23.4.21 void KbAnim::opacity (float *newOpacity*) [inline]

Definition at line 76 of file kbanim.h.

References _needsSave, and _opacity.

```
76 { _needsSave = true; _opacity = newOpacity; }
```

12.23.4.22 QVariant KbAnim::parameter (const QString & *name*) const [inline]

Definition at line 45 of file kbanim.h.

References _parameters.

Referenced by KbLight::addAnim(), AnimSettingDialog::AnimSettingDialog(), KbLight::previewAnim(), and AnimSettingDialog::updateParam().

```
45 { return _parameters.value(name); }
```

Here is the caller graph for this function:

12.23.4.23 void KbAnim::parameter (const QString & *name,* const QVariant & *value*)

Definition at line 114 of file kbanim.cpp.

References _script, _tempParameters, AnimScript::hasParam(), name(), and updateParams().

```
114                                                                 {
115     if(!_script->hasParam(name))
116         return;
117     _tempParameters[name] = value;
118     updateParams();
119 }
```

Here is the call graph for this function:

12.23.4.24 void KbAnim::relnit ( )

Definition at line 149 of file kbanim.cpp.

References _isActive, _isActiveKp, _keys, _map, _script, effectiveParams(), AnimScript::init(), and repeatKey.

Referenced by KbAnim(), keys(), map(), KbAnimWidget::on_propertyButton_clicked(), and KbLight::previewAnim().

```
149                     {
150     if(_script)
151         _script->init(_map, _keys, effectiveParams());
152     repeatKey = "";
153     _isActive = _isActiveKp = false;
154 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.23.4.25 void KbAnim::resetParams ( )

Definition at line 127 of file kbanim.cpp.

References _tempParameters, and updateParams().

Referenced by KbAnimWidget::on_propertyButton_clicked().

```
127                     {
128     _tempParameters.clear();
129     updateParams();
130 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.23.4.26 void KbAnim::save (CkbSettings & *settings*)

Definition at line 64 of file kbanim.cpp.

References _guid, _keys, _mode, _name, _needsSave, _opacity, _parameters, _scriptGuid, _scriptName, CkbSettings::beginGroup(), CkbSettings::endGroup(), and CkbSettings::setValue().

Referenced by KbLight::save().

```
64                                      {
65     _needsSave = false;
66     settings.beginGroup(_guid.toString().toUpper());
67     settings.setValue("UseRealNames", true);
68     settings.setValue("Keys", _keys);
69     settings.setValue("Name", _name);
70     settings.setValue("Opacity", QString::number(_opacity));
71     settings.setValue("BlendMode", metaObject()->enumerator(metaObject()->indexOfEnumerator("Mode")
      ).valueToKey(_mode));
72     settings.setValue("ScriptName", _scriptName);
73     settings.setValue("ScriptGuid", _scriptGuid.toString().toUpper());
74     settings.beginGroup("Parameters");
75     QMapIterator<QString, QVariant> i(_parameters);
76     while(i.hasNext()){
77         i.next();
78         settings.setValue(i.key(), i.value());
79     }
80     settings.endGroup();
81     settings.endGroup();
82 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.23.4.27 const AnimScript* KbAnim::script ( ) const [inline]

Definition at line 81 of file kbanim.h.

References _script.

Referenced by AnimSettingDialog::AnimSettingDialog(), KbAnimWidget::setCurrent(), and AnimSettingDialog::updateParam().

```
81 { return _script; }
```

Here is the caller graph for this function:

12.23.4.28 const QString& KbAnim::scriptName ( ) const [inline]

Definition at line 82 of file kbanim.h.

References _scriptName.

Referenced by AnimSettingDialog::AnimSettingDialog(), and KbAnimWidget::setCurrent().

```
82 { return _scriptName; }
```

Here is the caller graph for this function:

12.23.4.29 void KbAnim::stop ( )

Definition at line 312 of file kbanim.cpp.

References _isActive, _isActiveKp, _script, AnimScript::end(), kpRepeatMsec, kpRepeatTime, kpStopTime, repeatKey, repeatMsec, repeatTime, and stopTime.

Referenced by KbLight::addAnim(), KbLight::close(), KbLight::duplicateAnim(), KeyAction::keyEvent(), keypress(), KbLight::restartAnimation(), and trigger().

```
312                 {
313     if(_script)
314         _script->end();
315     repeatTime = 0;
316     kpRepeatTime = 0;
317     repeatMsec = 0;
318     kpRepeatMsec = 0;
319     stopTime = 0;
320     kpStopTime = 0;
321     repeatKey = "";
322     _isActive = _isActiveKp = false;
323 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.23.4.30 void KbAnim::trigger (quint64 *timestamp*, bool *ignoreParameter* = `false`)

Definition at line 209 of file kbanim.cpp.

References _isActive, _script, catchUp(), effectiveParams(), AnimScript::frame(), repeatMsec, repeatTime, AnimScript::retrigger(), stop(), and stopTime.

Referenced by KbLight::addAnim(), KbLight::duplicateAnim(), KeyAction::keyEvent(), KbLight::open(), KbLight::previewAnim(), and KbLight::restartAnimation().

```
209                                                                    {
210     if(!_script)
211         return;
212     QMap<QString, QVariant> parameters = effectiveParams();
213
214     catchUp(timestamp);
215     if(parameters.value("trigger").toBool() || ignoreParameter){
216         _isActive = true;
217         int delay = round(parameters.value("delay").toDouble() * 1000.);
218         if(delay > 0){
219             // If delay is enabled, wait to trigger the event
220             timestamp += delay;
221             repeatTime = timestamp;
222         } else
223             _script->retrigger(timestamp, true);
224
225         int repeat = round(parameters.value("repeat").toDouble() * 1000.);
226         if(repeat <= 0){
227             // If no repeat allowed, calculate stop time in seconds
228             repeatMsec = -1;
229             double stop = parameters.value("stop").toDouble();
230             if(stop <= 0)
231                 stopTime = 0;
232             else
233                 stopTime = timestamp + round(stop * 1000.);
234         } else {
235             // If repeat is allowed, calculate stop time in repetitions
236             repeatMsec = repeat;
237             if(delay <= 0)
238                 repeatTime = timestamp + repeat;
239             int stop = parameters.value("stop").toInt();
240             if(stop < 0)
241                 stopTime = 0;
242             else
243                 stopTime = timestamp + repeat * (1 + stop);
244         }
245     }
246     // Ask the script for a frame even if we didn't do anything here. This way ckb knows the script is
        responding.
247     _script->frame(timestamp);
```

```
248 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.23.4.31 void KbAnim::updateParams ( ) [private]

Definition at line 132 of file kbanim.cpp.

References _script, effectiveParams(), AnimScript::parameters(), and repeatKey.

Referenced by parameter(), and resetParams().

```
132                         {
133     if(_script)
134         _script->parameters(effectiveParams());
135     repeatKey = "";
136 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.23.5 Field Documentation

12.23.5.1 QUuid KbAnim::_guid [private]

Definition at line 110 of file kbanim.h.

Referenced by guid(), KbAnim(), newId(), and save().

12.23.5.2 bool KbAnim::_isActive [private]

Definition at line 114 of file kbanim.h.

Referenced by catchUp(), isActive(), keypress(), reInit(), stop(), and trigger().

12.23.5.3 bool KbAnim::_isActiveKp [private]

Definition at line 114 of file kbanim.h.

Referenced by catchUp(), isActive(), keypress(), reInit(), and stop().

12.23.5.4 QStringList KbAnim::_keys [private]

Definition at line 92 of file kbanim.h.

Referenced by KbAnim(), keys(), reInit(), and save().

12.23.5.5 KeyMap KbAnim::_map [private]

Definition at line 91 of file kbanim.h.

Referenced by KbAnim(), map(), and reInit().

12.23.5.6 Mode KbAnim::_mode [private]

Definition at line 113 of file kbanim.h.

Referenced by blend(), KbAnim(), mode(), and save().

12.23.5.7 QString KbAnim::_name [private]

Definition at line 111 of file kbanim.h.

Referenced by KbAnim(), name(), and save().

12.23.5.8 bool KbAnim::_needsSave [private]

Definition at line 115 of file kbanim.h.

Referenced by commitParams(), mode(), name(), needsSave(), newId(), opacity(), and save().

12.23.5.9 float KbAnim::_opacity [private]

Definition at line 112 of file kbanim.h.

Referenced by blend(), KbAnim(), opacity(), and save().

12.23.5.10 QMap<QString, QVariant> KbAnim::_parameters [private]

Definition at line 94 of file kbanim.h.

Referenced by commitParams(), effectiveParams(), hasParameter(), KbAnim(), parameter(), and save().

12.23.5.11 AnimScript* KbAnim::_script [private]

Definition at line 86 of file kbanim.h.

Referenced by blend(), catchUp(), isRunning(), KbAnim(), keypress(), parameter(), reInit(), script(), stop(), trigger(), and updateParams().

12.23.5.12 QUuid KbAnim::_scriptGuid [private]

Definition at line 88 of file kbanim.h.

Referenced by KbAnim(), and save().

12.23.5.13 QString KbAnim::_scriptName [private]

Definition at line 89 of file kbanim.h.

Referenced by KbAnim(), save(), and scriptName().

12.23.5.14 QMap<QString, QVariant> KbAnim::_tempParameters [private]

Definition at line 96 of file kbanim.h.

Referenced by commitParams(), effectiveParams(), parameter(), and resetParams().

12.23.5.15 int KbAnim::kpRepeatMsec [private]

Definition at line 106 of file kbanim.h.

Referenced by catchUp(), keypress(), and stop().

12.23.5.16 quint64 KbAnim::kpRepeatTime [private]

Definition at line 105 of file kbanim.h.

Referenced by catchUp(), keypress(), and stop().

12.23.5.17 quint64 KbAnim::kpStopTime [private]

Definition at line 105 of file kbanim.h.

Referenced by catchUp(), keypress(), and stop().

12.23.5.18 QString KbAnim::repeatKey [private]

Definition at line 104 of file kbanim.h.

Referenced by catchUp(), keypress(), reInit(), stop(), and updateParams().

12.23.5.19 int KbAnim::repeatMsec [private]

Definition at line 106 of file kbanim.h.

Referenced by catchUp(), keypress(), stop(), and trigger().

12.23.5.20 quint64 KbAnim::repeatTime [private]

Definition at line 105 of file kbanim.h.

Referenced by catchUp(), keypress(), stop(), and trigger().

12.23.5.21 quint64 KbAnim::stopTime [private]

Definition at line 105 of file kbanim.h.

Referenced by catchUp(), keypress(), stop(), and trigger().

The documentation for this class was generated from the following files:

- src/ckb/kbanim.h
- src/ckb/kbanim.cpp

12.24 Ui::KbAnimWidget Class Reference

```
#include <src/ckb/ui_kbanimwidget.h>
```

Inheritance diagram for Ui::KbAnimWidget:

Collaboration diagram for Ui::KbAnimWidget:

Public Member Functions

- void setupUi (QWidget ∗KbAnimWidget)
- void retranslateUi (QWidget ∗KbAnimWidget)

Data Fields

- QGridLayout * gridLayout
- QStackedWidget * selectionStack
- QWidget * noSelPage
- QGridLayout * gridLayout_2
- QLabel * noAnimLabel
- QSpacerItem * verticalSpacer
- QWidget * animPage
- QVBoxLayout * verticalLayout
- QHBoxLayout * horizontalLayout
- QLabel * aNameLabel
- QLabel * aVerLabel
- QSpacerItem * horizontalSpacer
- QLabel * aCopyLabel
- QSpacerItem * verticalSpacer_3
- QGridLayout * gridLayout_3
- QLineEdit * nameBox
- QDoubleSpinBox * opacityBox
- QComboBox * blendBox
- QLabel * label_6
- QSpacerItem * horizontalSpacer_4
- QSpacerItem * horizontalSpacer_2
- QLabel * label_5
- QSpacerItem * horizontalSpacer_3
- QLabel * label_7
- QPushButton * keyButton
- QPushButton * deleteButton
- QPushButton * propertyButton
- QSpacerItem * horizontalSpacer_5
- QSpacerItem * verticalSpacer_2
- QWidget * aMissingPage
- QGridLayout * gridLayout_4
- QLabel * aMissingLabel
- RListWidget * animList

12.24.1 Detailed Description

Definition at line 269 of file ui_kbanimwidget.h.

12.24.2 Member Function Documentation

12.24.2.1 void Ui_KbAnimWidget::retranslateUi (QWidget * *KbAnimWidget*) [inline],[inherited]

Definition at line 241 of file ui_kbanimwidget.h.

References Ui_KbAnimWidget::aCopyLabel, Ui_KbAnimWidget::aMissingLabel, Ui_KbAnimWidget::aNameLabel, Ui_KbAnimWidget::aVerLabel, Ui_KbAnimWidget::blendBox, Ui_KbAnimWidget::deleteButton, Ui_KbAnimWidget::keyButton, Ui_KbAnimWidget::label_5, Ui_KbAnimWidget::label_6, Ui_KbAnimWidget::label_7, Ui_KbAnimWidget::noAnimLabel, Ui_KbAnimWidget::opacityBox, and Ui_KbAnimWidget::propertyButton.

Referenced by Ui_KbAnimWidget::setupUi().

```
    {
        KbAnimWidget->setWindowTitle(QApplication::translate("KbAnimWidget", "Form", Q_NULLPTR));
        noAnimLabel->setText(QApplication::translate("KbAnimWidget", "No animations in this mode", Q_NULLPTR));
        aNameLabel->setText(QApplication::translate("KbAnimWidget", "Animation name", Q_NULLPTR);
        aVerLabel->setText(QApplication::translate("KbAnimWidget", "v0.0", Q_NULLPTR));
        aCopyLabel->setText(QApplication::translate("KbAnimWidget", "Copyright \302\251", Q_NULLPTR));
        opacityBox->setSuffix(QApplication::translate("KbAnimWidget", "%", Q_NULLPTR));
        blendBox->clear();
        blendBox->insertItems(0, QStringList()
         << QApplication::translate("KbAnimWidget", "Normal", Q_NULLPTR)
         << QApplication::translate("KbAnimWidget", "Add", Q_NULLPTR)
         << QApplication::translate("KbAnimWidget", "Subtract", Q_NULLPTR)
         << QApplication::translate("KbAnimWidget", "Multiply", Q_NULLPTR)
         << QApplication::translate("KbAnimWidget", "Divide", Q_NULLPTR)
        );
        label_6->setText(QApplication::translate("KbAnimWidget", "Blend mode:", Q_NULLPTR));
        label_5->setText(QApplication::translate("KbAnimWidget", "Opacity:", Q_NULLPTR));
        label_7->setText(QApplication::translate("KbAnimWidget", "Name:", Q_NULLPTR));
        keyButton->setText(QApplication::translate("KbAnimWidget", "Set keys", Q_NULLPTR));
        deleteButton->setText(QApplication::translate("KbAnimWidget", "Delete animation", Q_NULLPTR));
        propertyButton->setText(QApplication::translate("KbAnimWidget", "Edit properties", Q_NULLPTR));
        aMissingLabel->setText(QApplication::translate("KbAnimWidget", "Mising animation", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.24.2.2 void Ui_KbAnimWidget::setupUi (QWidget * *KbAnimWidget*) [inline],[inherited]

Definition at line 69 of file ui_kbanimwidget.h.

References Ui_KbAnimWidget::aCopyLabel, Ui_KbAnimWidget::aMissingLabel, Ui_KbAnimWidget::aMissingPage, Ui_KbAnimWidget::aNameLabel, Ui_KbAnimWidget::animList, Ui_KbAnimWidget::animPage, Ui_KbAnimWidget::aVerLabel, Ui_KbAnimWidget::blendBox, Ui_KbAnimWidget::deleteButton, Ui_KbAnimWidget::gridLayout, Ui_KbAnimWidget::gridLayout_2, Ui_KbAnimWidget::gridLayout_3, Ui_KbAnimWidget::gridLayout_4, Ui_KbAnimWidget::horizontalLayout, Ui_KbAnimWidget::horizontalSpacer, Ui_KbAnimWidget::horizontalSpacer_2, Ui_KbAnimWidget::horizontalSpacer_3, Ui_KbAnimWidget::horizontalSpacer_4, Ui_KbAnimWidget::horizontalSpacer_5, Ui_KbAnimWidget::keyButton, Ui_KbAnimWidget::label_5, Ui_KbAnimWidget::label_6, Ui_KbAnimWidget::label_7, Ui_KbAnimWidget::nameBox, Ui_KbAnimWidget::noAnimLabel, Ui_KbAnimWidget::noSelPage, Ui_KbAnimWidget::opacityBox, Ui_KbAnimWidget::propertyButton, Ui_KbAnimWidget::retranslateUi(), Ui_KbAnimWidget::selectionStack, Ui_KbAnimWidget::verticalLayout, Ui_KbAnimWidget::verticalSpacer, Ui_KbAnimWidget::verticalSpacer_2, and Ui_KbAnimWidget::verticalSpacer_3.

Referenced by KbAnimWidget::KbAnimWidget().

```
    {
        if (KbAnimWidget->objectName().isEmpty())
            KbAnimWidget->setObjectName(QStringLiteral("KbAnimWidget"));
        KbAnimWidget->resize(613, 300);
        gridLayout = new QGridLayout(KbAnimWidget);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        gridLayout->setContentsMargins(0, 0, 0, 0);
        selectionStack = new QStackedWidget(KbAnimWidget);
        selectionStack->setObjectName(QStringLiteral("selectionStack"));
        noSelPage = new QWidget();
        noSelPage->setObjectName(QStringLiteral("noSelPage"));
        gridLayout_2 = new QGridLayout(noSelPage);
        gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
        gridLayout_2->setContentsMargins(6, 6, 6, 6);
        noAnimLabel = new QLabel(noSelPage);
```

```
        noAnimLabel->setObjectName(QStringLiteral("noAnimLabel"));

        gridLayout_2->addWidget(noAnimLabel, 0, 0, 1, 1);

        verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout_2->addItem(verticalSpacer, 1, 0, 1, 1);

        selectionStack->addWidget(noSelPage);
        animPage = new QWidget();
        animPage->setObjectName(QStringLiteral("animPage"));
        verticalLayout = new QVBoxLayout(animPage);
        verticalLayout->setObjectName(QStringLiteral("verticalLayout"));
        verticalLayout->setContentsMargins(6, 0, 0, 0);
        horizontalLayout = new QHBoxLayout();
         horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
         aNameLabel = new QLabel(animPage);
         aNameLabel->setObjectName(QStringLiteral("aNameLabel"));
         QFont font;
         font.setBold(true);
         font.setWeight(75);
         aNameLabel->setFont(font);

         horizontalLayout->addWidget(aNameLabel);

         aVerLabel = new QLabel(animPage);
         aVerLabel->setObjectName(QStringLiteral("aVerLabel"));

         horizontalLayout->addWidget(aVerLabel);

         horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

         horizontalLayout->addItem(horizontalSpacer);

         aCopyLabel = new QLabel(animPage);
         aCopyLabel->setObjectName(QStringLiteral("aCopyLabel"));

         horizontalLayout->addWidget(aCopyLabel);


         verticalLayout->addLayout(horizontalLayout);

         verticalSpacer_3 = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

         verticalLayout->addItem(verticalSpacer_3);

         gridLayout_3 = new QGridLayout();
         gridLayout_3->setObjectName(QStringLiteral("gridLayout_3"));
         nameBox = new QLineEdit(animPage);
         nameBox->setObjectName(QStringLiteral("nameBox"));
         QSizePolicy sizePolicy(QSizePolicy::Fixed, QSizePolicy::Fixed);
         sizePolicy.setHorizontalStretch(0);
         sizePolicy.setVerticalStretch(0);
         sizePolicy.setHeightForWidth(nameBox->sizePolicy().hasHeightForWidth());
         nameBox->setSizePolicy(sizePolicy);
         nameBox->setMinimumSize(QSize(150, 0));
         nameBox->setMaximumSize(QSize(150, 16777215));

         gridLayout_3->addWidget(nameBox, 0, 3, 1, 2);

         opacityBox = new QDoubleSpinBox(animPage);
         opacityBox->setObjectName(QStringLiteral("opacityBox"));
         opacityBox->setDecimals(1);
         opacityBox->setValue(100);

         gridLayout_3->addWidget(opacityBox, 1, 3, 1, 1);

         blendBox = new QComboBox(animPage);
         blendBox->setObjectName(QStringLiteral("blendBox"));

         gridLayout_3->addWidget(blendBox, 2, 3, 1, 2);

         label_6 = new QLabel(animPage);
         label_6->setObjectName(QStringLiteral("label_6"));

         gridLayout_3->addWidget(label_6, 2, 1, 1, 1);

         horizontalSpacer_4 = new QSpacerItem(0, 0, QSizePolicy::Fixed, QSizePolicy::Minimum);

         gridLayout_3->addItem(horizontalSpacer_4, 0, 0, 1, 1);

         horizontalSpacer_2 = new QSpacerItem(30, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);
```

```

        gridLayout_3->addItem(horizontalSpacer_2, 0, 2, 1, 1);

        label_5 = new QLabel(animPage);
        label_5->setObjectName(QStringLiteral("label_5"));

        gridLayout_3->addWidget(label_5, 1, 1, 1, 1);

        horizontalSpacer_3 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_3, 0, 5, 1, 1);

        label_7 = new QLabel(animPage);
        label_7->setObjectName(QStringLiteral("label_7"));

        gridLayout_3->addWidget(label_7, 0, 1, 1, 1);

        keyButton = new QPushButton(animPage);
        keyButton->setObjectName(QStringLiteral("keyButton"));

        gridLayout_3->addWidget(keyButton, 1, 6, 1, 1);

        deleteButton = new QPushButton(animPage);
        deleteButton->setObjectName(QStringLiteral("deleteButton"));

        gridLayout_3->addWidget(deleteButton, 2, 6, 1, 1);

        propertyButton = new QPushButton(animPage);
        propertyButton->setObjectName(QStringLiteral("propertyButton"));

        gridLayout_3->addWidget(propertyButton, 0, 6, 1, 1);

        horizontalSpacer_5 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_5, 1, 4, 1, 1);


        verticalLayout->addLayout(gridLayout_3);

        verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
    QSizePolicy::Expanding);

        verticalLayout->addItem(verticalSpacer_2);

        selectionStack->addWidget(animPage);
        aMissingPage = new QWidget();
        aMissingPage->setObjectName(QStringLiteral("aMissingPage"));
        gridLayout_4 = new QGridLayout(aMissingPage);
        gridLayout_4->setObjectName(QStringLiteral("gridLayout_4"));
        aMissingLabel = new QLabel(aMissingPage);
        aMissingLabel->setObjectName(QStringLiteral("aMissingLabel"));
        aMissingLabel->setFont(font);

        gridLayout_4->addWidget(aMissingLabel, 0, 0, 1, 1);

        selectionStack->addWidget(aMissingPage);

        gridLayout->addWidget(selectionStack, 0, 2, 2, 1);

        animList = new RListWidget(KbAnimWidget);
        animList->setObjectName(QStringLiteral("animList"));
        animList->setMaximumSize(QSize(130, 16777215));
        animList->setContextMenuPolicy(Qt::CustomContextMenu);
        animList->setFrameShadow(QFrame::Plain);
        animList->setDragDropMode(QAbstractItemView::InternalMove);
        animList->setMovement(QListView::Snap);

        gridLayout->addWidget(animList, 0, 0, 2, 1);


        retranslateUi(KbAnimWidget);

        QMetaObject::connectSlotsByName(KbAnimWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.24.3 Field Documentation

12.24.3.1 QLabel* Ui_KbAnimWidget::aCopyLabel [inherited]

Definition at line 47 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), KbAnimWidget::setCurrent(), and Ui_KbAnimWidget::setupUi().

12.24.3.2 QLabel* Ui_KbAnimWidget::aMissingLabel [inherited]

Definition at line 66 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), KbAnimWidget::setCurrent(), and Ui_KbAnimWidget::setupUi().

12.24.3.3 QWidget* Ui_KbAnimWidget::aMissingPage [inherited]

Definition at line 64 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.4 QLabel* Ui_KbAnimWidget::aNameLabel [inherited]

Definition at line 44 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), KbAnimWidget::setCurrent(), and Ui_KbAnimWidget::setupUi().

12.24.3.5 RListWidget* Ui_KbAnimWidget::animList [inherited]

Definition at line 67 of file ui_kbanimwidget.h.

Referenced by KbAnimWidget::addAnim(), KbAnimWidget::clearSelection(), KbAnimWidget::duplicateAnim(), KbAnimWidget::KbAnimWidget(), KbAnimWidget::on_animList_customContextMenuRequested(), KbAnimWidget::on_deleteButton_clicked(), KbAnimWidget::on_nameBox_textEdited(), KbAnimWidget::refreshList(), KbAnimWidget::reorderAnims(), and Ui_KbAnimWidget::setupUi().

12.24.3.6 QWidget* Ui_KbAnimWidget::animPage [inherited]

Definition at line 41 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.7 QLabel* Ui_KbAnimWidget::aVerLabel [inherited]

Definition at line 45 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), KbAnimWidget::setCurrent(), and Ui_KbAnimWidget::setupUi().

12.24.3.8 QComboBox* Ui_KbAnimWidget::blendBox [inherited]

Definition at line 52 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), KbAnimWidget::setCurrent(), and Ui_KbAnimWidget::setupUi().

12.24.3.9 QPushButton* Ui_KbAnimWidget::deleteButton [inherited]

Definition at line 60 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), and Ui_KbAnimWidget::setupUi().

12.24.3.10 QGridLayout* Ui_KbAnimWidget::gridLayout [inherited]

Definition at line 35 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.11 QGridLayout* Ui_KbAnimWidget::gridLayout_2 [inherited]

Definition at line 38 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.12 QGridLayout* Ui_KbAnimWidget::gridLayout_3 [inherited]

Definition at line 49 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.13 QGridLayout* Ui_KbAnimWidget::gridLayout_4 [inherited]

Definition at line 65 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.14 QHBoxLayout* Ui_KbAnimWidget::horizontalLayout [inherited]

Definition at line 43 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.15 QSpacerItem* Ui_KbAnimWidget::horizontalSpacer [inherited]

Definition at line 46 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.16 QSpacerItem* Ui_KbAnimWidget::horizontalSpacer_2 [inherited]

Definition at line 55 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.17 QSpacerItem* Ui_KbAnimWidget::horizontalSpacer_3 [inherited]

Definition at line 57 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.18 QSpacerItem* Ui_KbAnimWidget::horizontalSpacer_4 [inherited]

Definition at line 54 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.19 QSpacerItem* Ui_KbAnimWidget::horizontalSpacer_5 [inherited]

Definition at line 62 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.20 QPushButton* Ui_KbAnimWidget::keyButton [inherited]

Definition at line 59 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), KbAnimWidget::setSelectedKeys(), and Ui_KbAnimWidget::setupUi().

12.24.3.21 QLabel* Ui_KbAnimWidget::label_5 [inherited]

Definition at line 56 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), and Ui_KbAnimWidget::setupUi().

12.24.3.22 QLabel* Ui_KbAnimWidget::label_6 [inherited]

Definition at line 53 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), and Ui_KbAnimWidget::setupUi().

12.24.3.23 QLabel* Ui_KbAnimWidget::label_7 [inherited]

Definition at line 58 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), and Ui_KbAnimWidget::setupUi().

12.24.3.24 QLineEdit* Ui_KbAnimWidget::nameBox [inherited]

Definition at line 50 of file ui_kbanimwidget.h.

Referenced by KbAnimWidget::on_animList_itemChanged(), KbAnimWidget::on_propertyButton_clicked(), KbAnimWidget::setCurrent(), and Ui_KbAnimWidget::setupUi().

12.24.3.25 QLabel* Ui_KbAnimWidget::noAnimLabel [inherited]

Definition at line 39 of file ui_kbanimwidget.h.

Referenced by KbAnimWidget::addAnim(), KbAnimWidget::duplicateAnim(), KbAnimWidget::on_deleteButton_clicked(), KbAnimWidget::refreshList(), Ui_KbAnimWidget::retranslateUi(), and Ui_KbAnimWidget::setupUi().

12.24.3.26 QWidget* Ui_KbAnimWidget::noSelPage [inherited]

Definition at line 37 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.27 QDoubleSpinBox* Ui_KbAnimWidget::opacityBox [inherited]

Definition at line 51 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), KbAnimWidget::setCurrent(), and Ui_KbAnimWidget::setupUi().

12.24.3.28 QPushButton* Ui_KbAnimWidget::propertyButton [inherited]

Definition at line 61 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::retranslateUi(), and Ui_KbAnimWidget::setupUi().

12.24.3.29 QStackedWidget* Ui_KbAnimWidget::selectionStack [inherited]

Definition at line 36 of file ui_kbanimwidget.h.

Referenced by KbAnimWidget::setCurrent(), and Ui_KbAnimWidget::setupUi().

12.24.3.30 QVBoxLayout* Ui_KbAnimWidget::verticalLayout [inherited]

Definition at line 42 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.31 QSpacerItem* Ui_KbAnimWidget::verticalSpacer [inherited]

Definition at line 40 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.32 QSpacerItem* Ui_KbAnimWidget::verticalSpacer_2 [inherited]

Definition at line 63 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

12.24.3.33 QSpacerItem* Ui_KbAnimWidget::verticalSpacer_3 [inherited]

Definition at line 48 of file ui_kbanimwidget.h.

Referenced by Ui_KbAnimWidget::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kbanimwidget.h

12.25 KbAnimWidget Class Reference

```
#include <src/ckb/kbanimwidget.h>
```

Inheritance diagram for KbAnimWidget:

Collaboration diagram for KbAnimWidget:

Signals

- void animChanged (KbAnim ∗selection)
- void didUpdateSelection (QStringList keys)

Public Member Functions

- KbAnimWidget (QWidget ∗parent=0)
- ∼KbAnimWidget ()
- void setLight (KbLight ∗newLight)
- void addAnim (const AnimScript ∗base, const QStringList &keyList, const QString &name, const QMap< QString, QVariant > &preset)
- void duplicateAnim (KbAnim ∗old)
- void clearSelection ()
- void setSelectedKeys (const QStringList &keys)

Private Slots

- void on_animList_currentItemChanged (QListWidgetItem ∗current, QListWidgetItem ∗previous)
- void on_animList_itemChanged (QListWidgetItem ∗item)
- void on_animList_customContextMenuRequested (const QPoint &pos)
- void on_nameBox_textEdited (const QString &arg1)
- void on_opacityBox_valueChanged (double arg1)
- void on_blendBox_activated (int index)
- void on_keyButton_clicked ()
- void on_deleteButton_clicked ()
- void refreshList ()
- void reorderAnims ()
- void on_propertyButton_clicked ()

Private Member Functions

- void setCurrent (KbAnim *newCurrent)

Private Attributes

- KbLight * light
- QHash< QUuid, KbAnim * > animations
- KbAnim * current
- QStringList selectedKeys
- bool noReorder
- Ui::KbAnimWidget * ui

12.25.1 Detailed Description

Definition at line 15 of file kbanimwidget.h.

12.25.2 Constructor & Destructor Documentation

12.25.2.1 KbAnimWidget::KbAnimWidget (QWidget * *parent* = 0) [explicit]

Definition at line 7 of file kbanimwidget.cpp.

References Ui_KbAnimWidget::animList, reorderAnims(), setCurrent(), Ui_KbAnimWidget::setupUi(), and ui.

```
7                                          :
8     QWidget(parent), light(0), current(0), noReorder(false),
9     ui(new Ui::KbAnimWidget)
10 {
11     ui->setupUi(this);
12     ui->animList->setVisible(false);
13     setCurrent(0);
14     connect(ui->animList, SIGNAL(orderChanged()), this, SLOT(
      reorderAnims()));
15 }
```

Here is the call graph for this function:

12.25.2.2 KbAnimWidget::~KbAnimWidget ( )

Definition at line 17 of file kbanimwidget.cpp.

References ui.

```
17                              {
18     delete ui;
19 }
```

12.25.3 Member Function Documentation

12.25.3.1 void KbAnimWidget::addAnim (const AnimScript * *base*, const QStringList & *keyList*, const QString & *name*, const QMap< QString, QVariant > & *preset*)

Definition at line 82 of file kbanimwidget.cpp.

References KbLight::addAnim(), animations, Ui_KbAnimWidget::animList, KbAnim::guid(), light, KbAnim::name(), Ui_KbAnimWidget::noAnimLabel, noReorder, on_propertyButton_clicked(), setCurrent(), and ui.

Referenced by KbLightWidget::on_animButton_clicked().

```
82
                                    {
83     if(!light)
84         return;
85     noReorder = true;
86     KbAnim* animation = light->addAnim(base, keyList, name, preset);
87     QListWidgetItem* item = new QListWidgetItem(animation->name(), ui->
       animList);
88     item->setData(Qt::UserRole, animation->guid());
89     item->setFlags(item->flags() | Qt::ItemIsEditable);
90     animations[animation->guid()] = animation;
91     ui->animList->addItem(item);
92     ui->animList->setCurrentItem(item);
```

```
    ui->animList->setVisible(true);
    ui->noAnimLabel->setVisible(false);

    setCurrent(animation);
    noReorder = false;

    // Activate settings dialog
     on_propertyButton_clicked();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.25.3.2 void KbAnimWidget::animChanged (KbAnim * *selection*) [signal]

Definition at line 213 of file moc_kbanimwidget.cpp.

Referenced by setCurrent().

```
{
    void *_a[] = { Q_NULLPTR, const_cast<void*>(reinterpret_cast<const void*>(&_t1)) };
    QMetaObject::activate(this, &staticMetaObject, 0, _a);
}
```

Here is the caller graph for this function:

12.25.3.3 void KbAnimWidget::clearSelection ( )

Definition at line 77 of file kbanimwidget.cpp.

References Ui_KbAnimWidget::animList, setCurrent(), and ui.

Referenced by KbLightWidget::setLight().

```
77                                  {
78     ui->animList->setCurrentItem(0);
79     setCurrent(0);
80 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.25.3.4 void KbAnimWidget::didUpdateSelection (QStringList *keys*) [signal]

Definition at line 220 of file moc_kbanimwidget.cpp.

Referenced by on_keyButton_clicked().

```
221 {
222     void *_a[] = { Q_NULLPTR, const_cast<void*>(reinterpret_cast<const void*>(&_t1)) };
223     QMetaObject::activate(this, &staticMetaObject, 1, _a);
224 }
```

Here is the caller graph for this function:

12.25.3.5 void KbAnimWidget::duplicateAnim (KbAnim * *old*)

Definition at line 103 of file kbanimwidget.cpp.

References KbLight::animList(), Ui_KbAnimWidget::animList, KbLight::duplicateAnim(), light, Ui_KbAnimWidget::noAnimLabel, noReorder, refreshList(), setCurrent(), and ui.

Referenced by on_animList_customContextMenuRequested().

```
103                                                 {
104     if(!light)
105         return;
106     noReorder = true;
107     KbAnim* animation = light->duplicateAnim(old);
108     // Refresh the list. insertItem doesn't seem to place the item in the correct position on its own...
109     refreshList();
110     ui->animList->setCurrentRow(light->animList().indexOf(animation));
111     ui->animList->setVisible(true);
112     ui->noAnimLabel->setVisible(false);
113
114     setCurrent(animation);
115     noReorder = false;
116 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.25.3.6 void KbAnimWidget::on_animList_currentItemChanged (QListWidgetItem * *current*, QListWidgetItem * *previous*) [private], [slot]

Definition at line 151 of file kbanimwidget.cpp.

References animations, and setCurrent().

```
151                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
156 }
```

Here is the call graph for this function:

12.25.3.7 void KbAnimWidget::on_animList_customContextMenuRequested (const QPoint & *pos*) [private], [slot]

Definition at line 169 of file kbanimwidget.cpp.

References animations, Ui_KbAnimWidget::animList, current, duplicateAnim(), on_deleteButton_clicked(), setCurrent(), and ui.

```
169                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
170     QListWidgetItem* item = ui->animList->itemAt(pos);
171     if(!item)
172         return;
173     setCurrent(animations[item->data(Qt::UserRole).toUuid()]);
174
175     QMenu menu(this);
176     QAction* rename = new QAction("Rename...", this);
177     QAction* duplicate = new QAction("Duplicate", this);
178     QAction* del = new QAction("Delete", this);
179     menu.addAction(rename);
180     menu.addAction(duplicate);
181     menu.addAction(del);
182     QAction* result = menu.exec(QCursor::pos());
183     if(result == rename)
184         ui->animList->editItem(item);
```

```
    else if(result == duplicate)
        duplicateAnim(current);
    else if(result == del)
        on_deleteButton_clicked();
}
```

Here is the call graph for this function:

12.25.3.8 void KbAnimWidget::on_animList_itemChanged (QListWidgetItem * *item*) [private],[slot]

Definition at line 158 of file kbanimwidget.cpp.

References anim, animations, current, KbAnim::name(), Ui_KbAnimWidget::nameBox, noReorder, and ui.

```
158                                                                 {
159     if(item){
160         KbAnim* anim = animations[item->data(Qt::UserRole).toUuid()];
161         if(anim){
162             anim->name(item->text().trimmed());
163             if(anim == current && !noReorder)
164                 ui->nameBox->setText(anim->name());
165         }
166     }
167 }
```

Here is the call graph for this function:

12.25.3.9 void KbAnimWidget::on_blendBox_activated (int *index*) [private],[slot]

Definition at line 205 of file kbanimwidget.cpp.

References current, and KbAnim::mode().

```
205                                                 {
206     if(current)
207         current->mode((KbAnim::Mode)index);
208 }
```

Here is the call graph for this function:

12.25.3.10 void KbAnimWidget::on_deleteButton_clicked ( ) [private], [slot]

Definition at line 226 of file kbanimwidget.cpp.

References animations, KbLight::animList(), Ui_KbAnimWidget::animList, current, KbAnim::guid(), light, Ui_KbAnimWidget::noAnimLabel, KbLight::restartAnimation(), setCurrent(), and ui.

Referenced by on_animList_customContextMenuRequested().

```
226                                                 {
227     if(current){
228         animations.remove(current->guid());
229         QList<KbAnim*> animList = light->animList();
230         animList.removeAll(current);
231         light->animList(animList);
232         current->deleteLater();
233         setCurrent(0);
234         delete ui->animList->currentItem();
235         if(animations.count() == 0){
236             ui->animList->setVisible(false);
237             ui->noAnimLabel->setVisible(true);
238         }
239     }
240     light->restartAnimation();
241 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.25.3.11 void KbAnimWidget::on_keyButton_clicked ( ) [private],[slot]

Definition at line 210 of file kbanimwidget.cpp.

References KeyMap::contains(), current, didUpdateSelection(), KbAnim::keys(), light, KbLight::map(), KbLight::restartAnimation(), and selectedKeys.

```
210                                         {
211     if(current){
212         QStringList keys = selectedKeys;
213         // If any keys were selected previously that aren't in the keymap now, leave them in
214         // This is important for layout compatibility - e.g. being able to select both bslash_iso and
        bslash, because no single layout contains both
215         const KeyMap& map = light->map();
216         foreach(const QString& key, current->keys()){
217             if(!map.contains(key))
218                 keys << key;
219         }
220         current->keys(keys);
221         emit didUpdateSelection(selectedKeys);
222     }
223     light->restartAnimation();
224 }
```

Here is the call graph for this function:

12.25.3.12 void KbAnimWidget::on_nameBox_textEdited (const QString & *arg1*) [private],[slot]

Definition at line 191 of file kbanimwidget.cpp.

References Ui_KbAnimWidget::animList, current, KbAnim::name(), noReorder, and ui.

Referenced by on_propertyButton_clicked().

```
191                                                     {
192     if(current){
193         noReorder = true;
194         current->name(arg1.trimmed());
195         ui->animList->currentItem()->setText(current->name());
196         noReorder = false;
197     }
198 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.25.3.13 void KbAnimWidget::on_opacityBox_valueChanged (double *arg1*) [private],[slot]

Definition at line 200 of file kbanimwidget.cpp.

References current, and KbAnim::opacity().

```
200                                                         {
201     if(current)
202         current->opacity(arg1 / 100.);
203 }
```

Here is the call graph for this function:

12.25.3.14 void KbAnimWidget::on_propertyButton_clicked ( ) [private],[slot]

Definition at line 243 of file kbanimwidget.cpp.

References KbAnim::commitParams(), current, light, AnimSettingDialog::name(), Ui_KbAnimWidget::nameBox, on_nameBox_textEdited(), KbAnim::reInit(), KbAnim::resetParams(), KbLight::restartAnimation(), and ui.

Referenced by addAnim().

```
243                                             {
244     if(!current)
245         return;
246     // Present animation property popup
247     AnimSettingDialog dialog(this, current);
248     dialog.exec();
249     if(dialog.result() != QDialog::Accepted){
250         current->resetParams();
251         return;
252     }
253     // Apply settings and restart all animations
254     current->commitParams();
255     current->reInit();
256     light->restartAnimation();
257     // Update name
258     ui->nameBox->setText(dialog.name());
259     on_nameBox_textEdited(dialog.name());
260 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.25.3.15 void KbAnimWidget::refreshList ( ) [private],[slot]

Definition at line 32 of file kbanimwidget.cpp.

References anim, animations, KbLight::animList(), Ui_KbAnimWidget::animList, KbAnim::guid(), light, KbAnim::name(), Ui_KbAnimWidget::noAnimLabel, noReorder, setCurrent(), and ui.

Referenced by duplicateAnim(), and setLight().

```
32                                {
33     noReorder = true;
34     setCurrent(0);
35     ui->animList->clear();
36     animations.clear();
37     // Add the animations from the new lighting mode
38     if(!light){
39         ui->animList->setVisible(false);
40         ui->noAnimLabel->setVisible(true);
41         return;
42     }
43     QList<KbAnim*> newAnimations = light->animList();
44     if(newAnimations.count() == 0){
45         ui->animList->setVisible(false);
46         ui->noAnimLabel->setVisible(true);
47         return;
48     }
49     ui->animList->setVisible(true);
50     foreach(KbAnim* anim, newAnimations){
51         QListWidgetItem* item = new QListWidgetItem(anim->name(), ui->
       animList);
52         item->setData(Qt::UserRole, anim->guid());
53         item->setFlags(item->flags() | Qt::ItemIsEditable);
54         animations[anim->guid()] = anim;
55         ui->animList->addItem(item);
56     }
57     ui->noAnimLabel->setVisible(false);
58     noReorder = false;
59 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.25.3.16 void KbAnimWidget::reorderAnims ( ) [private],[slot]

Definition at line 61 of file kbanimwidget.cpp.

References anim, animations, KbLight::animList(), Ui_KbAnimWidget::animList, light, noReorder, and ui.

Referenced by KbAnimWidget().

```
61                                  {
62      if(light && !noReorder){
63          // Clear and rebuild the list of animations in case the animation moved
64          int count = ui->animList->count();
65          QList<KbAnim*> animList;
66          for(int i = 0; i < count; i++){
67              QListWidgetItem* item = ui->animList->item(i);
68              KbAnim* anim = animations[item->data(Qt::UserRole).toUuid()];
69              if(anim && !animList.contains(anim))
70                  animList.append(anim);
71              item->setFlags(item->flags() | Qt::ItemIsEditable);
72          }
73          light->animList(animList);
74      }
75  }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.25.3.17 void KbAnimWidget::setCurrent (KbAnim * *newCurrent*) [private]

Definition at line 118 of file kbanimwidget.cpp.

References Ui_KbAnimWidget::aCopyLabel, Ui_KbAnimWidget::aMissingLabel, Ui_KbAnimWidget::aNameLabel, animChanged(), Ui_KbAnimWidget::aVerLabel, Ui_KbAnimWidget::blendBox, AnimScript::copyright(), current, KbAnim::keys(), KbAnim::mode(), AnimScript::name(), KbAnim::name(), Ui_KbAnimWidget::nameBox, KbAnim::opacity(), Ui_KbAnimWidget::opacityBox, KbAnim::script(), KbAnim::scriptName(), selectedKeys, Ui_KbAnimWidget::selectionStack, ui, and AnimScript::version().

Referenced by addAnim(), clearSelection(), duplicateAnim(), KbAnimWidget(), on_animList_currentItemChanged(), on_animList_customContextMenuRequested(), on_deleteButton_clicked(), and refreshList().

```
118                                                 {
119     if(newCurrent != current)
120         emit animChanged(current = newCurrent);
121     if(!current){
122         selectedKeys.clear();
123         ui->selectionStack->setCurrentIndex(0);
124         return;
125     }
126     selectedKeys = current->keys();
127     const AnimScript* script = current->script();
128     if(!script){
129         ui->selectionStack->setCurrentIndex(2);
130         ui->aMissingLabel->setText("The \"" + current->
        scriptName() + "\" script could not be loaded. Please check your animation directory.");
131         return;
132     }
133     ui->selectionStack->setCurrentIndex(1);
134     ui->aNameLabel->setText(script->name());
135     ui->aVerLabel->setText("v" + script->version());
136     ui->aCopyLabel->setText(script->copyright());
137
138     ui->nameBox->setText(current->name());
139     ui->opacityBox->setValue(current->opacity() * 100.);
140     ui->blendBox->setCurrentIndex((int)current->mode());
141 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.25.3.18 void KbAnimWidget::setLight (KbLight * *newLight*)

Definition at line 21 of file kbanimwidget.cpp.

References light, and refreshList().

Referenced by KbLightWidget::setLight().

```
                                        {
    if(light != newLight){
        if(light)
            disconnect(light, SIGNAL(didLoad()), this, SLOT(refreshList()));
        if(newLight)
            connect(newLight, SIGNAL(didLoad()), this, SLOT(refreshList()));
        light = newLight;
    }
    refreshList();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.25.3.19 void KbAnimWidget::setSelectedKeys (const QStringList & *keys*)

Definition at line 143 of file kbanimwidget.cpp.

References Ui_KbAnimWidget::keyButton, selectedKeys, and ui.

Referenced by KbLightWidget::newSelection().

```
                                                    {
    selectedKeys = keys;
    if(keys.count() == 0)
        ui->keyButton->setVisible(false);
    else
        ui->keyButton->setVisible(true);
}
```

Here is the caller graph for this function:

12.25.4 Field Documentation

12.25.4.1 QHash<QUuid, KbAnim*> KbAnimWidget::animations [private]

Definition at line 53 of file kbanimwidget.h.

Referenced by addAnim(), on_animList_currentItemChanged(), on_animList_customContextMenuRequested(), on_animList_itemChanged(), on_deleteButton_clicked(), refreshList(), and reorderAnims().

12.25.4.2 KbAnim* KbAnimWidget::current [private]

Definition at line 55 of file kbanimwidget.h.

Referenced by on_animList_customContextMenuRequested(), on_animList_itemChanged(), on_blendBox_activated(), on_deleteButton_clicked(), on_keyButton_clicked(), on_nameBox_textEdited(), on_opacityBox_valueChanged(), on_propertyButton_clicked(), and setCurrent().

12.25.4.3 KbLight* KbAnimWidget::light [private]

Definition at line 52 of file kbanimwidget.h.

Referenced by addAnim(), duplicateAnim(), on_deleteButton_clicked(), on_keyButton_clicked(), on_propertyButton_clicked(), refreshList(), reorderAnims(), and setLight().

12.25.4.4 bool KbAnimWidget::noReorder [private]

Definition at line 58 of file kbanimwidget.h.

Referenced by addAnim(), duplicateAnim(), on_animList_itemChanged(), on_nameBox_textEdited(), refreshList(), and reorderAnims().

12.25.4.5 QStringList KbAnimWidget::selectedKeys [private]

Definition at line 57 of file kbanimwidget.h.

Referenced by on_keyButton_clicked(), setCurrent(), and setSelectedKeys().

12.25.4.6 Ui::KbAnimWidget* KbAnimWidget::ui [private]

Definition at line 60 of file kbanimwidget.h.

Referenced by addAnim(), clearSelection(), duplicateAnim(), KbAnimWidget(), on_animList_customContextMenuRequested(), on_animList_itemChanged(), on_deleteButton_clicked(), on_nameBox_textEdited(), on_propertyButton_clicked(), refreshList(), reorderAnims(), setCurrent(), setSelectedKeys(), and ~KbAnimWidget().

The documentation for this class was generated from the following files:

- src/ckb/kbanimwidget.h

- src/ckb/kbanimwidget.cpp
- src/ckb/release/moc_kbanimwidget.cpp

12.26 KbBind Class Reference

`#include <src/ckb/kbbind.h>`

Inheritance diagram for KbBind:

Collaboration diagram for KbBind:

Public Slots

- void keyEvent (const QString &key, bool down)

Signals

- void didLoad ()
- void layoutChanged ()
- void updated ()

Public Member Functions

- KbBind (KbMode *modeParent, Kb *devParent, const KeyMap &keyMap)
- KbBind (KbMode *modeParent, Kb *devParent, const KeyMap &keyMap, const KbBind &other)

  KbBind.
- void load (CkbSettings &settings)
- void save (CkbSettings &settings)
- bool needsSave () const
- const KeyMap & map ()
- void map (const KeyMap &map)
- bool isISO () const
- bool isKeyboard () const
- bool isMouse () const
- KbPerf * perf ()
- KbLight * light ()
- QString action (const QString &key)
- QString friendlyName (const QString &key)

- QString friendlyActionName (const QString &key)
- void setAction (const QString &key, const QString &action)
- void setAction (const QStringList &keys, const QString &action)
- void resetAction (const QString &key)
- void resetAction (const QStringList &keys)
- void noAction (const QString &key)
- void noAction (const QStringList &keys)
- bool winLock ()
- void winLock (bool newWinLock)
- void update (QFile &cmd, bool force=false)
- void setNeedsUpdate ()
- int getMacroNumber ()

  KbBind::getMacroNumber.
- QString getMacroPath ()

  KbBind::getMacroPath.
- void handleNotificationChannel (bool start)

  handleNotificationChannel sends commands to ckb-daemon for (de-) activating the notify channel. Send a notify cmd to the keyboard to set or clear notification for reading macro definition. The file handle for the cmd pipe is stored in lastCmd.

Static Public Member Functions

- static QString globalRemap (const QString &key)
- static void setGlobalRemap (const QHash< QString, QString > keyToActual)
- static void loadGlobalRemap ()
- static void saveGlobalRemap ()
- static QString defaultAction (const QString &key)

Private Member Functions

- Kb * devParent () const
- KbMode * modeParent () const
- KeyAction * bindAction (const QString &key)

Private Attributes

- Kb * _devParent
- quint64 lastGlobalRemapTime
- QFile * lastCmd

  lastCmd is a cache-hack. Because the QFile ist opened in Kb, and we need it in the macro processing functions, we cache the value her in lastCmd.
- KeyMap _map
- QHash< QString, KeyAction * > _bind
- bool _winLock
- bool _needsUpdate
- bool _needsSave

Static Private Attributes

- static QHash< QString, QString > _globalRemap
- static quint64 globalRemapTime = 0

Friends

- class KeyAction

12.26.1 Detailed Description

Definition at line 20 of file kbbind.h.

12.26.2 Constructor & Destructor Documentation

12.26.2.1 KbBind::KbBind (KbMode * *modeParent*, Kb * *devParent*, const KeyMap & *keyMap*) [explicit]

Definition at line 12 of file kbbind.cpp.

```
12                                                                  :
13     QObject(modeParent), _devParent(parentBoard),
      lastGlobalRemapTime(globalRemapTime), _map(keyMap),
14     _winLock(false), _needsUpdate(true), _needsSave(true) {
15 }
```

12.26.2.2 KbBind::KbBind (KbMode * *modeParent*, Kb * *parentBoard*, const KeyMap & *keyMap*, const KbBind & *other*)

KbBind::KbBind // copy all existing Key bindings.

Parameters

modeParent	
devParent	
keyMap	
other	This is the KbBind object to copy from Use this constructor to copy an existing Binding
modeParent	
parentBoard	
keyMap	
other	

Create a new Hash table and copy all entries

clear the destination list (there are the original KeyActions as references, so do not delete them)

and move the KeyActions we just created

Definition at line 24 of file kbbind.cpp.

References _bind, KeyAction, map(), and KeyAction::value().

```
24                                                                                                  :
25     QObject(modeParent), _devParent(parentBoard),
      lastGlobalRemapTime(globalRemapTime), _bind(other.
      _bind),
26     _winLock(false), _needsUpdate(true), _needsSave(true) {
27     map(keyMap);
28
30     QHash<QString, KeyAction*> newBind;
31     foreach(QString key, _bind.keys()) {
32         KeyAction* act = _bind.value(key);
33         if(act) {
34             newBind[key] = new KeyAction(act->value(), this);
35         }
36     }
37
39     _bind.clear();
40     foreach(QString key, newBind.keys()) {
41         KeyAction* act = newBind.value(key);
42         if(act) {
44             _bind[key] = new KeyAction(act->value(), this);
45         }
46     }
```

```
    newBind.clear();      // here we *must not* delete the KeyActions, because they are referenced by _bind
    now
}
```

Here is the call graph for this function:

12.26.3 Member Function Documentation

12.26.3.1 QString KbBind::action (const QString & *key*)

Definition at line 140 of file kbbind.cpp.

References bindAction(), globalRemap(), and KeyAction::value().

Referenced by friendlyActionName(), KbBindWidget::on_copyButton_clicked(), resetAction(), RebindWidget::setSelection(), and KbBindWidget::updateBind().

```
                                        {
    QString rKey = globalRemap(key);
    return bindAction(rKey)->value();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.2 KeyAction* KbBind::bindAction (const QString & *key*) [inline], [private]

Definition at line 117 of file kbbind.h.

References _bind, KeyAction::defaultAction(), and KeyAction.

Referenced by action(), keyEvent(), and update().

```
117 { if(!_bind.contains(key)) return _bind[key] = new KeyAction(
      KeyAction::defaultAction(key), this); return _bind[
      key]; }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.3 QString KbBind::defaultAction (const QString & *key*) [static]

Definition at line 145 of file kbbind.cpp.

References KeyAction::defaultAction(), and globalRemap().

Referenced by KeyWidget::paintEvent(), and RebindWidget::setBind().

```
145                                                 {
146     QString rKey = globalRemap(key);
147     return KeyAction::defaultAction(rKey);
148 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.4 Kb* KbBind::devParent ( ) const [inline], [private]

Definition at line 114 of file kbbind.h.

References _devParent.

Referenced by getMacroNumber(), getMacroPath(), and KeyAction::keyEvent().

```
114 { return _devParent; }
```

Here is the caller graph for this function:

12.26.3.5 void KbBind::didLoad ( ) [signal]

Definition at line 155 of file moc_kbbind.cpp.

Referenced by load().

```
156 {
157     QMetaObject::activate(this, &staticMetaObject, 0, Q_NULLPTR);
158 }
```

Here is the caller graph for this function:

12.26.3.6 QString KbBind::friendlyActionName (const QString & *key*)

Definition at line 157 of file kbbind.cpp.

References _map, action(), and KeyAction.

Referenced by KbBindWidget::updateSelDisplay().

```
157                                                 {
158     QString act = action(key);
159     return KeyAction(act).friendlyName(_map);
160 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.7 QString KbBind::friendlyName (const QString & *key*)

Definition at line 150 of file kbbind.cpp.

References _map, Key::friendlyName(), and globalRemap().

```
150                                             {
151     const Key& pos = _map[globalRemap(key)];
152     if(!pos)
153         return "(Unknown)";
154     return pos.friendlyName();
155 }
```

Here is the call graph for this function:

12.26.3.8 int KbBind::getMacroNumber ( )

Returns

number of notification channel. Use it in combination with notifyon/off-Statement

Definition at line 257 of file kbbind.cpp.

References devParent(), and Kb::getMacroNumber().

Referenced by handleNotificationChannel(), and RebindWidget::on_btnStartMacro_clicked().

```
257                                 {
258     return devParent()->getMacroNumber();
259 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.9 QString KbBind::getMacroPath ( )

Returns

Filepath of macro notification pipe. If not set, returns initial value ""

Definition at line 265 of file kbbind.cpp.

References devParent(), and Kb::getMacroPath().

Referenced by RebindWidget::on_btnStartMacro_clicked().

```
265                                 {
266     return devParent()->getMacroPath();
267 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.10 QString KbBind::globalRemap (const QString & *key*) [static]

Definition at line 98 of file kbbind.cpp.

References _globalRemap.

Referenced by action(), defaultAction(), friendlyName(), keyEvent(), noAction(), KeyWidget::paintEvent(), resetAction(), setAction(), and SettingsWidget::SettingsWidget().

```
98                                          {
99     if(!_globalRemap.contains(key))
100         return key;
101     return _globalRemap.value(key);
102 }
```

Here is the caller graph for this function:

12.26.3.11 void KbBind::handleNotificationChannel (bool *start*)

Parameters

start	is boolean. If true, notification channel is opened for all keys, otherwise channel ist closed.
start	If true, notification channel is opened for all keys, otherwise channel ist closed.

Definition at line 275 of file kbbind.cpp.

References getMacroNumber(), and lastCmd.

Referenced by RebindWidget::on_btnStartMacro_clicked(), and RebindWidget::on_btnStopMacro_clicked().

```
275                                                 {
276     if (getMacroNumber() > 0 && lastCmd) {
277         if (start) {
278             lastCmd->write (QString("\nnotifyon %1\n@%1 notify all:on\n").arg(
      getMacroNumber()).toLatin1());
279         } else {
280             lastCmd->write (QString("\n@%1 notify all:off\nnotifyoff %1\n").arg(
      getMacroNumber()).toLatin1());
281         }
282         lastCmd->flush();
283     } else qDebug() << QString("No cmd or valid handle for notification found, macroNumber = %1, lastCmd =
      %2")
284                         .arg(getMacroNumber()).arg(lastCmd? "set" : "unset");
285 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.12 bool KbBind::isISO ( ) const [inline]

Definition at line 43 of file kbbind.h.

References _map, and KeyMap::isISO().

```
43 { return _map.isISO(); }
```

Here is the call graph for this function:

12.26.3.13 bool KbBind::isKeyboard ( ) const [inline]

Definition at line 44 of file kbbind.h.

References _map, and KeyMap::isKeyboard().

```
44 { return _map.isKeyboard(); }
```

Here is the call graph for this function:

12.26.3.14 bool KbBind::isMouse ( ) const [inline]

Definition at line 45 of file kbbind.h.

References _map, and KeyMap::isMouse().

Referenced by KbBindWidget::on_copyButton_clicked(), KbBindWidget::on_resetButton_clicked(), RebindWidget::setBind(), and KbBindWidget::updateSelDisplay().

```
45 { return _map.isMouse(); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.15 void KbBind::keyEvent (const QString & *key*, bool *down*) [slot]

Definition at line 287 of file kbbind.cpp.

References bindAction(), globalRemap(), and KeyAction::keyEvent().

Referenced by Kb::readNotify().

```
287                                                 {
288     QString rKey = globalRemap(key);
289     KeyAction* act = bindAction(rKey);
290     if(act)
291         act->keyEvent(this, down);
292 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.16 void KbBind::layoutChanged ( ) [signal]

Definition at line 161 of file moc_kbbind.cpp.

Referenced by map().

```
162 {
163     QMetaObject::activate(this, &staticMetaObject, 1, Q_NULLPTR);
164 }
```

Here is the caller graph for this function:

12.26.3.17 KbLight * KbBind::light ( )

Definition at line 54 of file kbbind.cpp.

References KbMode::light(), and modeParent().

Referenced by RebindWidget::applyChanges(), KeyAction::keyEvent(), and RebindWidget::setSelection().

```
54                          {
55      return modeParent()->light();
56  }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.18 void KbBind::load (CkbSettings & *settings*)

Definition at line 58 of file kbbind.cpp.

References _bind, _map, _needsSave, _winLock, CkbSettings::childKeys(), didLoad(), KeyMap::fromName(), KeyMap::fromStorage(), KeyAction, map(), and CkbSettings::value().

Referenced by KbMode::KbMode().

```
58                                      {
59     _needsSave = false;
60     SGroup group(settings, "Binding");
61     KeyMap currentMap = _map;
62     _map = KeyMap::fromName(settings.value("KeyMap").toString());
63     // Load key settings
64     bool useReal = settings.value("UseRealNames").toBool();
65     _bind.clear();
66     {
67         SGroup group(settings, "Keys");
68         foreach(QString key, settings.childKeys()){
69             QString name = key.toLower();
70             if(!useReal)
71                 name = _map.fromStorage(name);
72             QString bind = settings.value(key).toString();
73             _bind[name] = new KeyAction(bind, this);
74         }
75     }
76     _winLock = settings.value("WinLock").toBool();
77     emit didLoad();
78     map(currentMap);
79 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.19 void KbBind::loadGlobalRemap ( ) [static]

Definition at line 116 of file kbbind.cpp.

References _globalRemap, CkbSettings::childKeys(), globalRemapTime, and CkbSettings::value().

Referenced by SettingsWidget::SettingsWidget().

```
                                {
    _globalRemap.clear();
    CkbSettings settings("Program/GlobalRemap");
    foreach(const QString& key, settings.childKeys())
        _globalRemap[key] = settings.value(key).toString();
    globalRemapTime = QDateTime::currentMSecsSinceEpoch();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.20 const KeyMap& KbBind::map ( ) [inline]

Definition at line 41 of file kbbind.h.

References _map.

Referenced by KbBind(), KbMode::keyMap(), load(), map(), KbBindWidget::newLayout(), KbBindWidget::on_copyButton_clicked(), KbBindWidget::on_resetButton_clicked(), RebindWidget::setBind(), KbBindWidget::updateBind(), and KbBindWidget::updateSelDisplay().

```
41 { return _map; }
```

Here is the caller graph for this function:

12.26.3.21 void KbBind::map (const KeyMap & *map*)

Definition at line 133 of file kbbind.cpp.

References _map, _needsSave, _needsUpdate, layoutChanged(), and map().

```
133                                 {
134     _map = map;
135     _needsUpdate = true;
136     _needsSave = true;
137     emit layoutChanged();
138 }
```

Here is the call graph for this function:

12.26.3.22 KbMode* KbBind::modeParent ( ) const [inline], [private]

Definition at line 115 of file kbbind.h.

Referenced by light(), and perf().

```
115 { return (KbMode*)parent(); }
```

Here is the caller graph for this function:

12.26.3.23 bool KbBind::needsSave ( ) const [inline]

Definition at line 38 of file kbbind.h.

References _needsSave.

Referenced by KbMode::needsSave().

```
38 { return _needsSave; }
```

Here is the caller graph for this function:

12.26.3.24 void KbBind::noAction (const QString & *key*)

Definition at line 172 of file kbbind.cpp.

References _bind, _map, globalRemap(), KeyMap::key(), KeyAction, and resetAction().

Referenced by RebindWidget::applyChanges(), and RebindWidget::on_unbindButton_clicked().

```
172                                         {
173     resetAction(key);
174     QString rKey = globalRemap(key);
175     if(!_map.key(rKey))
176         return;
177     _bind[rKey] = new KeyAction(this);
178 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.25 void KbBind::noAction (const QStringList & *keys*) [inline]

Definition at line 75 of file kbbind.h.

References noAction().

Referenced by noAction().

```
75 { foreach(const QString& key, keys) noAction(key); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.26 KbPerf * KbBind::perf ( )

Definition at line 50 of file kbbind.cpp.

References modeParent(), and KbMode::perf().

Referenced by KeyAction::keyEvent(), and RebindWidget::setBind().

```
50                      {
51     return modeParent()->perf();
52 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.27 void KbBind::resetAction (const QString & *key*)

Definition at line 162 of file kbbind.cpp.

References _bind, _needsSave, _needsUpdate, action(), and globalRemap().

Referenced by noAction(), KbBindWidget::on_resetButton_clicked(), RebindWidget::on_resetButton_clicked(), and setAction().

```
162                                         {
163     QString rKey = globalRemap(key);
164     // Clean up existing action (if any)
165     KeyAction* action = _bind.value(rKey);
166     delete action;
167     _bind.remove(rKey);
168     _needsUpdate = true;
169     _needsSave = true;
170 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.28 void KbBind::resetAction (const QStringList & *keys*) [inline]

Definition at line 72 of file kbbind.h.

References resetAction().

Referenced by resetAction().

```
72 { foreach(const QString& key, keys) resetAction(key); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.29 void KbBind::save (CkbSettings & *settings*)

Definition at line 81 of file kbbind.cpp.

References _bind, _map, _needsSave, _winLock, KeyAction::defaultAction(), KeyMap::name(), CkbSettings::setValue(), and KeyAction::value().

Referenced by KbMode::save().

```
81                                      {
82     _needsSave = false;
83     SGroup group(settings, "Binding");
84     settings.setValue("KeyMap", _map.name());
85     // Save key settings
86     settings.setValue("UseRealNames", true);
87     {
88         SGroup group(settings, "Keys");
89         foreach(QString key, _bind.keys()){
90             KeyAction* act = _bind.value(key);
91             if(act && act->value() != KeyAction::defaultAction(key))
92                 settings.setValue(key, act->value());
93         }
94     }
95     settings.setValue("WinLock", _winLock);
96 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.30 void KbBind::saveGlobalRemap ( ) [static]

Definition at line 124 of file kbbind.cpp.

References _globalRemap, and CkbSettings::setValue().

Referenced by SettingsWidget::updateModifiers().

```
124                                 {
125     CkbSettings settings("Program/GlobalRemap", true);
126     QHashIterator<QString, QString> i(_globalRemap);
127     while(i.hasNext()){
128         i.next();
129         settings.setValue(i.key(), i.value());
130     }
131 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.31 void KbBind::setAction (const QString & *key*, const QString & *action*)

Definition at line 180 of file kbbind.cpp.

References _bind, _map, globalRemap(), KeyMap::key(), KeyAction, and resetAction().

Referenced by RebindWidget::applyChanges(), and KbBindWidget::on_copyButton_clicked().

```
180                                                                 {
181     resetAction(key);
182     QString rKey = globalRemap(key);
183     if(!_map.key(rKey))
184         return;
185     _bind[rKey] = new KeyAction(action, this);
186 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.32 void KbBind::setAction (const QStringList & *keys*, const QString & *action*) [inline]

Definition at line 69 of file kbbind.h.

References setAction().

Referenced by setAction().

```
69 { foreach(const QString& key, keys) setAction(key, action); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.33 void KbBind::setGlobalRemap (const QHash< QString, QString > *keyToActual*) [static]

Definition at line 104 of file kbbind.cpp.

References _globalRemap, and globalRemapTime.

Referenced by SettingsWidget::updateModifiers().

```
104                                                                 {
105     _globalRemap.clear();
106     // Ignore any keys with the standard binding
107     QHashIterator<QString, QString> i(keyToActual);
108     while(i.hasNext()){
109         i.next();
110         if(i.key() != i.value())
111             _globalRemap[i.key()] = i.value();
112     }
113     globalRemapTime = QDateTime::currentMSecsSinceEpoch();
114 }
```

Here is the caller graph for this function:

12.26.3.34 void KbBind::setNeedsUpdate ( ) [inline]

Definition at line 84 of file kbbind.h.

References _needsUpdate.

Referenced by KbMode::setNeedsUpdate().

```
84 { _needsUpdate = true; }
```

Here is the caller graph for this function:

12.26.3.35 void KbBind::update (QFile & *cmd*, bool *force* = false)

Definition at line 188 of file kbbind.cpp.

References _bind, _globalRemap, _needsUpdate, _winLock, bindAction(), KeyAction::driverName(), globalRemapTime, KeyAction::isValidMacro(), lastCmd, lastGlobalRemapTime, KeyAction::macroContent(), updated(), and KeyAction::value().

Referenced by Kb::frameUpdate().

```
188                                         {
189     if(!force && !_needsUpdate && lastGlobalRemapTime ==
      globalRemapTime)
190         return;
```

```
    lastGlobalRemapTime = globalRemapTime;
    emit updated();
    _needsUpdate = false;
    // Reset all keys and enable notifications for all
    cmd.write("rebind all notify all");
    // Make sure modifier keys are included as they may be remapped globally
    QHash<QString, KeyAction*> bind(_bind);
    if(!_bind.contains("caps")) bind["caps"] = 0;
    if(!_bind.contains("lshift")) bind["lshift"] = 0;
    if(!_bind.contains("rshift")) bind["rshift"] = 0;
    if(!_bind.contains("lctrl")) bind["lctrl"] = 0;
    if(!_bind.contains("rctrl")) bind["rctrl"] = 0;
    if(!_bind.contains("lwin")) bind["lwin"] = 0;
    if(!_bind.contains("rwin")) bind["rwin"] = 0;
    if(!_bind.contains("lalt")) bind["lalt"] = 0;
    if(!_bind.contains("ralt")) bind["ralt"] = 0;
    if(!_bind.contains("fn")) bind["fn"] = 0;
    QHashIterator<QString, KeyAction*> i(bind);

    // Initialize String buffer for macro Key definitions (G-keys)
    // "macro clear" is neccessary, if an older definition is unbound.
    QString macros = "\nmacro clear\n";

    // Write out rebound keys and collect infos for macro definitions
    while(i.hasNext()){
        i.next();
        QString key = i.key();
        KeyAction* act = i.value();
        if(_globalRemap.contains(key))
            act = bindAction(_globalRemap.value(key));
        if(!act)
            continue;
        QString value = act->driverName();
        if(value.isEmpty()){
            // If the key is unbound or is a special action, unbind it
            cmd.write(" unbind ");
            cmd.write(key.toLatin1());
            // if a macro definiton for the key is given,
            // add the converted string to key-buffer "macro"
            if (act->isValidMacro()) {
                if (act->macroContent().length() > 0) {
                    macros.append("macro " + key.toLatin1() + ":" + act->macroContent().toLatin1() + "\n");
                }
            }
        } else {
            // Otherwise, write the binding
            cmd.write(" bind ");
            cmd.write(key.toLatin1());
            cmd.write(":");
            cmd.write(value.toLatin1());
        }
    }
    // If win lock is enabled, unbind windows keys
    if(_winLock)
        cmd.write(" unbind lwin rwin");

    // At last, send Macro definitions if avalilable.
    // If no definitions are made, clear macro will be sent only to reset all macros,
    cmd.write(macros.toLatin1());
    lastCmd = &cmd;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.26.3.36 void KbBind::updated ( ) [signal]

Definition at line 167 of file moc_kbbind.cpp.

Referenced by update().

```
168 {
169     QMetaObject::activate(this, &staticMetaObject, 2, Q_NULLPTR);
170 }
```

Here is the caller graph for this function:

12.26.3.37 bool KbBind::winLock ( ) [inline]

Definition at line 78 of file kbbind.h.

References _winLock.

Referenced by KeyAction::keyEvent().

```
78 { return _winLock; }
```

Here is the caller graph for this function:

12.26.3.38 void KbBind::winLock (bool *newWinLock*) [inline]

Definition at line 79 of file kbbind.h.

References _needsUpdate, and _winLock.

```
79 { _winLock = newWinLock; _needsUpdate = true; }
```

12.26.4 Friends And Related Function Documentation

12.26.4.1 friend class KeyAction [friend]

Definition at line 136 of file kbbind.h.

Referenced by bindAction(), friendlyActionName(), KbBind(), load(), noAction(), and setAction().

12.26.5 Field Documentation

12.26.5.1 QHash<QString, KeyAction*> KbBind::_bind [private]

Definition at line 131 of file kbbind.h.

Referenced by bindAction(), KbBind(), load(), noAction(), resetAction(), save(), setAction(), and update().

12.26.5.2 Kb* KbBind::_devParent [private]

Definition at line 113 of file kbbind.h.

Referenced by devParent().

12.26.5.3 QHash< QString, QString > KbBind::_globalRemap [static], [private]

Definition at line 119 of file kbbind.h.

Referenced by globalRemap(), loadGlobalRemap(), saveGlobalRemap(), setGlobalRemap(), and update().

12.26.5.4 KeyMap KbBind::_map [private]

Definition at line 129 of file kbbind.h.

Referenced by friendlyActionName(), friendlyName(), isISO(), isKeyboard(), isMouse(), load(), map(), noAction(), save(), and setAction().

12.26.5.5 bool KbBind::_needsSave [private]

Definition at line 135 of file kbbind.h.

Referenced by load(), map(), needsSave(), resetAction(), and save().

12.26.5.6 bool KbBind::_needsUpdate [private]

Definition at line 134 of file kbbind.h.

Referenced by map(), resetAction(), setNeedsUpdate(), update(), and winLock().

12.26.5.7 bool KbBind::_winLock [private]

Definition at line 133 of file kbbind.h.

Referenced by load(), save(), update(), and winLock().

12.26.5.8 quint64 KbBind::globalRemapTime = 0 [static], [private]

Definition at line 120 of file kbbind.h.

Referenced by loadGlobalRemap(), setGlobalRemap(), and update().

12.26.5.9 QFile* KbBind::lastCmd [private]

Definition at line 127 of file kbbind.h.

Referenced by handleNotificationChannel(), and update().

12.26.5.10 quint64 KbBind::lastGlobalRemapTime [private]

Definition at line 121 of file kbbind.h.

Referenced by update().

The documentation for this class was generated from the following files:

- src/ckb/kbbind.h
- src/ckb/kbbind.cpp
- src/ckb/release/moc_kbbind.cpp

12.27 Ui::KbBindWidget Class Reference

```
#include <src/ckb/ui_kbbindwidget.h>
```

Inheritance diagram for Ui::KbBindWidget:

Collaboration diagram for Ui::KbBindWidget:

Public Member Functions

- void setupUi (QWidget *KbBindWidget)
- void retranslateUi (QWidget *KbBindWidget)

Data Fields

- QVBoxLayout * verticalLayout
- QLabel * label
- QFrame * line
- QGridLayout * gridLayout
- QSpacerItem * horizontalSpacer_2
- KeyWidget * keyWidget
- QSpacerItem * horizontalSpacer
- QHBoxLayout * horizontalLayout_2
- QPushButton * copyButton
- QLabel * selectLabel
- QPushButton * resetButton
- QSpacerItem * verticalSpacer
- QLabel * label_2
- QFrame * line_2
- QWidget * widget
- QGridLayout * gridLayout_2
- RebindWidget * rbWidget

12.27.1 Detailed Description

Definition at line 206 of file ui_kbbindwidget.h.

12.27.2 Member Function Documentation

12.27.2.1 void Ui_KbBindWidget::retranslateUi (QWidget * *KbBindWidget*) [inline],[inherited]

Definition at line 193 of file ui_kbbindwidget.h.

References Ui_KbBindWidget::copyButton, Ui_KbBindWidget::label, Ui_KbBindWidget::label_2, Ui_KbBindWidget::resetButton, and Ui_KbBindWidget::selectLabel.

Referenced by Ui_KbBindWidget::setupUi().

```
    {
        KbBindWidget->setWindowTitle(QApplication::translate("KbBindWidget", "Form", Q_NULLPTR));
        label->setText(QApplication::translate("KbBindWidget", "Keys", Q_NULLPTR));
        copyButton->setText(QApplication::translate("KbBindWidget", "Copy to mode...", Q_NULLPTR));
        selectLabel->setText(QApplication::translate("KbBindWidget", "Click to select keys", Q_NULLPTR));
        resetButton->setText(QApplication::translate("KbBindWidget", "Reset", Q_NULLPTR));
        label_2->setText(QApplication::translate("KbBindWidget", "Binding", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.27.2.2 void Ui_KbBindWidget::setupUi (QWidget * *KbBindWidget*) [inline],[inherited]

Definition at line 51 of file ui_kbbindwidget.h.

References Ui_KbBindWidget::copyButton, Ui_KbBindWidget::gridLayout, Ui_KbBindWidget::gridLayout_2, Ui_KbBindWidget::horizontalLayout_2, Ui_KbBindWidget::horizontalSpacer, Ui_KbBindWidget::horizontalSpacer_2, Ui_KbBindWidget::keyWidget, Ui_KbBindWidget::label, Ui_KbBindWidget::label_2, Ui_KbBindWidget::line, Ui_KbBindWidget::line_2, Ui_KbBindWidget::rbWidget, Ui_KbBindWidget::resetButton, Ui_KbBindWidget::retranslateUi(), Ui_KbBindWidget::selectLabel, Ui_KbBindWidget::verticalLayout, Ui_KbBindWidget::verticalSpacer, and Ui_KbBindWidget::widget.

Referenced by KbBindWidget::KbBindWidget().

```
52     {
53         if (KbBindWidget->objectName().isEmpty())
54             KbBindWidget->setObjectName(QStringLiteral("KbBindWidget"));
55         KbBindWidget->resize(581, 473);
56         verticalLayout = new QVBoxLayout(KbBindWidget);
57         verticalLayout->setObjectName(QStringLiteral("verticalLayout"));
58         verticalLayout->setContentsMargins(0, 0, 0, -1);
59         label = new QLabel(KbBindWidget);
60         label->setObjectName(QStringLiteral("label"));
61         QFont font;
62         font.setBold(true);
63         font.setWeight(75);
64         label->setFont(font);
65
66         verticalLayout->addWidget(label);
67
68         line = new QFrame(KbBindWidget);
69         line->setObjectName(QStringLiteral("line"));
70         line->setFrameShape(QFrame::HLine);
71         line->setFrameShadow(QFrame::Sunken);
72
73         verticalLayout->addWidget(line);
74
75         gridLayout = new QGridLayout();
76         gridLayout->setObjectName(QStringLiteral("gridLayout"));
77         horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
78
79         gridLayout->addItem(horizontalSpacer_2, 0, 4, 1, 1);
80
81         keyWidget = new KeyWidget(KbBindWidget);
82         keyWidget->setObjectName(QStringLiteral("keyWidget"));
83         QSizePolicy sizePolicy(QSizePolicy::Preferred, QSizePolicy::Preferred);
84         sizePolicy.setHorizontalStretch(0);
85         sizePolicy.setVerticalStretch(0);
86         sizePolicy.setHeightForWidth(keyWidget->sizePolicy().hasHeightForWidth());
87         keyWidget->setSizePolicy(sizePolicy);
88
89         gridLayout->addWidget(keyWidget, 0, 1, 1, 3);
90
91         horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
92
93         gridLayout->addItem(horizontalSpacer, 0, 0, 1, 1);
94
95         horizontalLayout_2 = new QHBoxLayout();
96         horizontalLayout_2->setSpacing(0);
97         horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
98         copyButton = new QPushButton(KbBindWidget);
99         copyButton->setObjectName(QStringLiteral("copyButton"));
100         QSizePolicy sizePolicy1(QSizePolicy::Fixed, QSizePolicy::Fixed);
101         sizePolicy1.setHorizontalStretch(0);
102         sizePolicy1.setVerticalStretch(0);
103         sizePolicy1.setHeightForWidth(copyButton->sizePolicy().hasHeightForWidth());
104         copyButton->setSizePolicy(sizePolicy1);
105         copyButton->setMinimumSize(QSize(140, 0));
106         copyButton->setMaximumSize(QSize(140, 16777215));
107
108         horizontalLayout_2->addWidget(copyButton);
109
110         selectLabel = new QLabel(KbBindWidget);
111         selectLabel->setObjectName(QStringLiteral("selectLabel"));
112         QSizePolicy sizePolicy2(QSizePolicy::Expanding, QSizePolicy::Preferred);
113         sizePolicy2.setHorizontalStretch(0);
114         sizePolicy2.setVerticalStretch(0);
115         sizePolicy2.setHeightForWidth(selectLabel->sizePolicy().hasHeightForWidth());
116         selectLabel->setSizePolicy(sizePolicy2);
117         selectLabel->setAlignment(Qt::AlignCenter);
118
119         horizontalLayout_2->addWidget(selectLabel);
```

```

        resetButton = new QPushButton(KbBindWidget);
        resetButton->setObjectName(QStringLiteral("resetButton"));
        QSizePolicy sizePolicy3(QSizePolicy::Expanding, QSizePolicy::Fixed);
        sizePolicy3.setHorizontalStretch(0);
        sizePolicy3.setVerticalStretch(0);
        sizePolicy3.setHeightForWidth(resetButton->sizePolicy().hasHeightForWidth());
        resetButton->setSizePolicy(sizePolicy3);
        resetButton->setMinimumSize(QSize(140, 0));
        resetButton->setMaximumSize(QSize(140, 16777215));

        horizontalLayout_2->addWidget(resetButton);


        gridLayout->addLayout(horizontalLayout_2, 1, 1, 1, 3);


        verticalLayout->addLayout(gridLayout);

        verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding
    );

        verticalLayout->addItem(verticalSpacer);

        label_2 = new QLabel(KbBindWidget);
        label_2->setObjectName(QStringLiteral("label_2"));
        label_2->setFont(font);

        verticalLayout->addWidget(label_2);

        line_2 = new QFrame(KbBindWidget);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
        line_2->setFrameShadow(QFrame::Sunken);

        verticalLayout->addWidget(line_2);

        widget = new QWidget(KbBindWidget);
        widget->setObjectName(QStringLiteral("widget"));
        QSizePolicy sizePolicy4(QSizePolicy::Preferred, QSizePolicy::Fixed);
        sizePolicy4.setHorizontalStretch(0);
        sizePolicy4.setVerticalStretch(0);
        sizePolicy4.setHeightForWidth(widget->sizePolicy().hasHeightForWidth());
        widget->setSizePolicy(sizePolicy4);
        widget->setMinimumSize(QSize(0, 280));
        widget->setMaximumSize(QSize(16777215, 280));
        gridLayout_2 = new QGridLayout(widget);
        gridLayout_2->setSpacing(0);
        gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
        gridLayout_2->setContentsMargins(0, 0, 0, 0);
        rbWidget = new RebindWidget(widget);
        rbWidget->setObjectName(QStringLiteral("rbWidget"));
        QSizePolicy sizePolicy5(QSizePolicy::Expanding, QSizePolicy::Expanding);
        sizePolicy5.setHorizontalStretch(0);
        sizePolicy5.setVerticalStretch(0);
        sizePolicy5.setHeightForWidth(rbWidget->sizePolicy().hasHeightForWidth());
        rbWidget->setSizePolicy(sizePolicy5);

        gridLayout_2->addWidget(rbWidget, 0, 0, 1, 1);


        verticalLayout->addWidget(widget);

        label->raise();
        line->raise();
        label_2->raise();
        line_2->raise();
        widget->raise();

        retranslateUi(KbBindWidget);

        QMetaObject::connectSlotsByName(KbBindWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.27.3 Field Documentation

12.27.3.1 QPushButton* Ui_KbBindWidget::copyButton [inherited]

Definition at line 41 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::retranslateUi(), and Ui_KbBindWidget::setupUi().

12.27.3.2 QGridLayout* Ui_KbBindWidget::gridLayout [inherited]

Definition at line 36 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::setupUi().

12.27.3.3 QGridLayout* Ui_KbBindWidget::gridLayout_2 [inherited]

Definition at line 48 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::setupUi().

12.27.3.4 QHBoxLayout* Ui_KbBindWidget::horizontalLayout_2 [inherited]

Definition at line 40 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::setupUi().

12.27.3.5 QSpacerItem* Ui_KbBindWidget::horizontalSpacer [inherited]

Definition at line 39 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::setupUi().

12.27.3.6 QSpacerItem* Ui_KbBindWidget::horizontalSpacer_2 [inherited]

Definition at line 37 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::setupUi().

12.27.3.7 KeyWidget* Ui_KbBindWidget::keyWidget [inherited]

Definition at line 38 of file ui_kbbindwidget.h.

Referenced by KbBindWidget::KbBindWidget(), KbBindWidget::newLayout(), KbBindWidget::setBind(), Ui_KbBindWidget::setupUi(), and KbBindWidget::updateBind().

12.27.3.8 QLabel* Ui_KbBindWidget::label [inherited]

Definition at line 34 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::retranslateUi(), and Ui_KbBindWidget::setupUi().

12.27.3.9 QLabel* Ui_KbBindWidget::label_2 [inherited]

Definition at line 45 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::retranslateUi(), and Ui_KbBindWidget::setupUi().

12.27.3.10 QFrame* Ui_KbBindWidget::line [inherited]

Definition at line 35 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::setupUi().

12.27.3.11 QFrame* Ui_KbBindWidget::line_2 [inherited]

Definition at line 46 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::setupUi().

12.27.3.12 RebindWidget* Ui_KbBindWidget::rbWidget [inherited]

Definition at line 49 of file ui_kbbindwidget.h.

Referenced by KbBindWidget::newLayout(), KbBindWidget::newSelection(), KbBindWidget::setBind(), Ui_KbBindWidget::setupUi(), and KbBindWidget::updateBind().

12.27.3.13 QPushButton* Ui_KbBindWidget::resetButton [inherited]

Definition at line 43 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::retranslateUi(), and Ui_KbBindWidget::setupUi().

12.27.3.14 QLabel* Ui_KbBindWidget::selectLabel [inherited]

Definition at line 42 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::retranslateUi(), Ui_KbBindWidget::setupUi(), and KbBindWidget::updateSelDisplay().

12.27.3.15 QVBoxLayout* Ui_KbBindWidget::verticalLayout [inherited]

Definition at line 33 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::setupUi().

12.27.3.16 QSpacerItem* Ui_KbBindWidget::verticalSpacer [inherited]

Definition at line 44 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::setupUi().

12.27.3.17 QWidget* Ui_KbBindWidget::widget [inherited]

Definition at line 47 of file ui_kbbindwidget.h.

Referenced by Ui_KbBindWidget::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kbbindwidget.h

12.28 KbBindWidget Class Reference

```
#include <src/ckb/kbbindwidget.h>
```

Inheritance diagram for KbBindWidget:

Collaboration diagram for KbBindWidget:

Public Member Functions

- KbBindWidget (QWidget *parent=0)
- ~KbBindWidget ()
- void setBind (KbBind *newBind, KbProfile *newProfile)

Private Slots

- void updateBind ()
- void newLayout ()
- void newSelection (QStringList selection)
- void updateSelDisplay ()
- void on_resetButton_clicked ()
- void on_copyButton_clicked ()

Private Attributes

- Ui::KbBindWidget * ui
- KbBind * bind
- KbProfile * profile
- QStringList currentSelection

12.28.1 Detailed Description

Definition at line 12 of file kbbindwidget.h.

12.28.2 Constructor & Destructor Documentation

12.28.2.1 KbBindWidget::KbBindWidget (QWidget * *parent* = 0) [explicit]

Definition at line 7 of file kbbindwidget.cpp.

References Ui_KbBindWidget::keyWidget, newSelection(), KeyWidget::rgbMode(), Ui_KbBindWidget::setupUi(), and ui.

```
7                                           :
8     QWidget(parent),
9     ui(new Ui::KbBindWidget), bind(0), profile(0)
10 {
11     ui->setupUi(this);
12     ui->keyWidget->rgbMode(false);
13     connect(ui->keyWidget, SIGNAL(selectionChanged(QStringList)), this, SLOT(
      newSelection(QStringList)));
14 }
```

Here is the call graph for this function:

12.28.2.2 KbBindWidget::~KbBindWidget ( )

Definition at line 16 of file kbbindwidget.cpp.

References ui.

```
16                                  {
17     delete ui;
18 }
```

12.28.3 Member Function Documentation

12.28.3.1 void KbBindWidget::newLayout ( ) [private],[slot]

Definition at line 50 of file kbbindwidget.cpp.

References bind, Ui_KbBindWidget::keyWidget, KeyWidget::map(), KbBind::map(), profile, Ui_KbBindWidget::rbWidget, RebindWidget::setBind(), ui, and updateSelDisplay().

Referenced by setBind().

```
50                                  {
51      ui->keyWidget->map(bind->map());
52      ui->rbWidget->setBind(bind, profile);
53      updateSelDisplay();
54  }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.28.3.2 void KbBindWidget::newSelection (QStringList *selection*) [private],[slot]

Definition at line 56 of file kbbindwidget.cpp.

References currentSelection, Ui_KbBindWidget::rbWidget, RebindWidget::setSelection(), ui, and updateSelDisplay().

Referenced by KbBindWidget(), and setBind().

```
56                                                  {
57     currentSelection = selection;
58     ui->rbWidget->setSelection(selection, true);
59     updateSelDisplay();
60 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.28.3.3 void KbBindWidget::on_copyButton_clicked ( ) [private],[slot]

Definition at line 103 of file kbbindwidget.cpp.

References KbBind::action(), bind, KbMode::bind(), KeyMap::count(), KbProfile::currentMode(), currentSelection, KbBind::isMouse(), KeyMap::keys(), KbBind::map(), KbProfile::modes(), profile, ModeSelectDialog::selection(), KbBind::setAction(), and KeyAction::type().

```
{
    QStringList selection = currentSelection;
    const KeyMap& map = bind->map();
    int count = selection.count();
    QString type = bind->isMouse() ? "button" : "key";
    QString text = tr("%1 %2").arg(count).arg(type) + (count == 1 ? "" : "s");
    if(count == 0){
        // Copy all keys if none selected
        selection = map.keys();
        text = tr("all %1s").arg(type);
    }
    text = "Copy binding for " + text + " to:";
    // Display popup
    ModeSelectDialog dialog(this, profile->currentMode(),
  profile->modes(), text);
    if(dialog.exec() != QDialog::Accepted)
        return;
    // Copy selected keys to selected modes
    QList<KbMode*> selectedModes = dialog.selection();
    foreach(KbMode* mode, selectedModes){
        KbBind* modeBind = mode->bind();
        foreach(const QString& key, selection){
            modeBind->setAction(key, bind->action(key));
        }
    }
}
```

Here is the call graph for this function:

12.28.3.4 void KbBindWidget::on_resetButton_clicked ( ) [private],[slot]

Definition at line 82 of file kbbindwidget.cpp.

References bind, KeyMap::count(), currentSelection, KbBind::isMouse(), KeyMap::keys(), KbBind::map(), KbBind::resetAction(), KeyAction::type(), and updateBind().

```
{
    QStringList selection = currentSelection;
    const KeyMap& map = bind->map();
    if(selection.isEmpty())
        // Reset all keys if none selected
        selection = map.keys();
    uint count = selection.count();
    QString type = bind->isMouse() ? "button" : "key";
    QString text;
    if(count == map.count())
        text = "<center>Reset all %1s to default?</center>";
    else if(count == 1)
        text = "<center>Reset this %1 to default?</center>";
    else
```

```
        text = tr("<center>Reset %1 %2s to default?</center>").arg(count);
    if(QMessageBox(QMessageBox::NoIcon, "Confirm action", text.arg(type), QMessageBox::Yes |
    QMessageBox::No, this).exec() != QMessageBox::Yes)
        return;
    bind->resetAction(selection);
    updateBind();
}
```

Here is the call graph for this function:

12.28.3.5 void KbBindWidget::setBind (KbBind * *newBind*, KbProfile * *newProfile*)

Definition at line 20 of file kbbindwidget.cpp.

References bind, KeyWidget::clearSelection(), Ui_KbBindWidget::keyWidget, newLayout(), newSelection(), profile, Ui_KbBindWidget::rbWidget, RebindWidget::setBind(), ui, and updateBind().

Referenced by KbWidget::modeChanged().

```
20                                                          {
21      ui->keyWidget->clearSelection();
22      ui->rbWidget->setBind(newBind, newProfile);
23      newSelection(QStringList());
24      if(bind == newBind)
25          return;
26      if(bind){
27          disconnect(bind, SIGNAL(layoutChanged()), this, SLOT(newLayout()));
28          disconnect(bind, SIGNAL(updated()), this, SLOT(updateBind()));
29      }
30      connect(newBind, SIGNAL(layoutChanged()), this, SLOT(newLayout()));
31      connect(newBind, SIGNAL(updated()), this, SLOT(updateBind()));
32      bind = newBind;
33      profile = newProfile;
34      newLayout();
35      ui->rbWidget->setBind(bind, profile);
36      updateBind();
37  }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.28.3.6 void KbBindWidget::updateBind ( ) [private],[slot]

Definition at line 39 of file kbbindwidget.cpp.

References KbBind::action(), bind, KeyWidget::bindMap(), currentSelection, KeyMap::keys(), Ui_KbBindWidget::keyWidget, KbBind::map(), Ui_KbBindWidget::rbWidget, RebindWidget::setSelection(), ui, and updateSelDisplay().

Referenced by on_resetButton_clicked(), and setBind().

```
39                                  {
40      const KeyMap& map = bind->map();
41      // Build the action list based on the keymap
42      QHash<QString, QString> actions;
```

```
    foreach(const QString& key, map.keys())
        actions[key] = bind->action(key);
    ui->keyWidget->bindMap(actions);
    ui->rbWidget->setSelection(currentSelection);
    updateSelDisplay();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.28.3.7 void KbBindWidget::updateSelDisplay ( ) [private],[slot]

Definition at line 62 of file kbbindwidget.cpp.

References bind, currentSelection, KbBind::friendlyActionName(), Key::friendlyName(), KbBind::isMouse(), KbBind::map(), Ui_KbBindWidget::selectLabel, and ui.

Referenced by newLayout(), newSelection(), and updateBind().

```
{
    int count = currentSelection.count();
    if(count == 0){
        // No keys selected
        ui->selectLabel->setText("Click to select");
        return;
    }
    if(count == 1){
        // Single key selected: show key name and binding
        QString key = currentSelection[0];
        const Key& pos = bind->map()[key];
        if(!pos)
            ui->selectLabel->setText("(Unknown)");
        else
            ui->selectLabel->setText(pos.friendlyName(false).split("\n")[0] + " → " + bind->friendlyActionName(key).split("\n")[0]);
        return;
    }
    ui->selectLabel->setText(QString("%1 %2 selected").arg(count).arg(bind->isMouse() ? "buttons" : "keys"));
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.28.4 Field Documentation

12.28.4.1 KbBind* KbBindWidget::bind [private]

Definition at line 34 of file kbbindwidget.h.

Referenced by newLayout(), on_copyButton_clicked(), on_resetButton_clicked(), setBind(), updateBind(), and updateSelDisplay().

12.28.4.2 QStringList KbBindWidget::currentSelection [private]

Definition at line 36 of file kbbindwidget.h.

Referenced by newSelection(), on_copyButton_clicked(), on_resetButton_clicked(), updateBind(), and updateSelDisplay().

12.28.4.3 KbProfile* KbBindWidget::profile [private]

Definition at line 35 of file kbbindwidget.h.

Referenced by newLayout(), on_copyButton_clicked(), and setBind().

12.28.4.4 Ui::KbBindWidget* KbBindWidget::ui [private]

Definition at line 32 of file kbbindwidget.h.

Referenced by KbBindWidget(), newLayout(), newSelection(), setBind(), updateBind(), updateSelDisplay(), and ~KbBindWidget().

The documentation for this class was generated from the following files:

- src/ckb/kbbindwidget.h
- src/ckb/kbbindwidget.cpp

12.29 KbFirmware Class Reference

```
#include <src/ckb/kbfirmware.h>
```

Inheritance diagram for KbFirmware:

Collaboration diagram for KbFirmware:

Data Structures

- struct FW

Signals

- void downloaded ()

Static Public Member Functions

- static bool checkUpdates ()
- static bool hasDownloaded ()
- static float versionForBoard (const QString &features, bool waitForComplete=false)
- static QByteArray dataForBoard (const QString &features)

Private Types

- enum { UNKNOWN = -1, NO, YES }

Private Slots

- void processDownload (QNetworkReply ∗reply)
- void downloadFinished ()

Private Member Functions

- KbFirmware ()
- ∼KbFirmware ()
- void initManager ()
- bool _checkUpdates ()
- float _latestForBoard (const QString &features, bool waitForComplete)
- QByteArray _fileForBoard (const QString &features)

Private Attributes

- quint64 lastCheck
- quint64 lastFinished
- QMap< QString, FW > fwTable
- QByteArray fwTableHash
- QNetworkAccessManager ∗ networkManager
- QNetworkReply ∗ tableDownload
- enum KbFirmware:: { ... } hasGPG

Static Private Attributes

- static KbFirmware instance

12.29.1 Detailed Description

Definition at line 10 of file kbfirmware.h.

12.29.2 Member Enumeration Documentation

12.29.2.1 anonymous enum [private]

Enumerator

UNKNOWN

NO

YES

Definition at line 53 of file kbfirmware.h.

```
53 { UNKNOWN = -1, NO, YES } hasGPG :2;
```

12.29.3 Constructor & Destructor Documentation

12.29.3.1 KbFirmware::KbFirmware ( ) [private]

Definition at line 14 of file kbfirmware.cpp.

```
14                          :
15     lastCheck(0), lastFinished(0), networkManager(0),
       tableDownload(0), hasGPG(UNKNOWN)
16 {
17 }
```

12.29.3.2 KbFirmware::~KbFirmware ( ) [private]

Definition at line 19 of file kbfirmware.cpp.

```
19                          {
20     //delete networkManager;
21     // ^ This can cause a crash (QT bug?)
22 }
```

12.29.4 Member Function Documentation

12.29.4.1 bool KbFirmware::_checkUpdates ( ) [private]

Definition at line 30 of file kbfirmware.cpp.

References AUTO_CHECK_TIME, downloadFinished(), initManager(), lastCheck, networkManager, and tableDownload.

Referenced by checkUpdates().

```
30                                  {
31     initManager();
32     quint64 now = QDateTime::currentMSecsSinceEpoch();
33     if(now < lastCheck + AUTO_CHECK_TIME)
34         return false;
35     // First location is for debugging only.
36     // tableDownload =
       networkManager->get(QNetworkRequest(QUrl("https://raw.githubusercontent.com/frickler24/ckb-next/issues-26-Firmware-Inc
37     // This one is the production one.
38     tableDownload = networkManager->get(QNetworkRequest(QUrl("
       https://raw.githubusercontent.com/mattanger/ckb-next/master/FIRMWARE")));
39     connect(tableDownload, SIGNAL(finished()), this, SLOT(
       downloadFinished()));
40     lastCheck = now;
41     return true;
42 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.29.4.2 QByteArray KbFirmware::_fileForBoard (const QString & *features*) [private]

Definition at line 183 of file kbfirmware.cpp.

References QuaZip::csInsensitive, KbFirmware::FW::fileName, fwTable, KbFirmware::FW::hash, QuaZip::mdUnzip, networkManager, QuaZip::open(), QuaZipFile::open(), quit(), QuaZip::setCurrentFile(), tableName(), and KbFirmware::FW::url.

Referenced by dataForBoard().

```
183                                                                 {
184     QString name = tableName(features);
185     FW info = fwTable.value(name);
186     if(info.hash.isEmpty())
187         return "";
188     // Download zip from URL. Wait for it to finish.
189     QNetworkReply* reply = networkManager->get(QNetworkRequest(QUrl(info.url)));
190     QEventLoop loop(this);
191     connect(reply, SIGNAL(finished()), &loop, SLOT(quit()));
192     loop.exec();
193     // Download finished, process data
194     if(reply->error() != QNetworkReply::NoError)
195         return "";
196     QByteArray zipData = reply->readAll();
197     QBuffer buffer(&zipData);
198     // Open zip archive
199     QuaZip zip(&buffer);
200     if(!zip.open(QuaZip::mdUnzip))
201         return "";
202     // Find the desired file
203     if(!zip.setCurrentFile(info.fileName, QuaZip::csInsensitive))
204         return "";
205     QuaZipFile binFile(&zip);
206     if(!binFile.open(QIODevice::ReadOnly))
207         return "";
208     QByteArray binary = binFile.readAll();
209     // Check the hash
210     if(QCryptographicHash::hash(binary, QCryptographicHash::Sha256) != info.hash)
211         return "";
212     return binary;
213 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.29.4.3 float KbFirmware::_latestForBoard (const QString & *features*, bool *waitForComplete*) [private]

Definition at line 165 of file kbfirmware.cpp.

References checkUpdates(), KbManager::ckbDaemonVersionF(), KbManager::ckbGuiVersionF(), KbFirmware::FW::ckbVersion, downloaded(), fwTable, KbFirmware::FW::fwVersion, KbFirmware::FW::hash, quit(), tableDownload, and tableName().

Referenced by versionForBoard().

```
165                                                                                 {
166     if((tableDownload || checkUpdates()) && waitForComplete){
167         // If waiting is desired, enter an event loop and stay here until the download is finished
168         QEventLoop loop(this);
169         connect(this, SIGNAL(downloaded()), &loop, SLOT(quit()));
170         loop.exec();
171     }
172     // Find this board
173     QString name = tableName(features);
174     FW info = fwTable.value(name);
175     if(info.hash.isEmpty())
176         return 0.f;
177     // Don't return the new version if the current ckb doesn't support it
178     if(info.ckbVersion > KbManager::ckbGuiVersionF() || info.ckbVersion >
    KbManager::ckbDaemonVersionF())
179         return -1.f;
180     return info.fwVersion;
181 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.29.4.4 static bool KbFirmware::checkUpdates ( ) [inline], [static]

Definition at line 15 of file kbfirmware.h.

References _checkUpdates(), and instance.

Referenced by _latestForBoard(), and MainWindow::timerTick().

```
15 { return instance._checkUpdates(); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.29.4.5 static QByteArray KbFirmware::dataForBoard (const QString & *features*) [inline], [static]

Definition at line 25 of file kbfirmware.h.

References _fileForBoard(), and instance.

Referenced by FwUpgradeDialog::exec().

```
25 { return instance._fileForBoard(features); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.29.4.6 void KbFirmware::downloaded ( ) [signal]

Definition at line 148 of file moc_kbfirmware.cpp.

Referenced by _latestForBoard(), and downloadFinished().

```
149 {
150     QMetaObject::activate(this, &staticMetaObject, 0, Q_NULLPTR);
151 }
```

Here is the caller graph for this function:

12.29.4.7 void KbFirmware::downloadFinished ( ) [private],[slot]

Definition at line 144 of file kbfirmware.cpp.

References downloaded(), processDownload(), and tableDownload.

Referenced by _checkUpdates().

```
144                                 {
145     if(!tableDownload)
146         return;
147     processDownload(tableDownload);
148     tableDownload->deleteLater();
149     tableDownload = 0;
150     emit downloaded();
151 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.29.4.8 static bool KbFirmware::hasDownloaded ( ) [inline],[static]

Definition at line 18 of file kbfirmware.h.

References instance, and lastFinished.

Referenced by KbWidget::on_fwUpdButton_clicked(), and KbWidget::updateFwButton().

```
18 { return instance.lastFinished != 0; }
```

Here is the caller graph for this function:

12.29.4.9 void KbFirmware::initManager ( ) [private]

Definition at line 24 of file kbfirmware.cpp.

References networkManager.

Referenced by _checkUpdates().

```
                                {
    if(networkManager)
        return;
    networkManager = new QNetworkAccessManager();
}
```

Here is the caller graph for this function:

12.29.4.10 void KbFirmware::processDownload (QNetworkReply * *reply*) [private],[slot]

Definition at line 44 of file kbfirmware.cpp.

References KbFirmware::FW::ckbVersion, KbFirmware::FW::fileName, fwTable, fwTableHash, KbFirmware::FW::fwVersion, hasGPG, KbFirmware::FW::hash, lastCheck, lastFinished, NO, KbManager::parseVersionString(), UNKNOWN, KbFirmware::FW::url, and YES.

Referenced by downloadFinished().

```
                                                    {
    if(reply->error() != QNetworkReply::NoError)
        return;
    // Update last check
    lastCheck = lastFinished = QDateTime::currentMSecsSinceEpoch();
    QByteArray data = reply->readAll();
    // Don't do anything if this is the same as the last version downloaded
    QByteArray hash = QCryptographicHash::hash(data, QCryptographicHash::Sha256);
    if(hash == fwTableHash)
        return;
    fwTableHash = hash;
    if(hasGPG == UNKNOWN){
        // Check for a GPG installation
        QProcess gpg;
        gpg.start("gpg", QStringList("--version"));
        gpg.waitForFinished();
        if(gpg.error() == QProcess::FailedToStart)
            // No GPG install
            hasGPG = NO;
        else {
            QString output = QString::fromUtf8(gpg.readAll());
            // Must support RSA keys and SHA256
            if(output.contains("RSA", Qt::CaseInsensitive) && output.contains("SHA256", Qt::CaseInsensitive
    ))
                hasGPG = YES;
            else
                hasGPG = NO;
        }
        if(!hasGPG)
            qDebug() << "No GPG detected, signature verification disabled";
    }
    if(hasGPG){
        // If GPG is available, check the signature on the file before proceeding.
        QDir tmp = QDir::temp();
        // Save file to a temporary path. Include PID to avoid conflicts
        qint64 pid = QCoreApplication::applicationPid();
        QString fwPath = tmp.absoluteFilePath(QString("ckb-%1-firmware").arg(pid));
        QFile firmware(fwPath);
        if(!firmware.open(QIODevice::WriteOnly)
                || firmware.write(data) != data.length()){
            qDebug() << "Failed to write firmware file to temporary location, aborting firmware check";
            return;
        }
        firmware.close();
        // Write GPG key
        QString keyPath = tmp.absoluteFilePath(QString("ckb-%1-key.gpg").arg(pid));
        if(!QFile::copy(":/bin/ckb-next-key.gpg", keyPath)){
            firmware.remove();
            qDebug() << "Failed to write GPG key to temporary location, aborting firmware check";
            return;
        }
        // Check signature
```

```
        QProcess gpg;
        gpg.start("gpg", QStringList("--no-default-keyring") << "--keyring" << keyPath << "--verify" << fwPath);
        gpg.waitForFinished();
        // Clean up temp files
        tmp.remove(fwPath);
        tmp.remove(keyPath);
        if(gpg.error() != QProcess::UnknownError || gpg.exitCode() != 0){
            qDebug() << "GPG couldn't verify firmware signature:";
            qDebug() << gpg.readAllStandardOutput();
            qDebug() << gpg.readAllStandardError();
            return;
        }
        // Signature good, proceed to update database
    }
    fwTable.clear();
    QStringList lines = QString::fromUtf8(data).split("\n");
    bool scan = false;
    foreach(QString line, lines){
        // Collapse whitespace
        line.replace(QRegExp("\\s+"), " ").remove(QRegExp("^\\s")).remove(QRegExp("\\s$"));
        // Skip empty or commented-out lines
        if(line.length() == 0 || line.at(0) == '#')
            continue;
        // Don't read anything until the entries begin and don't read anything after they end
        if(!scan){
            if(line == "!BEGIN FW ENTRIES")
                scan = true;
            else
                continue;
        }
        if(line == "!END FW ENTRIES")
            break;
        QStringList components = line.split(" ");
        if(components.length() != 7)
            continue;
        // "VENDOR-PRODUCT"
        QString device = components[0].toUpper() + "-" + components[1].toUpper();
        FW fw;
        fw.fwVersion = components[2].toFloat();                          // Firmware blob version
        fw.url = QUrl::fromPercentEncoding(components[3].toLatin1());    // URL to zip file
        fw.ckbVersion = KbManager::parseVersionString(components[4]);    // Minimum ckb version
        fw.fileName = QUrl::fromPercentEncoding(components[5].toLatin1()); // Name of file inside zip
        fw.hash = QByteArray::fromHex(components[6].toLatin1());         // SHA256 of file inside zip
        // Update entry
        fwTable[device] = fw;
    }
    qDebug() << "Downloaded new firmware list." << fwTable.count() << "entries found.";
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.29.4.11 static float KbFirmware::versionForBoard (const QString & *features*, bool *waitForComplete* = `false`) `[inline],[static]`

Definition at line 22 of file kbfirmware.h.

References _latestForBoard(), and instance.

Referenced by MainWindow::checkFwUpdates(), KbWidget::on_fwUpdButton_clicked(), and KbWidget::updateFwButton().

```
22 { return instance._latestForBoard(features, waitForComplete); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.29.5 Field Documentation

12.29.5.1 QMap<QString, FW> KbFirmware::fwTable [private]

Definition at line 41 of file kbfirmware.h.

Referenced by _fileForBoard(), _latestForBoard(), and processDownload().

12.29.5.2 QByteArray KbFirmware::fwTableHash [private]

Definition at line 43 of file kbfirmware.h.

Referenced by processDownload().

12.29.5.3 enum { ... } KbFirmware::hasGPG [private]

Referenced by processDownload().

12.29.5.4 KbFirmware KbFirmware::instance [static], [private]

Definition at line 59 of file kbfirmware.h.

Referenced by checkUpdates(), dataForBoard(), hasDownloaded(), and versionForBoard().

12.29.5.5 quint64 KbFirmware::lastCheck [private]

Definition at line 32 of file kbfirmware.h.

Referenced by _checkUpdates(), and processDownload().

12.29.5.6 quint64 KbFirmware::lastFinished [private]

Definition at line 32 of file kbfirmware.h.

Referenced by hasDownloaded(), and processDownload().

12.29.5.7 QNetworkAccessManager* KbFirmware::networkManager [private]

Definition at line 47 of file kbfirmware.h.

Referenced by _checkUpdates(), _fileForBoard(), and initManager().

12.29.5.8 QNetworkReply* KbFirmware::tableDownload [private]

Definition at line 50 of file kbfirmware.h.

Referenced by _checkUpdates(), _latestForBoard(), and downloadFinished().

The documentation for this class was generated from the following files:

- src/ckb/kbfirmware.h
- src/ckb/kbfirmware.cpp
- src/ckb/release/moc_kbfirmware.cpp

12.30 KbLight Class Reference

```
#include <src/ckb/kblight.h>
```

Inheritance diagram for KbLight:

Collaboration diagram for KbLight:

Public Types

- typedef QList< KbAnim * > AnimList

Signals

- void didLoad ()
- void updated ()
- void frameDisplayed (const ColorMap &animatedColors, const QSet< QString > &indicatorList)

Public Member Functions

- KbLight (KbMode *parent, const KeyMap &keyMap)
- KbLight (KbMode *parent, const KeyMap &keyMap, const KbLight &other)
- ~KbLight ()
- const KeyMap & map ()
- void map (const KeyMap &map)
- const QColorMap & colorMap ()
- void color (const QString &key, const QColor &newColor)
- void color (const QColor &newColor)
- int dimming ()
- void dimming (int newDimming)
- KbAnim * addAnim (const AnimScript *base, const QStringList &keys, const QString &name, const QMap< QString, QVariant > &preset)
- KbAnim * duplicateAnim (KbAnim *oldAnim)
- const AnimList & animList ()
- void animList (const AnimList &newAnimList)
- KbAnim * findAnim (const QUuid &guid) const

- int findAnimIdx (const QUuid &guid) const
- void previewAnim (const AnimScript *base, const QStringList &keys, const QMap< QString, QVariant > &preset)
- void stopPreview ()
- void restartAnimation ()
- void animKeypress (const QString &key, bool down)
- void open ()
- bool isStarted ()
- void close ()
- void resetIndicators ()
- void setIndicator (const char *name, QRgb argb)
- void frameUpdate (QFile &cmd, bool monochrome=false)
- void base (QFile &cmd, bool ignoreDim=false, bool monochrome=false)
- void load (CkbSettings &settings)
- void save (CkbSettings &settings)
- bool needsSave () const

Static Public Member Functions

- static int shareDimming ()
- static void shareDimming (int newShareDimming)

Static Public Attributes

- static const int MAX_DIM = 3

Private Member Functions

- void rebuildBaseMap ()
- void printRGB (QFile &cmd, const ColorMap &animMap)

Private Attributes

- AnimList _animList
- KbAnim * _previewAnim
- KeyMap _map
- QColorMap _qColorMap
- ColorMap _colorMap
- ColorMap _animMap
- ColorMap _indicatorMap
- QSet< QString > _indicatorList
- quint64 lastFrameSignal
- int _dimming
- bool _start
- bool _needsSave
- bool _needsMapRefresh

12.30.1 Detailed Description

Definition at line 17 of file kblight.h.

12.30.2 Member Typedef Documentation

12.30.2.1 typedef QList<KbAnim*> KbLight::AnimList

Definition at line 46 of file kblight.h.

12.30.3 Constructor & Destructor Documentation

12.30.3.1 KbLight::KbLight (KbMode * *parent*, const KeyMap & *keyMap*)

Definition at line 10 of file kblight.cpp.

References map().

```
10                                                    :
11     QObject(parent), _previewAnim(0), lastFrameSignal(0),
      _dimming(0), _start(false), _needsSave(true),
      _needsMapRefresh(true)
12 {
13     map(keyMap);
14 }
```

Here is the call graph for this function:

12.30.3.2 KbLight::KbLight (KbMode * *parent*, const KeyMap & *keyMap*, const KbLight & *other*)

Definition at line 16 of file kblight.cpp.

References _animList, and map().

```
16                                                                                    :
17     QObject(parent), _previewAnim(0), _map(other._map),
      _qColorMap(other._qColorMap), lastFrameSignal(0),
      _dimming(other._dimming), _start(false), _needsSave(true),
      _needsMapRefresh(true)
18 {
19     map(keyMap);
20     // Duplicate animations
21     foreach(KbAnim* animation, other._animList)
22         _animList.append(new KbAnim(this, keyMap, *animation));
23 }
```

Here is the call graph for this function:

12.30.3.3 KbLight::~KbLight ( )

Definition at line 45 of file kblight.cpp.

References activeLights.

```
45                  {
46      activeLights.remove(this);
47  }
```

12.30.4 Member Function Documentation

12.30.4.1 KbAnim * KbLight::addAnim (const AnimScript * *base*, const QStringList & *keys*, const QString & *name*, const QMap< QString, QVariant > & *preset*)

Definition at line 100 of file kblight.cpp.

References _animList, _map, _needsSave, _start, anim, KbAnim::commitParams(), KbAnim::parameter(), KbAnim::stop(), stopPreview(), and KbAnim::trigger().

Referenced by KbAnimWidget::addAnim().

```
100
                                {
101     // Stop and restart all existing animations
102     stopPreview();
103     quint64 timestamp = QDateTime::currentMSecsSinceEpoch();
104     foreach(KbAnim* anim, _animList){
105         anim->stop();
106         anim->trigger(timestamp);
107     }
108     // Load the new animation and set preset parameters
109     KbAnim* anim = new KbAnim(this, _map, name, keys, base);
110     QMapIterator<QString, QVariant> i(preset);
111     while(i.hasNext()){
112         i.next();
113         anim->parameter(i.key(), i.value());
114     }
115     anim->commitParams();
116     // Add the animation and start it
117     _animList.append(anim);
118     anim->trigger(timestamp);
119     _start = true;
120     _needsSave = true;
121     return anim;
122 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.2 void KbLight::animKeypress (const QString & *key*, bool *down*)

Definition at line 189 of file kblight.cpp.

References _animList, _previewAnim, anim, KbAnim::keypress(), and KbAnim::keys().

Referenced by Kb::readNotify().

```
189                                                     {
190     foreach(KbAnim* anim, _animList){
191         if(anim->keys().contains(key))
192             anim->keypress(key, down, QDateTime::currentMSecsSinceEpoch());
193     }
194     if(_previewAnim){
195         if(_previewAnim->keys().contains(key))
196             _previewAnim->keypress(key, down, QDateTime::currentMSecsSinceEpoch());
197     }
198 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.3 const AnimList& KbLight::animList ( ) [inline]

Definition at line 49 of file kblight.h.

References _animList.

Referenced by RebindWidget::applyChanges(), KbAnimWidget::duplicateAnim(), KbMode::newId(), KbAnimWidget::on_deleteButton_clicked(), KbAnimWidget::refreshList(), KbAnimWidget::reorderAnims(), and RebindWidget::setSelection().

```
49 { return _animList; }
```

Here is the caller graph for this function:

12.30.4.4 void KbLight::animList (const AnimList & *newAnimList*) [inline]

Definition at line 50 of file kblight.h.

References _animList, and _needsSave.

```
50 { _needsSave = true; _animList = newAnimList; }
```

12.30.4.5 void KbLight::base (QFile & *cmd*, bool *ignoreDim* = false, bool *monochrome* = false)

Definition at line 371 of file kblight.cpp.

References _animMap, _colorMap, _dimming, close(), ColorMap::colorForName(), ColorMap::colors(), ColorMap::count(), MAX_DIM, monoRgb(), printRGB(), and rebuildBaseMap().

Referenced by Kb::hwSave().

```
371                                                                 {
372     close();
373     if(_dimming == MAX_DIM && !ignoreDim){
374         cmd.write(QString().sprintf("rgb 000000").toLatin1());
375         return;
376     }
377     // Set just the background color, ignoring any animation
378     rebuildBaseMap();
379     _animMap = _colorMap;
380     // If monochrome is active, create grayscale
381     if(monochrome){
382         int count = _animMap.count();
383         QRgb* colors = _animMap.colors();
384         for(int i = 0; i < count; i++){
385             QRgb& rgb = colors[i];
386             rgb = monoRgb(qRed(rgb), qGreen(rgb), qBlue(rgb));
387         }
388     }
389     // Set a few indicators to black as the hardware handles them differently
390     QRgb* mr = _animMap.colorForName("mr"), *m1 = _animMap.
      colorForName("m1"), *m2 = _animMap.colorForName("m2"), *m3 =
      _animMap.colorForName("m3"), *lock = _animMap.
      colorForName("lock");
391     if(mr) *mr = 0;
392     if(m1) *m1 = 0;
393     if(m2) *m2 = 0;
394     if(m3) *m3 = 0;
395     if(lock) *lock = 0;
396     // Send to driver
397     cmd.write("rgb");
398     printRGB(cmd, _animMap);
399 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.6 void KbLight::close ( )

Definition at line 215 of file kblight.cpp.

References _animList, _start, activeLights, anim, KbAnim::stop(), and stopPreview().

Referenced by base(), Kb::frameUpdate(), Kb::hwSave(), and Kb::updateLayout().

```
215                 {
216     activeLights.remove(this);
217     foreach(KbAnim* anim, _animList)
218         anim->stop();
219     stopPreview();
220     _start = false;
221 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.7 void KbLight::color (const QString & *key*, const QColor & *newColor*)

Definition at line 49 of file kblight.cpp.

References _colorMap, _needsMapRefresh, _needsSave, _qColorMap, and ColorMap::colorForName().

Referenced by KbLightWidget::changeColor(), load(), printRGB(), Kb::readNotify(), rebuildBaseMap(), and KbLightWidget::toggleSidelight().

```
49                                                          {
50     QRgb newRgb = newColor.rgb();
51     _qColorMap[key] = newRgb;
52     _needsSave = true;
53     if(!_needsMapRefresh){
54         // Update flat map if we're not scheduled to rebuild it
55         QByteArray rawName = key.toLatin1();
56         QRgb* rawRgb = _colorMap.colorForName(rawName.data());
57         if(rawRgb)
58             *rawRgb = newRgb;
59     }
60 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.8 void KbLight::color (const QColor & *newColor*)

Definition at line 62 of file kblight.cpp.

References _colorMap, _needsMapRefresh, _needsSave, _qColorMap, ColorMap::colors(), and ColorMap::count().

```
62                                          {
63     QRgb newRgb = newColor.rgb();
64     QMutableColorMapIterator i(_qColorMap);
65     while(i.hasNext()){
66         i.next();
67         i.value() = newRgb;
68     }
69     _needsSave = true;
70     // Reset flat map
71     _needsMapRefresh = false;
72     int mapCount = _colorMap.count();
73     QRgb* flat = _colorMap.colors();
74     for(int i = 0; i < mapCount; i++)
75         flat[i] = mapCount;
76 }
```

Here is the call graph for this function:

12.30.4.9 const QColorMap& KbLight::colorMap ( ) [inline]

Definition at line 31 of file kblight.h.

References _qColorMap.

Referenced by KbLightWidget::changeColor(), KbLightWidget::newSelection(), KbLightWidget::toggleSidelight(), and KbLightWidget::updateLight().

```
31 { return _qColorMap; }
```

Here is the caller graph for this function:

12.30.4.10 void KbLight::didLoad ( ) [signal]

Definition at line 162 of file moc_kblight.cpp.

Referenced by load().

```
163 {
164     QMetaObject::activate(this, &staticMetaObject, 0, Q_NULLPTR);
165 }
```

Here is the caller graph for this function:

12.30.4.11 int KbLight::dimming ( ) [inline]

Definition at line 39 of file kblight.h.

References _dimming.

Referenced by KeyAction::keyEvent(), KbLightWidget::on_brightnessBox_activated(), open(), shareDimming(), and KbLightWidget::updateLight().

```
39 { return _dimming; }
```

Here is the caller graph for this function:

12.30.4.12 void KbLight::dimming (int *newDimming*)

Definition at line 92 of file kblight.cpp.

References _dimming, _needsSave, _shareDimming, shareDimming(), and updated().

```
92                                  {
93     if(_shareDimming != -1)
94         shareDimming(newDimming);
95     _needsSave = true;
96     _dimming = newDimming;
97     emit updated();
98 }
```

Here is the call graph for this function:

12.30.4.13 KbAnim * KbLight::duplicateAnim (KbAnim * *oldAnim*)

Definition at line 148 of file kblight.cpp.

References _animList, _map, _needsSave, _start, anim, KbAnim::newId(), KbAnim::stop(), and KbAnim::trigger().

Referenced by KbAnimWidget::duplicateAnim().

```
148                                                 {
149     // Stop and restart all existing animations
150     quint64 timestamp = QDateTime::currentMSecsSinceEpoch();
151     foreach(KbAnim* anim, _animList){
152         anim->stop();
153         anim->trigger(timestamp);
154     }
155     // Same as addAnim, just duplicate the existing one
156     KbAnim* anim = new KbAnim(this, _map, *oldAnim);
157     anim->newId();
158     int index = _animList.indexOf(oldAnim);
159     if(index < 0)
160         _animList.append(anim);
161     else
162         _animList.insert(index + 1, anim);
163     anim->trigger(timestamp);
164     _start = true;
165     _needsSave = true;
166     return anim;
167 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.14 KbAnim* KbLight::findAnim (const QUuid & *guid*) const [inline]

Definition at line 51 of file kblight.h.

References _animList, anim, and KbAnim::guid().

Referenced by findAnimIdx(), and KeyAction::keyEvent().

```
51 { foreach(KbAnim* anim, _animList) { if(anim->guid() == guid) return anim; } return
     0; }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.15 int KbLight::findAnimIdx (const QUuid & *guid*) const [inline]

Definition at line 52 of file kblight.h.

References _animList, and findAnim().

Referenced by RebindWidget::setSelection().

```
52 { return _animList.indexOf(findAnim(guid)); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.16 void KbLight::frameDisplayed (const ColorMap & *animatedColors*, const QSet< QString > & *indicatorList*) [signal]

Definition at line 174 of file moc_kblight.cpp.

Referenced by frameUpdate().

```
175 {
176     void *_a[] = { Q_NULLPTR, const_cast<void*>(reinterpret_cast<const void*>(&_t1)), const_cast<void*>(
    reinterpret_cast<const void*>(&_t2)) };
177     QMetaObject::activate(this, &staticMetaObject, 2, _a);
178 }
```

Here is the caller graph for this function:

12.30.4.17 void KbLight::frameUpdate (QFile & *cmd*, bool *monochrome* = false)

Definition at line 296 of file kblight.cpp.

References _animList, _animMap, _colorMap, _dimming, _indicatorList, _indicatorMap, _previewAnim, anim, KbAnim::blend(), ColorMap::colors(), ColorMap::count(), frameDisplayed(), lastFrameSignal, IToS(), monoRgb(), printRGB(), rebuildBaseMap(), and sToL().

Referenced by Kb::frameUpdate().

```
296                                                 {
297     rebuildBaseMap();
298     _animMap = _colorMap;
299     // Advance animations
300     quint64 timestamp = QDateTime::currentMSecsSinceEpoch();
301     foreach(KbAnim* anim, _animList)
302         anim->blend(_animMap, timestamp);
303     if(_previewAnim)
304         _previewAnim->blend(_animMap, timestamp);
305
306     int count = _animMap.count();
307     QRgb* colors = _animMap.colors();
308     // Apply active indicators and/or perform monochrome conversion
309     if(monochrome || !_indicatorList.isEmpty()){
310         QRgb* indicators = _indicatorMap.colors();
311         for(int i = 0; i < count; i++){
312             QRgb& rgb = colors[i];
313             float r = qRed(rgb);
314             float g = qGreen(rgb);
```

```
            float b = qBlue(rgb);
            // Apply indicators
            QRgb rgb2 = indicators[i];
            if(qAlpha(rgb2) != 0){
                float r2 = qRed(rgb2);
                float g2 = qGreen(rgb2);
                float b2 = qBlue(rgb2);
                float a2 = qAlpha(rgb2) / 255.f;
                r = round(r2 * a2 + r * (1.f - a2));
                g = round(g2 * a2 + g * (1.f - a2));
                b = round(b2 * a2 + b * (1.f - a2));
            }
            // If monochrome mode is active, average the channels to get a grayscale image
            if(monochrome)
                rgb = monoRgb(r, g, b);
            else
                rgb = qRgb(r, g, b);
        }
    }

    // Emit signals for the animation (only do this every 50ms - it can cause a lot of CPU usage)
    if(timestamp >= lastFrameSignal + 50){
        emit frameDisplayed(_animMap, _indicatorList);
        lastFrameSignal = timestamp;
    }

    // If brightness is at 0%, turn off lighting entirely
    if(_dimming == 3){
        cmd.write("rgb 000000");
        return;
    }

    float light = (3 - _dimming) / 3.f;
    // Apply global dimming
    if(light != 1.f || monochrome){
        for(int i = 0; i < count; i++){
            QRgb& rgb = colors[i];
            // Like the monochrome conversion, this should be done in a linear colorspace
            float r = sToL(qRed(rgb));
            float g = sToL(qGreen(rgb));
            float b = sToL(qBlue(rgb));
            r *= light;
            g *= light;
            b *= light;
            r = round(lToS(r));
            g = round(lToS(g));
            b = round(lToS(b));
            rgb = qRgb(r, g, b);
        }
    }

    // Apply light
    cmd.write("rgb");
    printRGB(cmd, _animMap);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.18 bool KbLight::isStarted ( )

Definition at line 169 of file kblight.cpp.

References _animList, _start, and KbAnim::isRunning().

Referenced by Kb::frameUpdate().

```
169                         {
170     if(!_start)
171         return false;
172     foreach(KbAnim* animation, _animList){
173         if(!animation->isRunning())
174             return false;
175     }
176     return true;
177 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.19 void KbLight::load (CkbSettings & *settings*)

Definition at line 401 of file kblight.cpp.

References _animList, _dimming, _map, _needsMapRefresh, _needsSave, _qColorMap, anim, CkbSettings::childKeys(), color(), didLoad(), KeyMap::fromName(), KeyMap::fromStorage(), map(), MAX_DIM, and CkbSettings::value().

Referenced by KbMode::KbMode().

```
                                    {
    // Load light settings
    _needsSave = false;
    SGroup group(settings, "Lighting");
    KeyMap currentMap = _map;
    _map = KeyMap::fromName(settings.value("KeyMap").toString());
    _dimming = settings.value("Brightness").toUInt();
    if(_dimming > MAX_DIM)
        _dimming = MAX_DIM;
    // Load RGB settings
    bool useReal = settings.value("UseRealNames").toBool();
    {
        SGroup group(settings, "Keys");
        foreach(QString key, settings.childKeys()){
            QString name = key.toLower();
            if(!useReal)
                name = _map.fromStorage(name);
            QColor color = settings.value(key).toString();
            if(!color.isValid())
                color = QColor(255, 255, 255);
            _qColorMap[name] = color.rgb();
        }
        _needsMapRefresh = true;
    }
    // Load animations
    foreach(KbAnim* anim, _animList)
        anim->deleteLater();
    _animList.clear();
    {
        SGroup group(settings, "Animations");
        foreach(QString anim, settings.value("List").toStringList()){
            QUuid id = anim;
            _animList.append(new KbAnim(this, _map, id, settings));
        }
    }
    emit didLoad();
    map(currentMap);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.20 const KeyMap& KbLight::map ( ) [inline]

Definition at line 28 of file kblight.h.

References _map.

Referenced by KbLight(), KbMode::keyMap(), load(), map(), KbLightWidget::newSelection(), KbAnimWidget::on_keyButton_clicked(), and KbLightWidget::updateLight().

```
28 { return _map; }
```

Here is the caller graph for this function:

12.30.4.21 void KbLight::map (const KeyMap & *map*)

Definition at line 25 of file kblight.cpp.

References _animList, _animMap, _colorMap, _indicatorMap, _map, _needsMapRefresh, _needsSave, _qColorMap, anim, ColorMap::init(), map(), KbAnim::map(), and updated().

```
25                                  {
26     // If any of the keys are missing from the color map, set them to white
27     QHashIterator<QString, Key> i(map);
28     while(i.hasNext()){
29         i.next();
30         const QString& key = i.key();
31         if(!_qColorMap.contains(key))
32             _qColorMap[key] = 0xFFFFFFFF;
33     }
34     // Set the new map
35     _map = map;
36     foreach(KbAnim* anim, _animList)
37         anim->map(map);
38     _colorMap.init(_map);
```

```
    _animMap.init(_map);
    _indicatorMap.init(_map);
    _needsSave = _needsMapRefresh = true;
    emit updated();
}
```

Here is the call graph for this function:

12.30.4.22 bool KbLight::needsSave ( ) const

Definition at line 467 of file kblight.cpp.

References _animList, _needsSave, anim, and KbAnim::needsSave().

Referenced by KbMode::needsSave().

```
467                                 {
468     if(_needsSave)
469         return true;
470     foreach(KbAnim* anim, _animList){
471         if(anim->needsSave())
472             return true;
473     }
474     return false;
475 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.23 void KbLight::open ( )

Definition at line 200 of file kblight.cpp.

References _animList, _dimming, _previewAnim, _shareDimming, _start, activeLights, anim, dimming(), and KbAnim::trigger().

Referenced by Kb::frameUpdate().

```
200                 {
201     // Apply shared dimming if needed
202     if(_shareDimming != -1 && _shareDimming !=
      _dimming)
203         dimming(_shareDimming);
204     activeLights.insert(this);
205     if(_start)
206         return;
207     quint64 timestamp = QDateTime::currentMSecsSinceEpoch();
208     foreach(KbAnim* anim, _animList)
209         anim->trigger(timestamp);
210     if(_previewAnim)
211         _previewAnim->trigger(timestamp);
212     _start = true;
213 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.24 void KbLight::previewAnim (const AnimScript * *base*, const QStringList & *keys*, const QMap< QString, QVariant > & *preset*)

Definition at line 124 of file kblight.cpp.

References _map, _previewAnim, _start, anim, KbAnim::commitParams(), KbAnim::parameter(), KbAnim::reInit(), stopPreview(), and KbAnim::trigger().

Referenced by AnimAddDialog::on_presetBox_activated().

```
124
          {
125     if(_previewAnim)
126         stopPreview();
127     quint64 timestamp = QDateTime::currentMSecsSinceEpoch();
128     // Load the new animation and set preset parameters
```

```
    KbAnim* anim = new KbAnim(this, _map, "", keys, base);
    QMapIterator<QString, QVariant> i(preset);
    while(i.hasNext()){
        i.next();
        anim->parameter(i.key(), i.value());
    }
    anim->commitParams();
    anim->reInit();
    // Add the animation and start it
    _previewAnim = anim;
    anim->trigger(timestamp);
    _start = true;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.25 void KbLight::printRGB (QFile & *cmd*, const ColorMap & *animMap*) [private]

Definition at line 223 of file kblight.cpp.

References color(), ColorMap::colors(), ColorMap::count(), and ColorMap::keyNames().

Referenced by base(), and frameUpdate().

```
223                                                     {
224     int count = animMap.count();
225     const char* const* names = animMap.keyNames();
226     const QRgb* colors = animMap.colors();
227     // Print each color and the corresponding RGB value
228     for(int i = 0; i < count; i++){
229         cmd.write(" ");
230         cmd.write(names[i]);
231         char output[8];
232         QRgb color = colors[i];
233         snprintf(output, sizeof(output), ":%02x%02x%02x", qRed(color), qGreen(color), qBlue(color));
234         cmd.write(output);
235     }
236 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.26 void KbLight::rebuildBaseMap ( ) [private]

Definition at line 238 of file kblight.cpp.

References _colorMap, _needsMapRefresh, _qColorMap, color(), and ColorMap::colorForName().

Referenced by base(), and frameUpdate().

```
238                                 {
239     if(!_needsMapRefresh)
240         return;
241     _needsMapRefresh = false;
242     // Copy RGB values from QColorMap to ColorMap
243     QColorMapIterator i(_qColorMap);
244     while(i.hasNext()){
245         i.next();
246         QByteArray rawName = i.key().toLatin1();
247         QRgb color = i.value();
248         QRgb* rawColor = _colorMap.colorForName(rawName.data());
249         if(rawColor)
250             *rawColor = color;
251     }
252 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.27 void KbLight::resetIndicators ( )

Definition at line 254 of file kblight.cpp.

References _indicatorList, _indicatorMap, and ColorMap::clear().

Referenced by KbPerf::applyIndicators().

```
254                                 {
255     _indicatorMap.clear();
256     _indicatorList.clear();
257 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.28 void KbLight::restartAnimation ( )

Definition at line 179 of file kblight.cpp.

References _animList, _start, anim, KbAnim::stop(), stopPreview(), and KbAnim::trigger().

Referenced by KbLightWidget::on_animButton_clicked(), KbAnimWidget::on_deleteButton_clicked(), KbAnimWidget::on_keyButton_clicked(), and KbAnimWidget::on_propertyButton_clicked().

```
179                                 {
180     quint64 timestamp = QDateTime::currentMSecsSinceEpoch();
```

```
    foreach(KbAnim* anim, _animList){
        anim->stop();
        anim->trigger(timestamp);
    }
    stopPreview();
    _start = true;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.29 void KbLight::save (CkbSettings & *settings*)

Definition at line 440 of file kblight.cpp.

References _animList, _dimming, _map, _needsSave, _qColorMap, anim, KbAnim::guid(), KeyMap::name(), KbAnim::save(), and CkbSettings::setValue().

Referenced by KbMode::save().

```
                                        {
    _needsSave = false;
    SGroup group(settings, "Lighting");
    settings.setValue("KeyMap", _map.name());
    settings.setValue("Brightness", _dimming);
    settings.setValue("UseRealNames", true);
    {
        // Save RGB settings
        SGroup group(settings, "Keys");
        QMutableColorMapIterator i(_qColorMap);
        while(i.hasNext()){
            i.next();
            settings.setValue(i.key(), QColor(i.value()).name());
        }
    }
    {
        // Save animations
        SGroup group(settings, "Animations");
        QStringList aList;
        foreach(KbAnim* anim, _animList){
            aList << anim->guid().toString().toUpper();
            anim->save(settings);
        }
        settings.setValue("List", aList);
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.30 void KbLight::setIndicator (const char * *name*, QRgb *argb*)

Definition at line 259 of file kblight.cpp.

References _indicatorList, _indicatorMap, and ColorMap::colorForName().

Referenced by KbPerf::lightIndicator().

```
259                                                 {
260     QRgb* dest = _indicatorMap.colorForName(name);
261     if(dest){
262         *dest = argb;
263         _indicatorList.insert(name);
264     }
265 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.30.4.31 int KbLight::shareDimming ( ) [static]

Definition at line 78 of file kblight.cpp.

References _shareDimming.

Referenced by dimming(), ExtraSettingsWidget::ExtraSettingsWidget(), ExtraSettingsWidget::on_brightnessBox_clicked(), and ExtraSettingsWidget::pollUpdates().

```
78                          {
79     return _shareDimming;
80 }
```

Here is the caller graph for this function:

12.30.4.32 void KbLight::shareDimming (int *newShareDimming*) [static]

Definition at line 82 of file kblight.cpp.

References _shareDimming, activeLights, and dimming().

```
82                                          {
83     if(_shareDimming == newShareDimming)
84         return;
85     _shareDimming = newShareDimming;
86     if(newShareDimming != -1){
87         foreach(KbLight* light, activeLights)
88             light->dimming(newShareDimming);
89     }
90 }
```

Here is the call graph for this function:

12.30.4.33 void KbLight::stopPreview ( )

Definition at line 143 of file kblight.cpp.

References _previewAnim.

Referenced by addAnim(), close(), AnimAddDialog::on_previewBox_clicked(), previewAnim(), restartAnimation(), and AnimAddDialog::~AnimAddDialog().

```
                        {
    delete _previewAnim;
    _previewAnim = 0;
}
```

Here is the caller graph for this function:

12.30.4.34 void KbLight::updated ( ) [signal]

Definition at line 168 of file moc_kblight.cpp.

Referenced by dimming(), and map().

```
{
    QMetaObject::activate(this, &staticMetaObject, 1, Q_NULLPTR);
}
```

Here is the caller graph for this function:

12.30.5 Field Documentation

12.30.5.1 AnimList KbLight::_animList [private]

Definition at line 89 of file kblight.h.

Referenced by addAnim(), animKeypress(), animList(), close(), duplicateAnim(), findAnim(), findAnimIdx(), frameUpdate(), isStarted(), KbLight(), load(), map(), needsSave(), open(), restartAnimation(), and save().

12.30.5.2 ColorMap KbLight::_animMap [private]

Definition at line 93 of file kblight.h.

Referenced by base(), frameUpdate(), and map().

12.30.5.3 ColorMap KbLight::_colorMap [private]

Definition at line 93 of file kblight.h.

Referenced by base(), color(), frameUpdate(), map(), and rebuildBaseMap().

12.30.5.4 int KbLight::_dimming [private]

Definition at line 96 of file kblight.h.

Referenced by base(), dimming(), frameUpdate(), load(), open(), and save().

12.30.5.5 QSet<QString> KbLight::_indicatorList [private]

Definition at line 94 of file kblight.h.

Referenced by frameUpdate(), resetIndicators(), and setIndicator().

12.30.5.6 ColorMap KbLight::_indicatorMap [private]

Definition at line 93 of file kblight.h.

Referenced by frameUpdate(), map(), resetIndicators(), and setIndicator().

12.30.5.7 KeyMap KbLight::_map [private]

Definition at line 91 of file kblight.h.

Referenced by addAnim(), duplicateAnim(), load(), map(), previewAnim(), and save().

12.30.5.8 bool KbLight::_needsMapRefresh [private]

Definition at line 98 of file kblight.h.

Referenced by color(), load(), map(), and rebuildBaseMap().

12.30.5.9 bool KbLight::_needsSave [private]

Definition at line 98 of file kblight.h.

Referenced by addAnim(), animList(), color(), dimming(), duplicateAnim(), load(), map(), needsSave(), and save().

12.30.5.10 KbAnim* KbLight::_previewAnim [private]

Definition at line 90 of file kblight.h.

Referenced by animKeypress(), frameUpdate(), open(), previewAnim(), and stopPreview().

12.30.5.11 QColorMap KbLight::_qColorMap [private]

Definition at line 92 of file kblight.h.

Referenced by color(), colorMap(), load(), map(), rebuildBaseMap(), and save().

12.30.5.12 bool KbLight::_start [private]

Definition at line 97 of file kblight.h.

Referenced by addAnim(), close(), duplicateAnim(), isStarted(), open(), previewAnim(), and restartAnimation().

12.30.5.13 quint64 KbLight::lastFrameSignal [private]

Definition at line 95 of file kblight.h.

Referenced by frameUpdate().

12.30.5.14 const int KbLight::MAX_DIM = 3 [static]

Definition at line 38 of file kblight.h.

Referenced by base(), ExtraSettingsWidget::ExtraSettingsWidget(), KeyAction::keyEvent(), and load().

The documentation for this class was generated from the following files:

- src/ckb/kblight.h
- src/ckb/kblight.cpp
- src/ckb/release/moc_kblight.cpp

12.31 Ui::KbLightWidget Class Reference

```
#include <src/ckb/ui_kblightwidget.h>
```

Inheritance diagram for Ui::KbLightWidget:

Collaboration diagram for Ui::KbLightWidget:

Public Member Functions

- void setupUi (QWidget *KbLightWidget)

- void retranslateUi (QWidget *KbLightWidget)

Data Fields

- QVBoxLayout * verticalLayout
- QHBoxLayout * horizontalLayout_3
- QLabel * label_3
- QCheckBox * showAnimBox
- QFrame * line_2
- QHBoxLayout * horizontalLayout_2
- QSpacerItem * horizontalSpacer_5
- QGridLayout * gridLayout
- KeyWidget * keyWidget
- QHBoxLayout * horizontalLayout
- ColorButton * bgButton
- QLabel * selLabel
- QPushButton * animButton
- QSpacerItem * horizontalSpacer_6
- QSpacerItem * verticalSpacer_2
- QGridLayout * gridLayout_2
- QComboBox * brightnessBox
- QLabel * label
- QSpacerItem * horizontalSpacer_3
- QSpacerItem * horizontalSpacer_4
- QSpacerItem * verticalSpacer_3
- QLabel * label_2
- QFrame * line
- QWidget * widget
- QGridLayout * gridLayout_4
- KbAnimWidget * animWidget

12.31.1 Detailed Description

Definition at line 263 of file ui_kblightwidget.h.

12.31.2 Member Function Documentation

12.31.2.1 void Ui_KbLightWidget::retranslateUi (QWidget * *KbLightWidget*) [inline],[inherited]

Definition at line 238 of file ui_kblightwidget.h.

References Ui_KbLightWidget::animButton, Ui_KbLightWidget::bgButton, Ui_KbLightWidget::brightnessBox, Ui_KbLightWidget::label, Ui_KbLightWidget::label_2, Ui_KbLightWidget::label_3, Ui_KbLightWidget::selLabel, and Ui_KbLightWidget::showAnimBox.

Referenced by Ui_KbLightWidget::setupUi().

```
    {
        KbLightWidget->setWindowTitle(QApplication::translate("KbLightWidget", "Form", Q_NULLPTR));
        label_3->setText(QApplication::translate("KbLightWidget", "Colors", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        showAnimBox->setToolTip(QApplication::translate("KbLightWidget", "If enabled, the same colors will be displayed here as on the keyboard. If disabled, the base colors will be shown.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        showAnimBox->setText(QApplication::translate("KbLightWidget", "Show animated", Q_NULLPTR));
        bgButton->setText(QApplication::translate("KbLightWidget", "Change color...", Q_NULLPTR));
        selLabel->setText(QApplication::translate("KbLightWidget", "Click to select", Q_NULLPTR));
        animButton->setText(QApplication::translate("KbLightWidget", "New animation...",
```

```
    Q_NULLPTR));
        brightnessBox->clear();
        brightnessBox->insertItems(0, QStringList()
         << QApplication::translate("KbLightWidget", "100%", Q_NULLPTR)
         << QApplication::translate("KbLightWidget", "67%", Q_NULLPTR)
         << QApplication::translate("KbLightWidget", "33%", Q_NULLPTR)
         << QApplication::translate("KbLightWidget", "Off", Q_NULLPTR)
        );
        label->setText(QApplication::translate("KbLightWidget", "\342\230\274", Q_NULLPTR));
        label_2->setText(QApplication::translate("KbLightWidget", "Animations", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.31.2.2 void Ui_KbLightWidget::setupUi (QWidget * *KbLightWidget*) [inline],[inherited]

Definition at line 63 of file ui_kblightwidget.h.

References Ui_KbLightWidget::animButton, Ui_KbLightWidget::animWidget, Ui_KbLightWidget::bgButton, Ui_KbLightWidget::brightnessBox, Ui_KbLightWidget::gridLayout, Ui_KbLightWidget::gridLayout_2, Ui_KbLightWidget::gridLayout_4, Ui_KbLightWidget::horizontalLayout, Ui_KbLightWidget::horizontalLayout_2, Ui_KbLightWidget::horizontalLayout_3, Ui_KbLightWidget::horizontalSpacer_3, Ui_KbLightWidget::horizontalSpacer_4, Ui_KbLightWidget::horizontalSpacer_5, Ui_KbLightWidget::horizontalSpacer_6, Ui_KbLightWidget::keyWidget, Ui_KbLightWidget::label, Ui_KbLightWidget::label_2, Ui_KbLightWidget::label_3, Ui_KbLightWidget::line, Ui_KbLightWidget::line_2, Ui_KbLightWidget::retranslateUi(), Ui_KbLightWidget::selLabel, Ui_KbLightWidget::showAnimBox, Ui_KbLightWidget::verticalLayout, Ui_KbLightWidget::verticalSpacer_2, Ui_KbLightWidget::verticalSpacer_3, and Ui_KbLightWidget::widget.

Referenced by KbLightWidget::KbLightWidget().

```
    {
        if (KbLightWidget->objectName().isEmpty())
            KbLightWidget->setObjectName(QStringLiteral("KbLightWidget"));
        KbLightWidget->resize(632, 540);
        KbLightWidget->setFocusPolicy(Qt::ClickFocus);
        verticalLayout = new QVBoxLayout(KbLightWidget);
        verticalLayout->setObjectName(QStringLiteral("verticalLayout"));
        verticalLayout->setContentsMargins(0, 0, 0, -1);
        horizontalLayout_3 = new QHBoxLayout();
        horizontalLayout_3->setObjectName(QStringLiteral("horizontalLayout_3"));
        label_3 = new QLabel(KbLightWidget);
        label_3->setObjectName(QStringLiteral("label_3"));
        QSizePolicy sizePolicy(QSizePolicy::Expanding, QSizePolicy::Preferred);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(label_3->sizePolicy().hasHeightForWidth());
        label_3->setSizePolicy(sizePolicy);
        QFont font;
        font.setBold(true);
        font.setWeight(75);
        label_3->setFont(font);

        horizontalLayout_3->addWidget(label_3);

        showAnimBox = new QCheckBox(KbLightWidget);
        showAnimBox->setObjectName(QStringLiteral("showAnimBox"));
        showAnimBox->setChecked(true);

        horizontalLayout_3->addWidget(showAnimBox);


        verticalLayout->addLayout(horizontalLayout_3);

        line_2 = new QFrame(KbLightWidget);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
```

```
        line_2->setFrameShadow(QFrame::Sunken);

        verticalLayout->addWidget(line_2);

        horizontalLayout_2 = new QHBoxLayout();
        horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
        horizontalSpacer_5 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer_5);

        gridLayout = new QGridLayout();
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        keyWidget = new KeyWidget(KbLightWidget);
        keyWidget->setObjectName(QStringLiteral("keyWidget"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Expanding);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(keyWidget->sizePolicy().hasHeightForWidth());
        keyWidget->setSizePolicy(sizePolicy1);
        keyWidget->setMinimumSize(QSize(100, 100));
        keyWidget->setFocusPolicy(Qt::ClickFocus);

        gridLayout->addWidget(keyWidget, 0, 0, 1, 3);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        bgButton = new ColorButton(KbLightWidget);
        bgButton->setObjectName(QStringLiteral("bgButton"));
        QSizePolicy sizePolicy2(QSizePolicy::Fixed, QSizePolicy::Fixed);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(0);
        sizePolicy2.setHeightForWidth(bgButton->sizePolicy().hasHeightForWidth());
        bgButton->setSizePolicy(sizePolicy2);
        bgButton->setMinimumSize(QSize(140, 0));
        bgButton->setMaximumSize(QSize(140, 16777215));

        horizontalLayout->addWidget(bgButton);

        selLabel = new QLabel(KbLightWidget);
        selLabel->setObjectName(QStringLiteral("selLabel"));
        sizePolicy.setHeightForWidth(selLabel->sizePolicy().hasHeightForWidth());
        selLabel->setSizePolicy(sizePolicy);
        selLabel->setAlignment(Qt::AlignCenter);

        horizontalLayout->addWidget(selLabel);

        animButton = new QPushButton(KbLightWidget);
        animButton->setObjectName(QStringLiteral("animButton"));
        sizePolicy2.setHeightForWidth(animButton->sizePolicy().hasHeightForWidth());
        animButton->setSizePolicy(sizePolicy2);
        animButton->setMinimumSize(QSize(140, 0));
        animButton->setMaximumSize(QSize(140, 16777215));

        horizontalLayout->addWidget(animButton);


        gridLayout->addLayout(horizontalLayout, 1, 0, 1, 3);


        horizontalLayout_2->addLayout(gridLayout);

        horizontalSpacer_6 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer_6);


        verticalLayout->addLayout(horizontalLayout_2);

        verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        verticalLayout->addItem(verticalSpacer_2);

        gridLayout_2 = new QGridLayout();
        gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
        brightnessBox = new QComboBox(KbLightWidget);
        brightnessBox->setObjectName(QStringLiteral("brightnessBox"));
        sizePolicy2.setHeightForWidth(brightnessBox->sizePolicy().hasHeightForWidth());
        brightnessBox->setSizePolicy(sizePolicy2);

        gridLayout_2->addWidget(brightnessBox, 1, 3, 1, 1);

        label = new QLabel(KbLightWidget);
        label->setObjectName(QStringLiteral("label"));
        QFont font1;
```

```
        font1.setPointSize(20);
        label->setFont(font1);
        label->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_2->addWidget(label, 1, 2, 1, 1);

        horizontalSpacer_3 = new QSpacerItem(0, 0, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_3, 0, 4, 1, 1);

        horizontalSpacer_4 = new QSpacerItem(0, 0, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_4, 0, 2, 1, 1);


        verticalLayout->addLayout(gridLayout_2);

        verticalSpacer_3 = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        verticalLayout->addItem(verticalSpacer_3);

        label_2 = new QLabel(KbLightWidget);
        label_2->setObjectName(QStringLiteral("label_2"));
        label_2->setFont(font);

        verticalLayout->addWidget(label_2);

        line = new QFrame(KbLightWidget);
        line->setObjectName(QStringLiteral("line"));
        line->setFrameShape(QFrame::HLine);
        line->setFrameShadow(QFrame::Sunken);

        verticalLayout->addWidget(line);

        widget = new QWidget(KbLightWidget);
        widget->setObjectName(QStringLiteral("widget"));
        widget->setMinimumSize(QSize(0, 170));
        gridLayout_4 = new QGridLayout(widget);
        gridLayout_4->setObjectName(QStringLiteral("gridLayout_4"));
        gridLayout_4->setContentsMargins(-1, 0, -1, 0);
        animWidget = new KbAnimWidget(widget);
        animWidget->setObjectName(QStringLiteral("animWidget"));

        gridLayout_4->addWidget(animWidget, 0, 0, 1, 1);


        verticalLayout->addWidget(widget);


        retranslateUi(KbLightWidget);

        QMetaObject::connectSlotsByName(KbLightWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.31.3 Field Documentation

12.31.3.1 QPushButton* Ui_KbLightWidget::animButton [inherited]

Definition at line 48 of file ui_kblightwidget.h.

Referenced by KbLightWidget::KbLightWidget(), Ui_KbLightWidget::retranslateUi(), and Ui_KbLightWidget::setupUi().

12.31.3.2 KbAnimWidget* Ui_KbLightWidget::animWidget [inherited]

Definition at line 61 of file ui_kblightwidget.h.

Referenced by KbLightWidget::KbLightWidget(), KbLightWidget::newSelection(), KbLightWidget::on_animButton_clicked(), KbLightWidget::setLight(), and Ui_KbLightWidget::setupUi().

12.31.3.3 ColorButton* Ui_KbLightWidget::bgButton [inherited]

Definition at line 46 of file ui_kblightwidget.h.

Referenced by KbLightWidget::KbLightWidget(), KbLightWidget::newSelection(), Ui_KbLightWidget::retranslateUi(), and Ui_KbLightWidget::setupUi().

12.31.3.4 QComboBox* Ui_KbLightWidget::brightnessBox [inherited]

Definition at line 52 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::retranslateUi(), Ui_KbLightWidget::setupUi(), and KbLightWidget::updateLight().

12.31.3.5 QGridLayout* Ui_KbLightWidget::gridLayout [inherited]

Definition at line 43 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.6 QGridLayout* Ui_KbLightWidget::gridLayout_2 [inherited]

Definition at line 51 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.7 QGridLayout* Ui_KbLightWidget::gridLayout_4 [inherited]

Definition at line 60 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.8 QHBoxLayout* Ui_KbLightWidget::horizontalLayout [inherited]

Definition at line 45 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.9 QHBoxLayout* Ui_KbLightWidget::horizontalLayout_2 [inherited]

Definition at line 41 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.10 QHBoxLayout* Ui_KbLightWidget::horizontalLayout_3 [inherited]

Definition at line 37 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.11 QSpacerItem* Ui_KbLightWidget::horizontalSpacer_3 [inherited]

Definition at line 54 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.12 QSpacerItem* Ui_KbLightWidget::horizontalSpacer_4 [inherited]

Definition at line 55 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.13 QSpacerItem* Ui_KbLightWidget::horizontalSpacer_5 [inherited]

Definition at line 42 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.14 QSpacerItem* Ui_KbLightWidget::horizontalSpacer_6 [inherited]

Definition at line 49 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.15 KeyWidget* Ui_KbLightWidget::keyWidget [inherited]

Definition at line 44 of file ui_kblightwidget.h.

Referenced by KbLightWidget::changeAnim(), KbLightWidget::changeAnimKeys(), KbLightWidget::changeColor(), KbLightWidget::KbLightWidget(), KbLightWidget::on_animButton_clicked(), KbLightWidget::on_bgButton_clicked(), KbLightWidget::on_showAnimBox_clicked(), KbLightWidget::setLight(), KbLightWidget::setMonochrome(), Ui_KbLightWidget::setupUi(), KbLightWidget::toggleSidelight(), and KbLightWidget::updateLight().

12.31.3.16 QLabel* Ui_KbLightWidget::label [inherited]

Definition at line 53 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::retranslateUi(), and Ui_KbLightWidget::setupUi().

12.31.3.17 QLabel* Ui_KbLightWidget::label_2 [inherited]

Definition at line 57 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::retranslateUi(), and Ui_KbLightWidget::setupUi().

12.31.3.18 QLabel* Ui_KbLightWidget::label_3 [inherited]

Definition at line 38 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::retranslateUi(), and Ui_KbLightWidget::setupUi().

12.31.3.19 QFrame* Ui_KbLightWidget::line [inherited]

Definition at line 58 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.20 QFrame* Ui_KbLightWidget::line_2 [inherited]

Definition at line 40 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.21 QLabel* Ui_KbLightWidget::selLabel [inherited]

Definition at line 47 of file ui_kblightwidget.h.

Referenced by KbLightWidget::newSelection(), Ui_KbLightWidget::retranslateUi(), and Ui_KbLightWidget::setupUi().

12.31.3.22 QCheckBox* Ui_KbLightWidget::showAnimBox [inherited]

Definition at line 39 of file ui_kblightwidget.h.

Referenced by KbLightWidget::KbLightWidget(), Ui_KbLightWidget::retranslateUi(), KbLightWidget::setLight(), and Ui_KbLightWidget::setupUi().

12.31.3.23 QVBoxLayout* Ui_KbLightWidget::verticalLayout [inherited]

Definition at line 36 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.24 QSpacerItem* Ui_KbLightWidget::verticalSpacer_2 [inherited]

Definition at line 50 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.25 QSpacerItem* Ui_KbLightWidget::verticalSpacer_3 [inherited]

Definition at line 56 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

12.31.3.26 QWidget* Ui_KbLightWidget::widget [inherited]

Definition at line 59 of file ui_kblightwidget.h.

Referenced by Ui_KbLightWidget::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kblightwidget.h

12.32 KbLightWidget Class Reference

```
#include <src/ckb/kblightwidget.h>
```

Inheritance diagram for KbLightWidget:

Collaboration diagram for KbLightWidget:

Public Member Functions

- KbLightWidget (QWidget *parent=0)
- ~KbLightWidget ()
- void setLight (KbLight *newLight)
- void setMonochrome ()

Private Slots

- void updateLight ()
- void newSelection (QStringList selection)
- void changeColor (QColor newColor)
- void changeAnim (KbAnim *newAnim)
- void changeAnimKeys (QStringList keys)
- void on_brightnessBox_activated (int index)
- void on_animButton_clicked ()
- void on_bgButton_clicked ()
- void on_showAnimBox_clicked (bool checked)
- void toggleSidelight ()

Private Attributes

- KbLight * light
- QStringList currentSelection
- Ui::KbLightWidget * ui

12.32.1 Detailed Description

Definition at line 15 of file kblightwidget.h.

12.32.2 Constructor & Destructor Documentation

12.32.2.1 KbLightWidget::KbLightWidget (QWidget * *parent* = 0) [explicit]

Definition at line 6 of file kblightwidget.cpp.

References Ui_KbLightWidget::animButton, Ui_KbLightWidget::animWidget, Ui_KbLightWidget::bgButton, changeAnim(), changeAnimKeys(), changeColor(), AnimScript::count(), CkbSettings::get(), Ui_KbLightWidget::keyWidget, newSelection(), Ui_KbLightWidget::setupUi(), Ui_KbLightWidget::showAnimBox, toggleSidelight(), and ui.

```
6                                                   :
7     QWidget(parent), light(0),
8     ui(new Ui::KbLightWidget)
9 {
10     ui->setupUi(this);
11     if(AnimScript::count() == 0)
12         ui->animButton->setVisible(false);
13
14     connect(ui->bgButton, SIGNAL(colorChanged(QColor)), this, SLOT(
      changeColor(QColor)));
15     connect(ui->keyWidget, SIGNAL(selectionChanged(QStringList)), this, SLOT(
      newSelection(QStringList)));
16     connect(ui->keyWidget, SIGNAL(sidelightToggled()), this, SLOT(
      toggleSidelight())); // click on a toggle button, like sidelight
17     connect(ui->animWidget, SIGNAL(animChanged(KbAnim*)), this, SLOT(
      changeAnim(KbAnim*)));
18     connect(ui->animWidget, SIGNAL(didUpdateSelection(QStringList)), this, SLOT(
      changeAnimKeys(QStringList)));
19
20     // Restore "show animated" setting
21     ui->showAnimBox->setChecked(!CkbSettings::get("UI/Light/ShowBaseOnly").
      toBool());
22 }
```

Here is the call graph for this function:

12.32.2.2 KbLightWidget::~KbLightWidget ( )

Definition at line 24 of file kblightwidget.cpp.

References ui.

```
24                                  {
25     delete ui;
26 }
```

12.32.3 Member Function Documentation

12.32.3.1 void KbLightWidget::changeAnim (KbAnim * *newAnim*) [private],[slot]

Definition at line 121 of file kblightwidget.cpp.

References KeyWidget::clearSelection(), KbAnim::keys(), Ui_KbLightWidget::keyWidget, KeyWidget::setAnimationToSelection(), KeyWidget::setSelection(), and ui.

Referenced by KbLightWidget().

```
121                                                 {
122     if(newAnim)
123         ui->keyWidget->setSelection(newAnim->keys());
124     else
125         ui->keyWidget->clearSelection();
126     ui->keyWidget->setAnimationToSelection();
127 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.32.3.2 void KbLightWidget::changeAnimKeys (QStringList *keys*) [private],[slot]

Definition at line 129 of file kblightwidget.cpp.

References Ui_KbLightWidget::keyWidget, KeyWidget::setAnimation(), and ui.

Referenced by KbLightWidget().

```
129                                                 {
130     ui->keyWidget->setAnimation(keys);
131 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.32.3.3 void KbLightWidget::changeColor (QColor *newColor*) [private],[slot]

Definition at line 99 of file kblightwidget.cpp.

References KbLight::color(), KeyWidget::colorMap(), KbLight::colorMap(), currentSelection, Ui_KbLightWidget::keyWidget, light, and ui.

Referenced by KbLightWidget().

```
99                                                  {
100     if(light){
101         foreach(QString key, currentSelection)
102             light->color(key, newColor);
103         ui->keyWidget->colorMap(light->colorMap());
104     }
105 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.32.3.4 void KbLightWidget::newSelection (QStringList *selection*) [private],[slot]

Definition at line 72 of file kblightwidget.cpp.

References Ui_KbLightWidget::animWidget, Ui_KbLightWidget::bgButton, ColorButton::color(), KbLight::colorMap(), currentSelection, KeyMap::isMouse(), light, KbLight::map(), Ui_KbLightWidget::selLabel, KbAnimWidget::setSelectedKeys(), and ui.

Referenced by KbLightWidget().

```
72                                                  {
73     // Determine selected color (invalid color if no selection or if they're not all the same)
74     QColor selectedColor;
75     const QColorMap& colorMap = light->colorMap();
76     foreach(const QString& key, selection){
77         QColor color = colorMap.value(key);
78         if(!selectedColor.isValid())
79             selectedColor = color;
80         else if(color != selectedColor){
81             selectedColor = QColor();
82             break;
83         }
84     }
85
86     currentSelection = selection;
87     ui->animWidget->setSelectedKeys(selection);
88     ui->bgButton->color(selectedColor);
89     int count = selection.count();
90     if(count == 0){
91         ui->selLabel->setText("Click to select");
92         return;
93     } else if(count == 1)
94         ui->selLabel->setText(tr("1 %1 selected").arg(light->map().
      isMouse() ? "zone" : "key"));
95     else
96         ui->selLabel->setText(tr("%1 %2 selected").arg(count).arg(
      light->map().isMouse() ? "zones" : "keys"));
97 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.32.3.5 void KbLightWidget::on_animButton_clicked ( ) [private],[slot]

Definition at line 143 of file kblightwidget.cpp.

References KbAnimWidget::addAnim(), Ui_KbLightWidget::animWidget, AnimAddDialog::chosenPreset(), AnimAddDialog::chosenScript(), AnimScript::count(), currentSelection, Ui_KbLightWidget::keyWidget, light, AnimScript::preset(), AnimScript::presets(), KbLight::restartAnimation(), KeyWidget::selectAll(), and ui.

```
143                                         {
144     if(AnimScript::count() == 0)
145         return;
146     if(currentSelection.isEmpty())
147         ui->keyWidget->selectAll();
148     AnimAddDialog dialog(this, light, currentSelection);
149     dialog.exec();
150     if(dialog.result() != QDialog::Accepted)
151         return;
152     const AnimScript* script = dialog.chosenScript();
153     int presetId = dialog.chosenPreset();
154     ui->animWidget->addAnim(script, currentSelection, script->
      presets()[presetId], script->preset(presetId));
155     light->restartAnimation();
156 }
```

Here is the call graph for this function:

12.32.3.6 void KbLightWidget::on_bgButton_clicked ( ) [private],[slot]

Definition at line 138 of file kblightwidget.cpp.

References currentSelection, Ui_KbLightWidget::keyWidget, KeyWidget::selectAll(), and ui.

```
138                                     {
139     if(currentSelection.isEmpty())
140         ui->keyWidget->selectAll();
141 }
```

Here is the call graph for this function:

12.32.3.7 void KbLightWidget::on_brightnessBox_activated (int *index*) [private],[slot]

Definition at line 133 of file kblightwidget.cpp.

References KbLight::dimming(), and light.

```
133                                                     {
134     if(light)
135         light->dimming(index);
136 }
```

Here is the call graph for this function:

12.32.3.8 void KbLightWidget::on_showAnimBox_clicked (bool *checked*) [private],[slot]

Definition at line 52 of file kblightwidget.cpp.

References KeyWidget::displayColorMap(), Ui_KbLightWidget::keyWidget, light, CkbSettings::set(), and ui.

Referenced by setLight().

```
52                                                  {
53     // FIXME: set globally if there's more than one KbLightWidget active
54     // Connect/disconnect animation slot
55     if(checked){
56         if(light)
57             connect(light, SIGNAL(frameDisplayed(const ColorMap&,const QSet<QString>&)),
       ui->keyWidget, SLOT(displayColorMap(const ColorMap&,const QSet<QString>&)));
58     } else {
59         if(light)
60             disconnect(light, SIGNAL(frameDisplayed(const ColorMap&,const QSet<QString>&)),
       ui->keyWidget, SLOT(displayColorMap(const ColorMap&,const QSet<QString>&)));
61         ui->keyWidget->displayColorMap(ColorMap());
62     }
63     CkbSettings::set("UI/Light/ShowBaseOnly", !checked);
64 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.32.3.9 void KbLightWidget::setLight (KbLight * *newLight*)

Definition at line 28 of file kblightwidget.cpp.

References Ui_KbLightWidget::animWidget, KeyWidget::clearAnimation(), KbAnimWidget::clearSelection(), KeyWidget::clearSelection(), Ui_KbLightWidget::keyWidget, light, on_showAnimBox_clicked(), KeyWidget::setAnimation(), KbAnimWidget::setLight(), Ui_KbLightWidget::showAnimBox, ui, and updateLight().

Referenced by KbWidget::modeChanged().

```
{
    ui->keyWidget->clearSelection();
    ui->keyWidget->clearAnimation();
    ui->animWidget->clearSelection();
    if(light == newLight)
        return;
    if(light){
        disconnect(light, SIGNAL(updated()), this, SLOT(updateLight()));
        // Disabled animated colors for previous light
        on_showAnimBox_clicked(false);
    }
    connect(newLight, SIGNAL(updated()), this, SLOT(updateLight()));
    light = newLight;
    updateLight();
    ui->keyWidget->setAnimation(QStringList());
    ui->animWidget->setLight(newLight);
    if(ui->showAnimBox->isChecked())
        on_showAnimBox_clicked(true);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.32.3.10 void KbLightWidget::setMonochrome ( )

Definition at line 48 of file kblightwidget.cpp.

References Ui_KbLightWidget::keyWidget, KeyWidget::monochrome(), and ui.

Referenced by KbWidget::KbWidget().

```
48                                  {
49      ui->keyWidget->monochrome(true);
50  }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.32.3.11 void KbLightWidget::toggleSidelight ( ) [private],[slot]

Definition at line 107 of file kblightwidget.cpp.

References KbLight::color(), KeyWidget::colorMap(), KbLight::colorMap(), Ui_KbLightWidget::keyWidget, light, and ui.

Referenced by KbLightWidget().

```
107                                     {
108     if(light){
109         if (light->colorMap()["lsidel"] == 0xFF000000){
110                 light->color("lsidel",QRgb(0xFFFFFFFF));
111                 light->color("rsidel",QRgb(0xFFFFFFFF));
112         } else {
113                 light->color("lsidel", QRgb(0xFF000000));
114                 light->color("rsidel", QRgb(0xFF000000));
115         }
116         ui->keyWidget->colorMap(light->colorMap());
117     }
118 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.32.3.12 void KbLightWidget::updateLight ( ) [private],[slot]

Definition at line 66 of file kblightwidget.cpp.

References Ui_KbLightWidget::brightnessBox, KeyWidget::colorMap(), KbLight::colorMap(), KbLight::dimming(), Ui_KbLightWidget::keyWidget, light, KeyWidget::map(), KbLight::map(), and ui.

Referenced by setLight().

```
66                                {
67     ui->keyWidget->map(light->map());
68     ui->keyWidget->colorMap(light->colorMap());
69     ui->brightnessBox->setCurrentIndex(light->dimming());
70 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.32.4 Field Documentation

12.32.4.1 QStringList KbLightWidget::currentSelection [private]

Definition at line 44 of file kblightwidget.h.

Referenced by changeColor(), newSelection(), on_animButton_clicked(), and on_bgButton_clicked().

12.32.4.2 KbLight* KbLightWidget::light [private]

Definition at line 43 of file kblightwidget.h.

Referenced by changeColor(), newSelection(), on_animButton_clicked(), on_brightnessBox_activated(), on_showAnimBox_clicked(), setLight(), toggleSidelight(), and updateLight().

12.32.4.3 Ui::KbLightWidget* KbLightWidget::ui [private]

Definition at line 46 of file kblightwidget.h.

Referenced by changeAnim(), changeAnimKeys(), changeColor(), KbLightWidget(), newSelection(), on_animButton_clicked(), on_bgButton_clicked(), on_showAnimBox_clicked(), setLight(), setMonochrome(), toggleSidelight(), updateLight(), and ~KbLightWidget().

The documentation for this class was generated from the following files:

- src/ckb/kblightwidget.h

- src/ckb/kblightwidget.cpp

12.33 KbManager Class Reference

```
#include <src/ckb/kbmanager.h>
```

Inheritance diagram for KbManager:

Collaboration diagram for KbManager:

Signals

- void kbConnected (Kb *device)
- void kbDisconnected (Kb *device)
- void versionUpdated ()

Static Public Member Functions

- static void init (QString guiVersion)
- static void stop ()
- static KbManager * kbManager ()
- static QString ckbGuiVersion ()
- static QString ckbDaemonVersion ()
- static float parseVersionString (QString version)
- static float ckbGuiVersionF ()
- static float ckbDaemonVersionF ()
- static const QSet< Kb * > devices ()
- static QTimer * eventTimer ()
- static void fps (int framerate)
- static QTimer * scanTimer ()

Private Slots

- void scanKeyboards ()

Private Member Functions

- KbManager (QObject *parent=0)

Private Attributes

- QSet< Kb * > _devices
- QTimer * _eventTimer
- QTimer * _scanTimer

Static Private Attributes

- static KbManager * _kbManager = 0
- static QString _guiVersion
- static QString _daemonVersion = "<unavailable>"

12.33.1 Detailed Description

Definition at line 14 of file kbmanager.h.

12.33.2 Constructor & Destructor Documentation

12.33.2.1 KbManager::KbManager (QObject * *parent* = 0) [explicit], [private]

Definition at line 26 of file kbmanager.cpp.

References _eventTimer, _scanTimer, and scanKeyboards().

Referenced by init().

```
26                                  : QObject(parent){
27     // Set up the timers
28     _eventTimer = new QTimer(this);
29     _eventTimer->setTimerType(Qt::PreciseTimer);
30     _scanTimer = new QTimer(this);
31     _scanTimer->start(100);
32     connect(_scanTimer, SIGNAL(timeout()), this, SLOT(scanKeyboards()));
33 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.33.3 Member Function Documentation

12.33.3.1 static QString KbManager::ckbDaemonVersion ( ) [inline], [static]

Definition at line 27 of file kbmanager.h.

References _daemonVersion.

Referenced by MainWindow::updateVersion().

```
27 { return _daemonVersion; }
```

Here is the caller graph for this function:

12.33.3.2 static float KbManager::ckbDaemonVersionF ( ) [inline], [static]

Definition at line 31 of file kbmanager.h.

References _daemonVersion, DAEMON_UNAVAILABLE_STR, and parseVersionString().

Referenced by KbFirmware::_latestForBoard(), and MainWindow::updateVersion().

```
31 { return _daemonVersion == DAEMON_UNAVAILABLE_STR ? INFINITY :
     parseVersionString(_daemonVersion); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.33.3.3 static QString KbManager::ckbGuiVersion ( ) [inline],[static]

Definition at line 26 of file kbmanager.h.

References _guiVersion.

```
26 { return _guiVersion; }
```

12.33.3.4 static float KbManager::ckbGuiVersionF ( ) [inline],[static]

Definition at line 30 of file kbmanager.h.

References _guiVersion, and parseVersionString().

Referenced by KbFirmware::_latestForBoard(), and MainWindow::updateVersion().

```
30 { return parseVersionString(_guiVersion); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.33.3.5 static const QSet<Kb*> KbManager::devices ( ) [inline], [static]

Definition at line 34 of file kbmanager.h.

References _devices, and _kbManager.

```
34 { return _kbManager ? _kbManager->_devices : QSet<Kb*>(); }
```

12.33.3.6 static QTimer* KbManager::eventTimer ( ) [inline], [static]

Definition at line 38 of file kbmanager.h.

References _eventTimer, and _kbManager.

Referenced by fps().

```
38 { return _kbManager ? _kbManager->_eventTimer : 0; }
```

Here is the caller graph for this function:

12.33.3.7 void KbManager::fps (int *framerate*) [static]

Definition at line 35 of file kbmanager.cpp.

References eventTimer().

Referenced by Kb::frameRate().

```
35                                  {
36     QTimer* timer = eventTimer();
37     if(!timer)
38         return;
39     if(timer->isActive())
40         timer->setInterval(1000 / framerate);
41     else
42         timer->start(1000 / framerate);
43 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.33.3.8 void KbManager::init (QString *guiVersion*) [static]

Definition at line 12 of file kbmanager.cpp.

References _guiVersion, _kbManager, and KbManager().

Referenced by MainWindow::MainWindow().

```
12                                          {
13     _guiVersion = guiVersion;
14     if(_kbManager)
15         return;
16     _kbManager = new KbManager();
17 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.33.3.9 void KbManager::kbConnected (Kb * *device*) [signal]

Definition at line 174 of file moc_kbmanager.cpp.

Referenced by scanKeyboards().

```
175 {
176     void *_a[] = { Q_NULLPTR, const_cast<void*>(reinterpret_cast<const void*>(&_t1)) };
177     QMetaObject::activate(this, &staticMetaObject, 0, _a);
178 }
```

Here is the caller graph for this function:

12.33.3.10 void KbManager::kbDisconnected (Kb * *device*) [signal]

Definition at line 181 of file moc_kbmanager.cpp.

Referenced by scanKeyboards().

```
182 {
183     void *_a[] = { Q_NULLPTR, const_cast<void*>(reinterpret_cast<const void*>(&_t1)) };
184     QMetaObject::activate(this, &staticMetaObject, 1, _a);
185 }
```

Here is the caller graph for this function:

12.33.3.11 static KbManager* KbManager::kbManager ( ) [inline],[static]

Definition at line 23 of file kbmanager.h.

References _kbManager.

Referenced by MainWindow::MainWindow().

```
23 { return _kbManager; }
```

Here is the caller graph for this function:

12.33.3.12 float KbManager::parseVersionString (QString *version*) [static]

Definition at line 45 of file kbmanager.cpp.

Referenced by ckbDaemonVersionF(), ckbGuiVersionF(), and KbFirmware::processDownload().

```
45                                                  {
46     // Remove extraneous info (anything after a +, anything non-numeric)
47     QStringList dots = version.replace(QRegExp("\\+.+"), "").replace(QRegExp("[^\\d\\.]"), "").split(".");
48     float base = 1.f;
49     float res = 0.f;
50     // A number like "1.2.3" will result in 1.0203
51     // NB: will fail if a point version goes over 99 or if using more than two dots. floats can only
       reliably encode 7 decimal digits.
52     foreach(const QString& dot, dots){
53         res += dot.toFloat() * base;
54         base /= 100.f;
55     }
56     return res;
57 }
```

Here is the caller graph for this function:

12.33.3.13 void KbManager::scanKeyboards ( ) [private], [slot]

Definition at line 59 of file kbmanager.cpp.

References _daemonVersion, _devices, _eventTimer, _scanTimer, DAEMON_UNAVAILABLE_STR, devpath, Kb::isOpen(), kbConnected(), kbDisconnected(), Kb::load(), Kb::matches(), Kb::save(), and versionUpdated().

Referenced by KbManager().

```
59                                  {
60     QString rootdev = devpath.arg(0);
61     QFile connected(rootdev + "/connected");
62     if(!connected.open(QIODevice::ReadOnly)){
63         // No root controller - remove all keyboards
64         foreach(Kb* kb, _devices){
65             emit kbDisconnected(kb);
66             kb->save();
67             delete kb;
68         }
69         _devices.clear();
70         if(_daemonVersion != DAEMON_UNAVAILABLE_STR){
```

```
            _daemonVersion = DAEMON_UNAVAILABLE_STR;
            emit versionUpdated();
        }
        return;
    }
    // Check daemon version
    QFile version(rootdev + "/version");
    QString vString;
    if(version.open(QIODevice::ReadOnly)){
        vString = QString::fromUtf8(version.readLine()).trimmed();
        version.close();
    } else
        vString = DAEMON_UNAVAILABLE_STR;
    if(_daemonVersion != vString){
        _daemonVersion = vString;
        emit versionUpdated();
    }

    // Scan connected devices
    QList<QStringList> lines;
    while(1){
        QString line = connected.readLine().trimmed();
        if(line.isEmpty())
            break;
        QStringList components = line.split(" ");
        if(components.length() < 2)             // "<path> <serial> <name>" (we're only interested in the first two)
            continue;
        lines.append(components);
    }
     connected.close();

     // Remove any active devices not in the list
     QMutableSetIterator<Kb*> i(_devices);
     while(i.hasNext()){
         Kb* kb = i.next();
         bool matched = false;
         foreach(const QStringList& line, lines){
             if(kb->matches(line[0], line[1])){
                 matched = true;
                 break;
             }
         }
         if(matched)
             continue;
         // Device not found, remove
         i.remove();
         emit kbDisconnected(kb);
         kb->save();
         delete kb;
     }

     // Add any new devices found in the list
     foreach(const QStringList& line, lines){
         bool matched = false;
         foreach(Kb* kb, _devices){
             if(kb->matches(line[0], line[1])){
                 matched = true;
                 break;
             }
         }
         if(matched)
             continue;
         // Device not found, create new
         Kb* kb = new Kb(this, line[0]);
         if(!kb->isOpen()){
             delete kb;
             continue;
         }
         _devices.insert(kb);
         // Load preferences and send signal
         emit kbConnected(kb);
         kb->load();
         connect(_eventTimer, SIGNAL(timeout()), kb, SLOT(frameUpdate()));
         connect(_scanTimer, SIGNAL(timeout()), kb, SLOT(autoSave()));
     }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.33.3.14 static QTimer* KbManager::scanTimer ( ) [inline],[static]

Definition at line 43 of file kbmanager.h.

References _kbManager, and _scanTimer.

Referenced by MainWindow::MainWindow().

```
43 { return _kbManager ? _kbManager->_scanTimer : 0; }
```

Here is the caller graph for this function:

12.33.3.15 void KbManager::stop ( ) [static]

Definition at line 19 of file kbmanager.cpp.

References _kbManager.

Referenced by MainWindow::cleanup().

```
                    {
    if(!_kbManager)
        return;
    delete _kbManager;
    _kbManager = 0;
}
```

Here is the caller graph for this function:

12.33.3.16 void KbManager::versionUpdated ( ) [signal]

Definition at line 188 of file moc_kbmanager.cpp.

Referenced by scanKeyboards().

```
{
    QMetaObject::activate(this, &staticMetaObject, 2, Q_NULLPTR);
}
```

Here is the caller graph for this function:

12.33.4 Field Documentation

12.33.4.1 QString KbManager::_daemonVersion = "<unavailable>" [static], [private]

Definition at line 59 of file kbmanager.h.

Referenced by ckbDaemonVersion(), ckbDaemonVersionF(), and scanKeyboards().

12.33.4.2 QSet<Kb*> KbManager::_devices [private]

Definition at line 63 of file kbmanager.h.

Referenced by devices(), and scanKeyboards().

12.33.4.3 QTimer* KbManager::_eventTimer [private]

Definition at line 64 of file kbmanager.h.

Referenced by eventTimer(), KbManager(), and scanKeyboards().

12.33.4.4 QString KbManager::_guiVersion [static],[private]

Definition at line 59 of file kbmanager.h.

Referenced by ckbGuiVersion(), ckbGuiVersionF(), and init().

12.33.4.5 KbManager * KbManager::_kbManager = 0 [static],[private]

Definition at line 58 of file kbmanager.h.

Referenced by devices(), eventTimer(), init(), kbManager(), scanTimer(), and stop().

12.33.4.6 QTimer * KbManager::_scanTimer [private]

Definition at line 64 of file kbmanager.h.

Referenced by KbManager(), scanKeyboards(), and scanTimer().

The documentation for this class was generated from the following files:

- src/ckb/kbmanager.h
- src/ckb/kbmanager.cpp
- src/ckb/release/moc_kbmanager.cpp

12.34 KbMode Class Reference

```
#include <src/ckb/kbmode.h>
```

Inheritance diagram for KbMode:

Collaboration diagram for KbMode:

Signals

- void updated ()

Public Member Functions

- KbMode (Kb *parent, const KeyMap &keyMap, const QString &guid="", const QString &modified="")
- KbMode (Kb *parent, const KeyMap &keyMap, CkbSettings &settings)
- KbMode (Kb *parent, const KeyMap &keyMap, const KbMode &other)

  KbMode::KbMode.
- ~KbMode ()

  KbMode::~KbMode Destructor may be used for Debugging (issue #38 with SIGSEGV). Insert qDebug-statement.
- const QString & name () const
- void name (const QString &newName)
- UsbId & id ()
- void id (const UsbId &newId)
- void newId ()
- void keyMap (const KeyMap &keyMap)
- KbLight * light ()
- KbBind * bind ()
- KbPerf * perf ()

- void save (CkbSettings &settings)
- bool needsSave () const
- void setNeedsSave ()
- void setNeedsUpdate ()

Private Slots

- void doUpdate ()

Private Attributes

- QString _name
- UsbId _id
- KbLight * _light
- KbBind * _bind
- KbPerf * _perf
- bool _needsSave

12.34.1 Detailed Description

Definition at line 36 of file kbmode.h.

12.34.2 Constructor & Destructor Documentation

12.34.2.1 KbMode::KbMode (Kb * *parent*, const KeyMap & *keyMap*, const QString & *guid* = " ", const QString & *modified* = " ")

Definition at line 4 of file kbmode.cpp.

References _id, _light, doUpdate(), UsbId::guid, and updated().

```
4                                                                                                    :
5     QObject(parent),
6     _name("Unnamed"), _id(guid, modified),
7     _light(new KbLight(this, keyMap)), _bind(new KbBind(this, parent, keyMap)),
      _perf(new KbPerf(this)),
8     _needsSave(true)
9 {
10     connect(_light, SIGNAL(updated()), this, SLOT(doUpdate()));
11     if(_id.guid.isNull())
12         _id.guid = QUuid::createUuid();
13 }
```

Here is the call graph for this function:

12.34.2.2 KbMode::KbMode (Kb * *parent*, const KeyMap & *keyMap*, CkbSettings & *settings*)

Definition at line 30 of file kbmode.cpp.

References _bind, _id, _light, _name, _perf, CkbSettings::contains(), doUpdate(), UsbId::guid, UsbId::hwModified, UsbId::hwModifiedString(), KbPerf::load(), KbBind::load(), KbLight::load(), UsbId::modified, updated(), and CkbSettings::value().

```
30                                                                  :
31     QObject(parent),
32     _name(settings.value("Name").toString().trimmed()),
33     _id(settings.value("GUID").toString().trimmed(), settings.value("Modified").toString().
     trimmed()),
34     _light(new KbLight(this, keyMap)), _bind(new KbBind(this, parent, keyMap)),
     _perf(new KbPerf(this)),
35     _needsSave(false)
36 {
37     if(settings.contains("HwModified"))
38         _id.hwModifiedString(settings.value("HwModified").toString());
39     else
40         _id.hwModified = _id.modified;
41
42     connect(_light, SIGNAL(updated()), this, SLOT(doUpdate()));
43     if(_id.guid.isNull())
44         _id.guid = QUuid::createUuid();
45     if(_name == "")
46         _name = "Unnamed";
47     _light->load(settings);
48     _bind->load(settings);
49     _perf->load(settings);
50 }
```

Here is the call graph for this function:

12.34.2.3 KbMode::KbMode (Kb * *parent*, const KeyMap & *keyMap*, const KbMode & *other*)

Parameters

parent	Kb as parent (append to the Keyboard list
keyMap	Map to copy from
other	Mode to copy from Constructor to copy an existing Keyboard-Mode KbMode &other

Definition at line 21 of file kbmode.cpp.

References _light, doUpdate(), and updated().

```
21                                                                  :
22     QObject(parent),
```

```
    _name(other._name), _id(other._id),
    _light(new KbLight(this, keyMap, *other._light)), _bind(new
   KbBind(this, parent, keyMap, *other._bind)), _perf(new KbPerf(this, *other.
   _perf)),
    _needsSave(true)
{
    connect(_light, SIGNAL(updated()), this, SLOT(doUpdate()));
}
```

Here is the call graph for this function:

12.34.2.4 KbMode::~KbMode ( )

Definition at line 89 of file kbmode.cpp.

```
89                  {
90 }
```

12.34.3 Member Function Documentation

12.34.3.1 KbBind* KbMode::bind ( ) [inline]

Definition at line 61 of file kbmode.h.

References _bind.

Referenced by KbPerf::bind(), Kb::currentBind(), Kb::frameUpdate(), KbBindWidget::on_copyButton_clicked(), and Kb::readNotify().

```
61 { return _bind; }
```

Here is the caller graph for this function:

12.34.3.2 void KbMode::doUpdate ( ) [private],[slot]

Definition at line 82 of file kbmode.cpp.

References updated().

Referenced by KbMode().

```
82                      {
83     emit updated();
84 }
```

Here is the caller graph for this function:

12.34.3.3 UsbId& KbMode::id ( ) [inline]

Definition at line 52 of file kbmode.h.

References _id.

Referenced by KbProfile::find(), Kb::hwSave(), KbProfile::KbProfile(), KbWidget::on_modesList_customContextMenuRequested(), KbWidget::on_modesList_itemChanged(), KbWidget::on_modesList_itemClicked(), KbWidget::profileChanged(), Kb::readNotify(), and KbProfile::save().

```
52 { return _id; }
```

Here is the caller graph for this function:

12.34.3.4 void KbMode::id (const UsbId & *newId*) [inline]

Definition at line 53 of file kbmode.h.

References _id, _needsSave, and newId().

```
53 { _needsSave = true; _id = newId; }
```

Here is the call graph for this function:

12.34.3.5 void KbMode::keyMap (const KeyMap & *keyMap*)

Definition at line 60 of file kbmode.cpp.

References _bind, _light, _needsSave, KbLight::map(), and KbBind::map().

Referenced by KbProfile::keyMap().

```
60                                          {
61     _needsSave = true;
62     _light->map(keyMap);
63     _bind->map(keyMap);
64 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.34.3.6 KbLight* KbMode::light ( ) [inline]

Definition at line 60 of file kbmode.h.

References _light.

Referenced by Kb::currentLight(), Kb::frameUpdate(), Kb::hwSave(), KbBind::light(), KbPerf::light(), Kb::readNotify(), and Kb::updateLayout().

```
60 { return _light; }
```

Here is the caller graph for this function:

12.34.3.7 const QString& KbMode::name ( ) const [inline]

Definition at line 50 of file kbmode.h.

References _name.

Referenced by Kb::hwSave(), ModeSelectDialog::ModeSelectDialog(), KbWidget::on_modesList_itemChanged(), KbWidget::profileChanged(), Kb::readNotify(), and RebindWidget::setBind().

```
50 { return _name; }
```

Here is the caller graph for this function:

12.34.3.8 void KbMode::name (const QString & *newName*) [inline]

Definition at line 51 of file kbmode.h.

References _name, and _needsSave.

```
51 { _needsSave = true; _name = newName.trimmed(); if(_name == "")
      _name = "Unnamed"; }
```

12.34.3.9 bool KbMode::needsSave ( ) const

Definition at line 78 of file kbmode.cpp.

References _bind, _light, _needsSave, _perf, KbPerf::needsSave(), KbBind::needsSave(), and KbLight::needsSave().

Referenced by KbProfile::needsSave().

```
78                                {
79     return _needsSave || _light->needsSave() || _bind->
      needsSave() || _perf->needsSave();
80 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.34.3.10 void KbMode::newId ( )

Definition at line 52 of file kbmode.cpp.

References _id, _light, _needsSave, anim, KbLight::animList(), and KbAnim::newId().

Referenced by id(), KbProfile::newId(), and KbWidget::on_modesList_customContextMenuRequested().

```
52                    {
53     _needsSave = true;
54     _id = UsbId();
55     // Create new IDs for animations
56     foreach(KbAnim* anim, _light->animList())
57         anim->newId();
58 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.34.3.11 KbPerf* KbMode::perf ( ) [inline]

Definition at line 62 of file kbmode.h.

References _perf.

Referenced by Kb::currentPerf(), Kb::frameUpdate(), Kb::hwSave(), KPerfWidget::on_copyButton_clicked(), MPerfWidget::on_copyButton_clicked(), KbBind::perf(), and Kb::readNotify().

```
62 { return _perf; }
```

Here is the caller graph for this function:

12.34.3.12 void KbMode::save (CkbSettings & *settings*)

Definition at line 66 of file kbmode.cpp.

References _bind, _id, _light, _name, _needsSave, _perf, UsbId::guidString(), UsbId::hwModifiedString(), UsbId::modifiedString(), UsbId::newModified(), KbPerf::save(), KbBind::save(), KbLight::save(), and CkbSettings::setValue().

Referenced by KbProfile::save().

```
66                                          {
67     _needsSave = false;
68     _id.newModified();
69     settings.setValue("GUID", _id.guidString());
70     settings.setValue("Modified", _id.modifiedString());
71     settings.setValue("HwModified", _id.hwModifiedString());
72     settings.setValue("Name", _name);
73     _light->save(settings);
74     _bind->save(settings);
75     _perf->save(settings);
76 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.34.3.13 void KbMode::setNeedsSave ( ) [inline]

Definition at line 67 of file kbmode.h.

References _needsSave.

Referenced by Kb::hwSave(), and Kb::readNotify().

```
67 { _needsSave = true; }
```

Here is the caller graph for this function:

12.34.3.14 void KbMode::setNeedsUpdate ( ) [inline]

Definition at line 68 of file kbmode.h.

References _bind, _perf, KbBind::setNeedsUpdate(), and KbPerf::setNeedsUpdate().

Referenced by KbProfile::setNeedsUpdate().

```
68 { _bind->setNeedsUpdate(); _perf->setNeedsUpdate(); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.34.3.15 void KbMode::updated ( ) [signal]

Definition at line 131 of file moc_kbmode.cpp.

Referenced by doUpdate(), and KbMode().

```
{
    QMetaObject::activate(this, &staticMetaObject, 0, Q_NULLPTR);
}
```

Here is the caller graph for this function:

12.34.4 Field Documentation

12.34.4.1 KbBind* KbMode::_bind [private]

Definition at line 78 of file kbmode.h.

Referenced by bind(), KbMode(), keyMap(), needsSave(), save(), and setNeedsUpdate().

12.34.4.2 UsbId KbMode::_id [private]

Definition at line 75 of file kbmode.h.

Referenced by id(), KbMode(), newId(), and save().

12.34.4.3 KbLight* KbMode::_light [private]

Definition at line 77 of file kbmode.h.

Referenced by KbMode(), keyMap(), light(), needsSave(), newId(), and save().

12.34.4.4 QString KbMode::_name [private]

Definition at line 74 of file kbmode.h.

Referenced by KbMode(), name(), and save().

12.34.4.5 bool KbMode::_needsSave [private]

Definition at line 81 of file kbmode.h.

Referenced by id(), keyMap(), name(), needsSave(), newId(), save(), and setNeedsSave().

12.34.4.6 KbPerf* KbMode::_perf [private]

Definition at line 79 of file kbmode.h.

Referenced by KbMode(), needsSave(), perf(), save(), and setNeedsUpdate().

The documentation for this class was generated from the following files:

- src/ckb/kbmode.h
- src/ckb/kbmode.cpp
- src/ckb/release/moc_kbmode.cpp

12.35 KbPerf Class Reference

`#include <src/ckb/kbperf.h>`

Inheritance diagram for KbPerf:

Collaboration diagram for KbPerf:

Public Types

- enum height {
  LOW = 1, LOWMED, MEDIUM, MEDHIGH,
  HIGH }
- enum indicator {
  NUM, CAPS, SCROLL, HW_IMAX = SCROLL,
  MODE, MACRO, LIGHT, LOCK,
  MUTE }
- enum i_hw { NONE = -1, NORMAL, ON, OFF }

Signals

- void didLoad ()
- void settingsUpdated ()

Public Member Functions

- KbPerf (KbMode *parent)
- KbPerf (KbMode *parent, const KbPerf &other)
- const KbPerf & operator= (const KbPerf &rhs)
- void load (CkbSettings &settings)
- void save (CkbSettings &settings)
- bool needsSave () const
- height liftHeight () const
- void liftHeight (height newHeight)
- bool angleSnap () const
- void angleSnap (bool newAngleSnap)
- QPoint dpi (int index) const
- void dpi (int index, const QPoint &newValue)
- QPoint sniperDpi () const
- void sniperDpi (const QPoint &newValue)

- void dpi (int index, int newValue)
- void sniperDpi (int newValue)
- QPoint curDpi () const
- void curDpi (const QPoint &newDpi)
- void curDpi (int newDpi)
- int curDpiIdx () const
- void curDpiIdx (int newIdx)
- void dpiUp ()
- void dpiDown ()
- bool dpiEnabled (int index) const
- void dpiEnabled (int index, bool newEnabled)
- quint64 pushDpi (const QPoint &newDpi)
- quint64 pushDpi (int newDpi)
- quint64 pushSniper ()
- void popDpi (quint64 pushIdx)
- float iOpacity () const
- void iOpacity (float newIOpacity)
- bool dpiIndicator () const
- void dpiIndicator (bool newDpiIndicator)
- QColor dpiColor (int index) const
- void dpiColor (int index, const QColor &newColor)
- void getIndicator (indicator index, QColor &color1, QColor &color2, QColor &color3, bool &software_enable, i_hw &hardware_enable)
- void setIndicator (indicator index, const QColor &color1, const QColor &color2, const QColor &color3=QColor(), bool software_enable=true, i_hw hardware_enable=NORMAL)
- void update (QFile &cmd, bool force=false, bool saveCustomDpi=true)
- void setNeedsUpdate ()
- void applyIndicators (int modeIndex, const bool indicatorState[HW_I_COUNT])

Static Public Attributes

- static const int DPI_COUNT = 6
- static const int SNIPER = 0
- static const int DPI_MIN = 100
- static const int DPI_MAX = 12000
- static const int OTHER = DPI_COUNT
- static const int I_COUNT = (int)MUTE + 1
- static const int HW_I_COUNT = (int)HW_IMAX + 1

Private Member Functions

- KbMode * modeParent () const
- KbBind * bind () const
- KbLight * light () const
- void lightIndicator (const char *name, QRgb rgba)
- void _curDpi (const QPoint &newDpi)

Private Attributes

- int dpiX [DPI_COUNT]
- int dpiY [DPI_COUNT]
- int dpiCurX
- int dpiCurY
- int dpiCurIdx
- QColor dpiClr [DPI_COUNT+1]
- bool dpiOn [DPI_COUNT]
- int dpiLastIdx
- QMap< quint64, QPoint > pushedDpis
- uint runningPushIdx
- float _iOpacity
- QColor iColor [I_COUNT][2]
- QColor light100Color
- QColor muteNAColor
- bool iEnable [I_COUNT]
- i_hw hwIType [HW_I_COUNT]
- bool _dpiIndicator
- height _liftHeight
- bool _angleSnap
- bool _needsUpdate
- bool _needsSave

12.35.1 Detailed Description

Definition at line 15 of file kbperf.h.

12.35.2 Member Enumeration Documentation

12.35.2.1 enum KbPerf::height

Enumerator

LOW

LOWMED

MEDIUM

MEDHIGH

HIGH

Definition at line 31 of file kbperf.h.

```
31                  {
32          LOW = 1,
33          LOWMED,
34          MEDIUM,
35          MEDHIGH,
36          HIGH
37      };
```

12.35.2.2 enum KbPerf::i_hw

Enumerator

NONE

NORMAL

ON

OFF

Definition at line 98 of file kbperf.h.

```
98              {
99          NONE = -1,  // For non-hardware indicators
100          NORMAL,
101          ON,
102          OFF
103     };
```

12.35.2.3 enum KbPerf::indicator

Enumerator

NUM

CAPS

SCROLL

HW_IMAX

MODE

MACRO

LIGHT

LOCK

MUTE

Definition at line 85 of file kbperf.h.

```
85                  {
86          // Hardware
87          NUM,
88          CAPS,
89          SCROLL, HW_IMAX = SCROLL,
90          // Software
91          MODE,
92          MACRO,
93          LIGHT,
94          LOCK,
95          MUTE
96      };
```

12.35.3 Constructor & Destructor Documentation

12.35.3.1 KbPerf::KbPerf (KbMode * *parent*) [explicit]

Definition at line 13 of file kbperf.cpp.

References CAPS, DPI_COUNT, dpiClr, dpiCurIdx, dpiCurX, dpiCurY, dpiLastIdx, dpiOn, dpiX, dpiY, HW_I_COUNT, hwIType, I_COUNT, iColor, iEnable, LIGHT, light100Color, LOCK, MACRO, MODE, MUTE, muteNAColor, NORMAL, NUM, and SCROLL.

```
13                                :
14     QObject(parent), runningPushIdx(1),
15     _iOpacity(1.f), _dpiIndicator(true), _liftHeight(
      MEDIUM), _angleSnap(false),
16     _needsUpdate(true), _needsSave(true) {
17     // Default DPI settings
18     dpiX[0] = dpiY[0] = 400;
19     dpiX[1] = dpiY[1] = 450;
20     dpiX[2] = dpiY[2] = 800;
21     dpiX[3] = dpiY[3] = 1500;
22     dpiX[4] = dpiY[4] = 3000;
23     dpiX[5] = dpiY[5] = 6000;
24     dpiClr[0] = QColor(255, 0, 0);
25     dpiClr[1] = QColor(255, 192, 0);
26     dpiClr[2] = QColor(255, 255, 0);
27     dpiClr[3] = QColor(0, 255, 0);
28     dpiClr[4] = QColor(0, 255, 255);
29     dpiClr[5] = QColor(255, 255, 255);
30     dpiClr[6] = QColor(192, 192, 192);
31     for(int i = 0; i < DPI_COUNT; i++)
32         dpiOn[i] = true;
33     dpiLastIdx = dpiCurIdx = 3;
34     dpiCurX = dpiX[dpiCurIdx];
35     dpiCurY = dpiY[dpiCurIdx];
36     // Default indicators
37     iColor[NUM][0] = iColor[CAPS][0] = iColor[SCROLL][0] = QColor(0, 255, 0)
      ;   // Lock lights: on = green, off = black
38     iColor[NUM][1] = iColor[CAPS][1] = iColor[SCROLL][1] = QColor(0, 0, 0);
39     iColor[MACRO][0] = QColor(255, 0, 0);                                    // Macro: on =
       red, off = black
40     iColor[LOCK][0] = QColor(255, 255, 255);                                 // Win lock: on =
       white, off = black
41     iColor[MODE][0] = iColor[MUTE][0] = QColor(255, 255, 255, 0);            //
       Mode, mute: on = transparent, off = black
42     iColor[MODE][1] = iColor[MACRO][1] = iColor[LOCK][1] =
      iColor[MUTE][1] = muteNAColor = QColor(0, 0, 0);
43     iColor[LIGHT][0] = QColor(255, 0, 0);       // Brightness: red, yellow, white
44     iColor[LIGHT][1] = QColor(255, 255, 0);
45     light100Color = QColor(255, 255, 255);
46     for(int i = 0; i < HW_I_COUNT; i++){
47         // Set all lock lights to HW mode
48         iEnable[i] = false;
49         hwIType[i] = NORMAL;
50     }
51     for(int i = HW_I_COUNT; i < I_COUNT; i++){
52         // Turn all other indicators on
53         iEnable[i] = true;
54     }
55 }
```

12.35.3.2 KbPerf::KbPerf (KbMode * *parent*, const KbPerf & *other*)

Definition at line 57 of file kbperf.cpp.

References curDpi(), DPI_COUNT, dpiClr, dpiOn, dpiX, dpiY, hwIType, I_COUNT, iColor, iEnable, and pushedDpis.

```
57                                                  :
58     QObject(parent), dpiCurX(other.dpiCurX), dpiCurY(other.
      dpiCurY), dpiCurIdx(other.dpiCurIdx), dpiLastIdx(other.
      dpiLastIdx), runningPushIdx(1),
59     _iOpacity(other._iOpacity), light100Color(other.
      light100Color), muteNAColor(other.muteNAColor),
      _dpiIndicator(other._dpiIndicator),
60     _liftHeight(other._liftHeight), _angleSnap(other.
      _angleSnap),
61     _needsUpdate(true), _needsSave(true) {
62     memcpy(dpiX, other.dpiX, sizeof(dpiX));
63     memcpy(dpiY, other.dpiY, sizeof(dpiY));
64     for(int i = 0; i < DPI_COUNT + 1; i++)
65         dpiClr[i] = other.dpiClr[i];
66     memcpy(dpiOn, other.dpiOn, sizeof(dpiOn));
67     for(int i = 0; i < I_COUNT; i++){
68         iColor[i][0] = other.iColor[i][0];
69         iColor[i][1] = other.iColor[i][1];
70     }
71     memcpy(iEnable, other.iEnable, sizeof(iEnable));
72     memcpy(hwIType, other.hwIType, sizeof(hwIType));
73     // Don't copy pushed DPI states. If the other mode has any, restore the original DPI
74     if(!other.pushedDpis.isEmpty())
75         curDpi(other.pushedDpis[0]);
76 }
```

Here is the call graph for this function:

12.35.4 Member Function Documentation

12.35.4.1 void KbPerf::_curDpi (const QPoint & *newDpi*) [private]

Definition at line 262 of file kbperf.cpp.

References _needsSave, _needsUpdate, DPI_COUNT, dpiCurIdx, dpiCurX, dpiCurY, dpiLastIdx, dpiX, and dpiY.

Referenced by curDpi(), popDpi(), and pushDpi().

```
262                                         {
263     dpiCurX = newDpi.x();
264     dpiCurY = newDpi.y();
265     // Set current/last index
266     dpiCurIdx = -1;
267     for(int i = 0; i < DPI_COUNT; i++){
268         if(dpiCurX == dpiX[i] && dpiCurY == dpiY[i]){
269             dpiCurIdx = i;
270             if(i != 0)
271                 dpiLastIdx = i;
272             break;
273         }
274     }
275     _needsUpdate = _needsSave = true;
276 }
```

Here is the caller graph for this function:

12.35.4.2 bool KbPerf::angleSnap ( ) const [inline]

Definition at line 42 of file kbperf.h.

References _angleSnap.

Referenced by MPerfWidget::on_aSnapBox_clicked(), Kb::readNotify(), and MPerfWidget::setPerf().

```
42 { return _angleSnap; }
```

Here is the caller graph for this function:

12.35.4.3 void KbPerf::angleSnap (bool *newAngleSnap*)

Definition at line 368 of file kbperf.cpp.

References _angleSnap, _needsSave, and _needsUpdate.

```
368                                         {
369     _angleSnap = newAngleSnap;
370     _needsUpdate = _needsSave = true;
371 }
```

12.35.4.4 void KbPerf::applyIndicators (int *modeIndex*, const bool *indicatorState[HW_I_COUNT]*)

Definition at line 432 of file kbperf.cpp.

References _dpiIndicator, _iOpacity, bind(), CAPS, curDpiIdx(), dpiClr, getMuteState(), Kb::HWMODE_MAX, iColor, iEnable, LIGHT, light(), light100Color, lightIndicator(), LOCK, MACRO, MODE, MUTE, MUTED, muteNAColor, NUM, OTHER, KbLight::resetIndicators(), SCROLL, and UNMUTED.

Referenced by Kb::frameUpdate().

```
432                                                                         {
433     light()->resetIndicators();
434     if(_iOpacity <= 0.f)
435         return;
436     if(_dpiIndicator){
437         // Set DPI indicator according to index
438         int index = curDpiIdx();
439         if(index == -1 || index > OTHER)
440             index = OTHER;
441         lightIndicator("dpi", dpiClr[index].rgba());
442     }
443     // KB indicators
444     if(iEnable[MODE]){
445         for(int i = 0; i < Kb::HWMODE_MAX; i++){
446             char name[4];
447             snprintf(name, sizeof(name), "m%d", i + 1);
448             if(modeIndex == i)
449                 lightIndicator(name, iColor[MODE][0].rgba());
450             else
451                 lightIndicator(name, iColor[MODE][1].rgba());
452         }
453     }
454     if(iEnable[MACRO])
455         lightIndicator("mr", iColor[MUTE][1].rgba());
456     if(iEnable[LIGHT]){
457         switch(light()->dimming()){
458         case 0: // 100%
459             lightIndicator("light", light100Color.rgba());
460             break;
461         case 1: // 67%
462             lightIndicator("light", iColor[LIGHT][1].rgba());
463             break;
464         case 2: // 33%
465         case 3: // light off
466             lightIndicator("light", iColor[LIGHT][0].rgba());
467             break;
```

```
        }
    }
    if(iEnable[LOCK]){
        if(bind()->winLock())
            lightIndicator("lock", iColor[LOCK][0].rgba());
        else
            lightIndicator("lock", iColor[LOCK][1].rgba());
    }
    if(iEnable[MUTE]){
        switch(getMuteState()){
        case MUTED:
            lightIndicator("mute", iColor[MUTE][0].rgba());
            break;
        case UNMUTED:
            lightIndicator("mute", iColor[MUTE][1].rgba());
            break;
        default:
            lightIndicator("mute", muteNAColor.rgba());
            break;
        }
    }
    // Lock lights
    if(iEnable[NUM])
        lightIndicator("numlock", indicatorState[0] ? iColor[NUM][0].rgba() :
    iColor[NUM][1].rgba());
    if(iEnable[CAPS])
        lightIndicator("caps", indicatorState[1] ? iColor[CAPS][0].rgba() :
    iColor[CAPS][1].rgba());
    if(iEnable[SCROLL])
        lightIndicator("scroll", indicatorState[2] ? iColor[SCROLL][0].rgba() :
    iColor[SCROLL][1].rgba());
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.5 KbBind * KbPerf::bind ( ) const [private]

Definition at line 100 of file kbperf.cpp.

References KbMode::bind(), and modeParent().

Referenced by applyIndicators().

```
                                {
    return modeParent()->bind();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.6 QPoint KbPerf::curDpi ( ) const [inline]

Definition at line 57 of file kbperf.h.

References dpiCurX, and dpiCurY.

Referenced by curDpiIdx(), KbPerf(), load(), operator=(), and pushDpi().

```
57 { return QPoint(dpiCurX, dpiCurY); }
```

Here is the caller graph for this function:

12.35.4.7 void KbPerf::curDpi (const QPoint & *newDpi*)

Definition at line 278 of file kbperf.cpp.

References _curDpi(), popDpi(), and pushedDpis.

```
                                        {
    while(pushedDpis.count() > 0)
        popDpi(pushedDpis.keys().last());
    _curDpi(newDpi);
}
```

Here is the call graph for this function:

12.35.4.8 void KbPerf::curDpi (int *newDpi*) [inline]

Definition at line 59 of file kbperf.h.

References curDpi().

Referenced by curDpi().

```
59 { curDpi(QPoint(newDpi, newDpi)); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.9 int KbPerf::curDpiIdx ( ) const [inline]

Definition at line 61 of file kbperf.h.

References dpiCurIdx.

Referenced by applyIndicators(), dpiDown(), dpiUp(), and Kb::readNotify().

```
61 { return dpiCurIdx; }
```

Here is the caller graph for this function:

12.35.4.10 void KbPerf::curDpiIdx (int *newIdx*) [inline]

Definition at line 62 of file kbperf.h.

References curDpi(), and dpi().

```
62 { curDpi(dpi(newIdx)); }
```

Here is the call graph for this function:

12.35.4.11 void KbPerf::didLoad ( ) [signal]

Definition at line 134 of file moc_kbperf.cpp.

Referenced by load().

```
135 {
136     QMetaObject::activate(this, &staticMetaObject, 0, Q_NULLPTR);
137 }
```

Here is the caller graph for this function:

12.35.4.12 QPoint KbPerf::dpi (int *index*) const [inline]

Definition at line 48 of file kbperf.h.

References DPI_COUNT, dpiX, and dpiY.

Referenced by MPerfWidget::boxXChanged(), MPerfWidget::boxYChanged(), curDpiIdx(), KeyAction::keyEvent(), Kb::readNotify(), RebindWidget::setBind(), MPerfWidget::setPerf(), MPerfWidget::sliderXMoved(), MPerfWidget::sliderYMoved(), and sniperDpi().

```
48 { if(index < 0 || index >= DPI_COUNT) return QPoint(); return QPoint(
      dpiX[index], dpiY[index]); }
```

Here is the caller graph for this function:

12.35.4.13 void KbPerf::dpi (int *index,* const QPoint & *newValue*)

Definition at line 249 of file kbperf.cpp.

References _needsSave, _needsUpdate, DPI_COUNT, dpiCurIdx, dpiCurX, dpiCurY, dpiX, and dpiY.

```
249                                                 {
250     if(index < 0 || index >= DPI_COUNT)
251         return;
252     dpiX[index] = newValue.x();
253     dpiY[index] = newValue.y();
254     // Update current DPI if needed
255     if(dpiCurIdx == index){
256         dpiCurX = newValue.x();
257         dpiCurY = newValue.y();
258     }
259     _needsUpdate = _needsSave = true;
260 }
```

12.35.4.14 void KbPerf::dpi (int *index*, int *newValue*) [inline]

Definition at line 53 of file kbperf.h.

References dpi().

Referenced by dpi().

```
53 { dpi(index, QPoint(newValue, newValue)); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.15 QColor KbPerf::dpiColor (int *index*) const [inline]

Definition at line 82 of file kbperf.h.

References dpiClr.

Referenced by MPerfWidget::colorChanged(), Kb::readNotify(), MPerfWidget::setPerf(), and update().

```
82 { return dpiClr[index]; }
```

Here is the caller graph for this function:

12.35.4.16 void KbPerf::dpiColor (int *index*, const QColor & *newColor*) [inline]

Definition at line 83 of file kbperf.h.

References _needsSave, _needsUpdate, and dpiClr.

```
83 { dpiClr[index] = newColor; _needsUpdate = _needsSave = true; }
```

12.35.4.17 void KbPerf::dpiDown ( )

Definition at line 319 of file kbperf.cpp.

References curDpiIdx(), dpiOn, and SNIPER.

Referenced by KeyAction::keyEvent().

```
319                     {
320     int idx = curDpiIdx();
321     do {
322         idx--;
323         if(idx <= SNIPER)
324             return;
325     } while(!dpiOn[idx]);
326     curDpiIdx(idx);
327 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.18 bool KbPerf::dpiEnabled (int *index*) const [inline]

Definition at line 66 of file kbperf.h.

References dpiOn.

Referenced by MPerfWidget::enableChanged(), Kb::readNotify(), and MPerfWidget::setPerf().

```
66 { return dpiOn[index]; }
```

Here is the caller graph for this function:

12.35.4.19 void KbPerf::dpiEnabled (int *index*, bool *newEnabled*) [inline]

Definition at line 67 of file kbperf.h.

References _needsSave, _needsUpdate, and dpiOn.

```
67 { if(index <= 0) return; dpiOn[index] = newEnabled; _needsUpdate =
      _needsSave = true; }
```

12.35.4.20 bool KbPerf::dpiIndicator ( ) const [inline]

Definition at line 79 of file kbperf.h.

References _dpiIndicator.

Referenced by MPerfWidget::on_indicBox_clicked(), and MPerfWidget::setPerf().

```
79 { return _dpiIndicator; }
```

Here is the caller graph for this function:

12.35.4.21 void KbPerf::dpiIndicator (bool *newDpiIndicator*) [inline]

Definition at line 80 of file kbperf.h.

References _dpiIndicator, and _needsSave.

```
80 { _dpiIndicator = newDpiIndicator; _needsSave = true; }
```

12.35.4.22 void KbPerf::dpiUp ( )

Definition at line 308 of file kbperf.cpp.

References curDpiIdx(), DPI_COUNT, and dpiOn.

Referenced by KeyAction::keyEvent().

```
308                 {
309     // Scroll past disabled DPIs and choose the next one up
310     int idx = curDpiIdx();
311     do {
312         idx++;
313         if(idx >= DPI_COUNT)
314             return;
315     } while(!dpiOn[idx]);
316     curDpiIdx(idx);
317 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.23 void KbPerf::getIndicator (indicator *index*, QColor & *color1*, QColor & *color2*, QColor & *color3*, bool & *software_enable*, i_hw & *hardware_enable*)

Definition at line 329 of file kbperf.cpp.

References HW_IMAX, hwIType, I_COUNT, iColor, iEnable, LIGHT, light100Color, MUTE, muteNAColor, and NONE.

Referenced by KPerfWidget::setPerf().

```
329                                 {
330     if(index < 0 || index >= I_COUNT)
331         return;
332     color1 = iColor[index][0];
333     color2 = iColor[index][1];
334     if(index == LIGHT)
335         color3 = light100Color;
336     else if(index == MUTE)
337         color3 = muteNAColor;
338     else
339         color3 = QColor();
340     software_enable = iEnable[index];
341     hardware_enable = (index <= HW_IMAX ? hwIType[index] : NONE);
342 }
```

Here is the caller graph for this function:

12.35.4.24 float KbPerf::iOpacity ( ) const [inline]

Definition at line 76 of file kbperf.h.

References _iOpacity.

Referenced by KPerfWidget::on_intensityBox_valueChanged(), MPerfWidget::on_spinBox_valueChanged(), KPerfWidget::setPerf(), and MPerfWidget::setPerf().

```
76 { return _iOpacity; }
```

Here is the caller graph for this function:

12.35.4.25 void KbPerf::iOpacity (float *newIOpacity*) [inline]

Definition at line 77 of file kbperf.h.

References _iOpacity, and _needsSave.

```
77 { _iOpacity = newIOpacity; _needsSave = true; }
```

12.35.4.26 height KbPerf::liftHeight ( ) const [inline]

Definition at line 38 of file kbperf.h.

References _liftHeight.

Referenced by MPerfWidget::on_lHeightBox_activated(), Kb::readNotify(), and MPerfWidget::setPerf().

```
38 { return _liftHeight; }
```

Here is the caller graph for this function:

12.35.4.27 void KbPerf::liftHeight (height *newHeight*)

Definition at line 361 of file kbperf.cpp.

References _liftHeight, _needsSave, _needsUpdate, and HIGH.

```
361                                     {
362     if(newHeight < LOW || newHeight > HIGH)
363         return;
364     _liftHeight = newHeight;
365     _needsUpdate = _needsSave = true;
366 }
```

12.35.4.28 KbLight * KbPerf::light ( ) const [private]

Definition at line 104 of file kbperf.cpp.

References KbMode::light(), and modeParent().

Referenced by applyIndicators(), and lightIndicator().

```
104                             {
105     return modeParent()->light();
106 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.29 void KbPerf::lightIndicator (const char * *name*, QRgb *rgba*) [private]

Definition at line 425 of file kbperf.cpp.

References _iOpacity, light(), and KbLight::setIndicator().

Referenced by applyIndicators().

```
425                                                 {
426     int a = round(qAlpha(rgba) * _iOpacity);
427     if(a <= 0)
428         return;
429     light()->setIndicator(name, qRgba(qRed(rgba), qGreen(rgba), qBlue(rgba), a));
430 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.30 void KbPerf::load (CkbSettings & *settings*)

Definition at line 108 of file kbperf.cpp.

References _angleSnap, _dpiIndicator, _iOpacity, _liftHeight, _needsSave, CkbSettings::contains(), CkbSettings::containsGroup(), curDpi(), didLoad(), DPI_COUNT, dpiClr, dpiLastIdx, dpiOn, dpiX, dpiY, HIGH, HW_IMAX, hwIType, I_COUNT, iColor, iEnable, LIGHT, light100Color, LOCK, MACRO, MEDIUM, MODE, MUTE, muteNAColor, NORMAL, OTHER, pushedDpis, runningPushIdx, and CkbSettings::value().

Referenced by KbMode::KbMode().

```
108                                         {
109     pushedDpis.clear();
110     runningPushIdx = 1;
111     _needsSave = false;
112     bool readIndicators = true;
113     if(!settings.containsGroup("Performance/Indicators")){
114         // Read old indicator settings from the lighting group, if present
115         // (ckb <= v0.2.0)
116         SGroup group(settings, "Lighting");
117         if(settings.contains("InactiveIndicators")){
118             bool inOk = false;
119             int inactive = settings.value("InactiveIndicators").toInt(&inOk);
120             if(!inOk || inactive > 2)
121                 inactive = 2;
122             if(inactive == 1)
123                 _iOpacity = 0.75f;
124             else if(inactive == 0)
125                 _iOpacity = 0.5f;
126             else if(inactive < 0){
127                 // Indicators disabled
128                 iEnable[MODE] = iEnable[MACRO] = iEnable[
    LIGHT] = iEnable[LOCK]  = iEnable[MUTE] = false;
129             }
130             bool showMute = (settings.value("ShowMute").toInt(&inOk) != 0);
131             if(inOk && !showMute)
132                 iEnable[MUTE] = false;
133             readIndicators = false;
134         }
135     }
136     SGroup group(settings, "Performance");
137     // Read DPI settings
138     {
139         SGroup group(settings, "DPI");
140         for(int i = 0; i < DPI_COUNT; i++){
141             QString iStr = QString::number(i);
142             QPoint value = settings.value(iStr).toPoint();
143             if(value.isNull())
144                 continue;
145             dpiX[i] = value.x(); dpiY[i] = value.y();
146             QColor color = settings.value(iStr + "RGB").toString();
147             if(color.isValid())
148                 dpiClr[i] = color;
149             if(i != 0)
150                 dpiOn[i] = !settings.value(iStr + "Disabled").toBool();
151         }
152         QColor color = settings.value("6RGB").toString();
153         if(color.isValid())
154             dpiClr[OTHER] = color;
155         if(settings.contains("LastIdx")){
156             dpiLastIdx = settings.value("LastIdx").toInt();
157             if(dpiLastIdx >= DPI_COUNT || dpiLastIdx < 0)
158                 dpiLastIdx = 1;
159         }
160         QPoint value = settings.value("Current").toPoint();
161         if(!value.isNull())
```

```
            curDpi(value);
    }
    // Read misc. mouse settings
    _liftHeight = (height)settings.value("LiftHeight").toInt();
    if(_liftHeight < LOW || _liftHeight > HIGH)
        _liftHeight = MEDIUM;
    _angleSnap = settings.value("AngleSnap").toBool();
    if(settings.contains("NoIndicator")){
        // ckb <= v0.2.0
        _dpiIndicator = !settings.value("NoIndicator").toBool();
    } else {
        _dpiIndicator = settings.value("Indicators/DPI", true).toBool();
    }
    // Read indicator settings
    if(readIndicators){
        SGroup group(settings, "Indicators");
        _iOpacity = settings.value("Opacity", 100).toInt() / 100.f;
        for(int i = 0; i < I_COUNT; i++){
            SGroup group(settings, QString::number(i));
            QColor color = settings.value("RGB0").toString();
            if(color.isValid())
                iColor[i][0] = color;
            color = settings.value("RGB1").toString();
            if(color.isValid())
                iColor[i][1] = color;
            if(i == LIGHT){
                color = settings.value("RGB2").toString();
                if(color.isValid())
                    light100Color = color;
            } else if(i == MUTE){
                color = settings.value("RGB2").toString();
                if(color.isValid())
                    muteNAColor = color;
            }
            if(i <= HW_IMAX){
                iEnable[i] = settings.value("Enable", false).toBool();
                hwIType[i] = (i_hw)settings.value("Hardware", (int)
NORMAL).toInt();
            } else {
                iEnable[i] = settings.value("Enable", true).toBool();
            }
        }
    }
    emit didLoad();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.31 KbMode* KbPerf::modeParent ( ) const [inline], [private]

Definition at line 124 of file kbperf.h.

Referenced by bind(), and light().

```
124 { return (KbMode*)parent(); }
```

Here is the caller graph for this function:

12.35.4.32 bool KbPerf::needsSave ( ) const [inline]

Definition at line 28 of file kbperf.h.

References _needsSave.

Referenced by KbMode::needsSave().

```
28 { return _needsSave; }
```

Here is the caller graph for this function:

12.35.4.33 const KbPerf & KbPerf::operator= (const KbPerf & *rhs*)

Definition at line 78 of file kbperf.cpp.

References _angleSnap, _dpiIndicator, _iOpacity, _liftHeight, _needsSave, _needsUpdate, curDpi(), DPI_COUNT, dpiClr, dpiCurIdx, dpiCurX, dpiCurY, dpiLastIdx, dpiOn, dpiX, dpiY, hwIType, I_COUNT, iColor, iEnable, light100Color, muteNAColor, pushedDpis, and runningPushIdx.

```
78                                                  {
79     dpiCurX = other.dpiCurX; dpiCurY = other.dpiCurY; dpiCurIdx = other.dpiCurIdx;
      dpiLastIdx = other.dpiLastIdx; runningPushIdx = 1;
80     _iOpacity = other._iOpacity; light100Color = other.light100Color;
      muteNAColor = other.muteNAColor; _dpiIndicator = other._dpiIndicator;
81     _liftHeight = other._liftHeight; _angleSnap = other._angleSnap;
82     _needsUpdate = true; _needsSave = true;
83     memcpy(dpiX, other.dpiX, sizeof(dpiX));
84     memcpy(dpiY, other.dpiY, sizeof(dpiY));
85     for(int i = 0; i < DPI_COUNT + 1; i++)
86         dpiClr[i] = other.dpiClr[i];
87     memcpy(dpiOn, other.dpiOn, sizeof(dpiOn));
88     for(int i = 0; i < I_COUNT; i++){
89         iColor[i][0] = other.iColor[i][0];
90         iColor[i][1] = other.iColor[i][1];
91     }
92     memcpy(iEnable, other.iEnable, sizeof(iEnable));
```

```
    memcpy(hwIType, other.hwIType, sizeof(hwIType));
    // Don't copy pushed DPI states. If the other mode has any, restore the original DPI
    if(!other.pushedDpis.isEmpty())
        curDpi(other.pushedDpis[0]);
    return other;
}
```

Here is the call graph for this function:

12.35.4.34 void KbPerf::popDpi (quint64 *pushIdx*)

Definition at line 296 of file kbperf.cpp.

References _curDpi(), _needsSave, _needsUpdate, map_last, and pushedDpis.

Referenced by curDpi(), and KeyAction::keyEvent().

```
296                                 {
297     if(pushIdx == 0 || !pushedDpis.contains(pushIdx))
298         return;
299     pushedDpis.remove(pushIdx);
300     // Set the DPI to the last-pushed value still on the stack
301     _curDpi(map_last(pushedDpis));
302     // If all values have been popped, remove the original DPI
303     if(pushedDpis.count() == 1)
304         pushedDpis.clear();
305     _needsUpdate = _needsSave = true;
306 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.35 quint64 KbPerf::pushDpi (const QPoint & *newDpi*)

Definition at line 284 of file kbperf.cpp.

References _curDpi(), curDpi(), pushedDpis, and runningPushIdx.

Referenced by KeyAction::keyEvent(), and pushSniper().

```
284                                                 {
285     if(pushedDpis.isEmpty())
286         // Push original DPI
287         pushedDpis[0] = curDpi();
288     quint64 index = runningPushIdx++;
289     if(runningPushIdx == 0)
290         runningPushIdx = 1;
291     pushedDpis[index] = newDpi;
292     _curDpi(newDpi);
293     return index;
294 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.36 quint64 KbPerf::pushDpi (int *newDpi*) [inline]

Definition at line 71 of file kbperf.h.

References pushDpi().

Referenced by pushDpi().

```
71 { return pushDpi(QPoint(newDpi, newDpi)); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.37 quint64 KbPerf::pushSniper ( ) [inline]

Definition at line 72 of file kbperf.h.

References pushDpi(), and sniperDpi().

Referenced by KeyAction::keyEvent().

```
72 { return pushDpi(sniperDpi()); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.38 void KbPerf::save (CkbSettings & *settings*)

Definition at line 207 of file kbperf.cpp.

References _angleSnap, _dpiIndicator, _liftHeight, _needsSave, DPI_COUNT, dpiClr, dpiCurX, dpiCurY, dpiLastIdx, dpiOn, dpiX, dpiY, HW_IMAX, hwIType, I_COUNT, iColor, iEnable, LIGHT, light100Color, MUTE, muteNAColor, OTHER, pushedDpis, and CkbSettings::setValue().

Referenced by KbMode::save().

```
207                                     {
208     _needsSave = false;
209     SGroup group(settings, "Performance");
210     {
211         SGroup group(settings, "DPI");
212         for(int i = 0; i < DPI_COUNT; i++){
213             QString iStr = QString::number(i);
214             settings.setValue(iStr, QPoint(dpiX[i], dpiY[i]));
215             settings.setValue(iStr + "RGB", dpiClr[i].name(QColor::HexArgb));
216             if(i != 0)
217                 settings.setValue(iStr + "Disabled", !dpiOn[i]);
218         }
219         settings.setValue("6RGB", dpiClr[OTHER].name(QColor::HexArgb));
220         settings.setValue("LastIdx", dpiLastIdx);
221         int curX = dpiCurX, curY = dpiCurY;
222         // Ignore any pushed modes
223         if(pushedDpis.count() > 0){
224             curX = pushedDpis.value(0).x();
225             curY = pushedDpis.value(0).y();
226         }
227         settings.setValue("Current", QPoint(curX, curY));
228     }
229     settings.setValue("LiftHeight", _liftHeight);
230     settings.setValue("AngleSnap", _angleSnap);
231     {
232         SGroup group(settings, "Indicators");
233         settings.setValue("DPI", _dpiIndicator);
234         for(int i = 0; i < I_COUNT; i++){
235             SGroup group(settings, QString::number(i));
236             settings.setValue("RGB0", iColor[i][0].name(QColor::HexArgb));
237             settings.setValue("RGB1", iColor[i][1].name(QColor::HexArgb));
238             if(i == LIGHT)
239                 settings.setValue("RGB2", light100Color.name(QColor::HexArgb));
240             else if(i == MUTE)
241                 settings.setValue("RGB2", muteNAColor.name(QColor::HexArgb));
242             settings.setValue("Enable", iEnable[i]);
243             if(i <= HW_IMAX)
244                 settings.setValue("Hardware", (int)hwIType[i]);
245         }
246     }
247 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.39 void KbPerf::setIndicator (indicator *index*, const QColor & *color1*, const QColor & *color2*, const QColor & *color3* = `QColor()`, bool *software_enable* = `true`, i_hw *hardware_enable* = NORMAL)

Definition at line 344 of file kbperf.cpp.

References _needsSave, _needsUpdate, HW_IMAX, hwIType, I_COUNT, iColor, iEnable, LIGHT, light100Color, MUTE, muteNAColor, NONE, and NORMAL.

Referenced by KPerfWidget::uiUpdated().

```
344                                                     {
345     if(index < 0 || index >= I_COUNT)
346         return;
347     iColor[index][0] = color1;
348     iColor[index][1] = color2;
349     if(index == LIGHT)
350         light100Color = color3;
351     else if(index == MUTE)
352         muteNAColor = color3;
353     iEnable[index] = software_enable;
354     if(hardware_enable == NONE)
355         hardware_enable = NORMAL;
356     if(index <= HW_IMAX)
357         hwIType[index] = hardware_enable;
358     _needsUpdate = _needsSave = true;
359 }
```

Here is the caller graph for this function:

12.35.4.40 void KbPerf::setNeedsUpdate ( ) [inline]

Definition at line 113 of file kbperf.h.

References _needsUpdate.

Referenced by KbMode::setNeedsUpdate().

```
113 { _needsUpdate = true; }
```

Here is the caller graph for this function:

12.35.4.41 void KbPerf::settingsUpdated ( ) [signal]

Definition at line 140 of file moc_kbperf.cpp.

Referenced by update().

```
141 {
142     QMetaObject::activate(this, &staticMetaObject, 1, Q_NULLPTR);
143 }
```

Here is the caller graph for this function:

12.35.4.42 QPoint KbPerf::sniperDpi ( ) const [inline]

Definition at line 50 of file kbperf.h.

References dpi(), and SNIPER.

Referenced by pushSniper().

```
50 { return dpi(SNIPER); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.43 void KbPerf::sniperDpi (const QPoint & *newValue*) [inline]

Definition at line 51 of file kbperf.h.

References dpi(), and SNIPER.

```
51 { dpi(SNIPER, newValue); }
```

Here is the call graph for this function:

12.35.4.44 void KbPerf::sniperDpi (int *newValue*) [inline]

Definition at line 54 of file kbperf.h.

References sniperDpi().

Referenced by sniperDpi().

```
54 { sniperDpi(QPoint(newValue, newValue)); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.4.45 void KbPerf::update (QFile & *cmd*, bool *force* = `false`, bool *saveCustomDpi* = `true`)

Definition at line 373 of file kbperf.cpp.

References _angleSnap, _liftHeight, _needsUpdate, DPI_COUNT, dpiColor(), dpiCurIdx, dpiCurX, dpiCurY, dpiOn, dpiX, dpiY, HW_I_COUNT, hwIType, OFF, ON, and settingsUpdated().

Referenced by Kb::frameUpdate(), and Kb::hwSave().

```
373                                                                 {
374     if(!force && !_needsUpdate)
375         return;
376     emit settingsUpdated();
377     _needsUpdate = false;
378     // Save DPI stage 0 (sniper)
379     cmd.write(QString("dpi 0:%1,%2").arg(dpiX[0]).arg(dpiY[0]).toLatin1());
380     // If the mouse is set to a custom DPI, save it in stage 1
381     int stage = dpiCurIdx;
382     if(stage < 0 && saveCustomDpi){
383         stage = 1;
384         cmd.write(QString(" 1:%1,%2").arg(dpiCurX).arg(dpiCurY).toLatin1());
385     } else {
386         // Otherwise, save stage 1 normally
387         if(!dpiOn[1] && stage != 1)
388             cmd.write(" 1:off");
389         else
390             cmd.write(QString(" 1:%1,%2").arg(dpiX[1]).arg(dpiY[1]).toLatin1());
391     }
392     // Save stages 1 - 5
393     for(int i = 2; i < DPI_COUNT; i++){
394         if(!dpiOn[i] && stage != i)
395             cmd.write(QString(" %1:off").arg(i).toLatin1());
396         else
397         cmd.write(QString(" %1:%2,%3").arg(i).arg(dpiX[i]).arg(dpiY[i]).toLatin1());
398     }
399     // Save stage selection, lift height, and angle snap
400     cmd.write(QString(" dpisel %1 lift %2 snap %3").arg(stage).arg(
      _liftHeight).arg(_angleSnap ? "on" : "off").toLatin1());
401     // Save DPI colors
402     cmd.write(" rgb");
403     for(int i = 0; i < DPI_COUNT; i++){
404         QColor color = dpiColor(i);
405         cmd.write(" dpi");
406         char output[9];
407         snprintf(output, sizeof(output), "%1d:%02x%02x%02x", i, color.red(), color.green(), color.blue());
408         cmd.write(output);
409     }
410     // Enable indicator notifications
411     cmd.write(" inotify all");
412     // Set indicator state
413     const char* iNames[HW_I_COUNT] = { "num", "caps", "scroll" };
414     for(int i = 0; i < HW_I_COUNT; i++){
415         if(hwIType[i] == ON)
416             cmd.write(" ion ");
417         else if(hwIType[i] == OFF)
418             cmd.write(" ioff ");
419         else
420             cmd.write(" iauto ");
421         cmd.write(iNames[i]);
422     }
423 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.35.5 Field Documentation

12.35.5.1 bool KbPerf::_angleSnap [private]

Definition at line 158 of file kbperf.h.

Referenced by angleSnap(), load(), operator=(), save(), and update().

12.35.5.2 bool KbPerf::_dpiIndicator [private]

Definition at line 154 of file kbperf.h.

Referenced by applyIndicators(), dpiIndicator(), load(), operator=(), and save().

12.35.5.3 float KbPerf::_iOpacity [private]

Definition at line 149 of file kbperf.h.

Referenced by applyIndicators(), iOpacity(), lightIndicator(), load(), and operator=().

12.35.5.4 height KbPerf::_liftHeight [private]

Definition at line 157 of file kbperf.h.

Referenced by liftHeight(), load(), operator=(), save(), and update().

12.35.5.5 bool KbPerf::_needsSave [private]

Definition at line 160 of file kbperf.h.

Referenced by _curDpi(), angleSnap(), dpi(), dpiColor(), dpiEnabled(), dpiIndicator(), iOpacity(), liftHeight(), load(), needsSave(), operator=(), popDpi(), save(), and setIndicator().

12.35.5.6 bool KbPerf::_needsUpdate [private]

Definition at line 160 of file kbperf.h.

Referenced by _curDpi(), angleSnap(), dpi(), dpiColor(), dpiEnabled(), liftHeight(), operator=(), popDpi(), setIndicator(), setNeedsUpdate(), and update().

12.35.5.7 const int KbPerf::DPI_COUNT = 6 [static]

Definition at line 46 of file kbperf.h.

Referenced by _curDpi(), dpi(), dpiUp(), KbPerf(), KeyAction::keyEvent(), load(), operator=(), Kb::readNotify(), save(), RebindWidget::setBind(), and update().

12.35.5.8 const int KbPerf::DPI_MAX = 12000 [static]

Definition at line 47 of file kbperf.h.

12.35.5.9 const int KbPerf::DPI_MIN = 100 [static]

Definition at line 47 of file kbperf.h.

Referenced by dpiExp(), and dpiLog().

12.35.5.10 QColor KbPerf::dpiClr[DPI_COUNT+1] [private]

Definition at line 135 of file kbperf.h.

Referenced by applyIndicators(), dpiColor(), KbPerf(), load(), operator=(), and save().

12.35.5.11 int KbPerf::dpiCurIdx [private]

Definition at line 134 of file kbperf.h.

Referenced by _curDpi(), curDpiIdx(), dpi(), KbPerf(), operator=(), and update().

12.35.5.12 int KbPerf::dpiCurX [private]

Definition at line 134 of file kbperf.h.

Referenced by _curDpi(), curDpi(), dpi(), KbPerf(), operator=(), save(), and update().

12.35.5.13 int KbPerf::dpiCurY [private]

Definition at line 134 of file kbperf.h.

Referenced by _curDpi(), curDpi(), dpi(), KbPerf(), operator=(), save(), and update().

12.35.5.14 int KbPerf::dpiLastIdx [private]

Definition at line 138 of file kbperf.h.

Referenced by _curDpi(), KbPerf(), load(), operator=(), and save().

12.35.5.15 bool KbPerf::dpiOn[DPI_COUNT] [private]

Definition at line 136 of file kbperf.h.

Referenced by dpiDown(), dpiEnabled(), dpiUp(), KbPerf(), load(), operator=(), save(), and update().

12.35.5.16 int KbPerf::dpiX[DPI_COUNT] [private]

Definition at line 132 of file kbperf.h.

Referenced by _curDpi(), dpi(), KbPerf(), load(), operator=(), save(), and update().

12.35.5.17 int KbPerf::dpiY[DPI_COUNT] [private]

Definition at line 133 of file kbperf.h.

Referenced by _curDpi(), dpi(), KbPerf(), load(), operator=(), save(), and update().

12.35.5.18 const int KbPerf::HW_I_COUNT = (int)HW_IMAX + 1 [static]

Definition at line 104 of file kbperf.h.

Referenced by KbPerf(), and update().

12.35.5.19 i_hw KbPerf::hwiType[HW_I_COUNT] [private]

Definition at line 153 of file kbperf.h.

Referenced by getIndicator(), KbPerf(), load(), operator=(), save(), setIndicator(), and update().

12.35.5.20 const int KbPerf::I_COUNT = (int)MUTE + 1 [static]

Definition at line 104 of file kbperf.h.

Referenced by getIndicator(), KbPerf(), load(), operator=(), save(), and setIndicator().

12.35.5.21 QColor KbPerf::iColor[I_COUNT][2] [private]

Definition at line 150 of file kbperf.h.

Referenced by applyIndicators(), getIndicator(), KbPerf(), load(), operator=(), save(), and setIndicator().

12.35.5.22 bool KbPerf::iEnable[I_COUNT] [private]

Definition at line 152 of file kbperf.h.

Referenced by applyIndicators(), getIndicator(), KbPerf(), load(), operator=(), save(), and setIndicator().

12.35.5.23 QColor KbPerf::light100Color [private]

Definition at line 151 of file kbperf.h.

Referenced by applyIndicators(), getIndicator(), KbPerf(), load(), operator=(), save(), and setIndicator().

12.35.5.24 QColor KbPerf::muteNAColor [private]

Definition at line 151 of file kbperf.h.

Referenced by applyIndicators(), getIndicator(), KbPerf(), load(), operator=(), save(), and setIndicator().

12.35.5.25 const int KbPerf::OTHER = DPI_COUNT [static]

Definition at line 81 of file kbperf.h.

Referenced by applyIndicators(), MPerfWidget::colorChanged(), load(), save(), and MPerfWidget::setPerf().

12.35.5.26 QMap<quint64, QPoint> KbPerf::pushedDpis [private]

Definition at line 142 of file kbperf.h.

Referenced by curDpi(), KbPerf(), load(), operator=(), popDpi(), pushDpi(), and save().

12.35.5.27 uint KbPerf::runningPushIdx [private]

Definition at line 143 of file kbperf.h.

Referenced by load(), operator=(), and pushDpi().

12.35.5.28 const int KbPerf::SNIPER = 0 [static]

Definition at line 46 of file kbperf.h.

Referenced by dpiDown(), and sniperDpi().

The documentation for this class was generated from the following files:

- src/ckb/kbperf.h
- src/ckb/kbperf.cpp
- src/ckb/release/moc_kbperf.cpp

12.36 KbProfile Class Reference

```
#include <src/ckb/kbprofile.h>
```

Inheritance diagram for KbProfile:

Collaboration diagram for KbProfile:

Public Types

- typedef QList< KbMode * > ModeList

Public Member Functions

- KbProfile (Kb *parent, const KeyMap &keyMap, const KbProfile &other)
- KbProfile (Kb *parent, const KeyMap &keyMap, const QString &guid="", const QString &modified="")
- KbProfile (Kb *parent, const KeyMap &keyMap, CkbSettings &settings, const QString &guid)
- void save (CkbSettings &settings)
- bool needsSave () const
- void setNeedsSave ()
- QString name () const
- void name (const QString &newName)
- UsbId & id ()
- void id (const UsbId &newId)
- void newId ()
- const KeyMap & keyMap () const
- void keyMap (const KeyMap &newKeyMap)
- const ModeList & modes () const
- void modes (const QList< KbMode * > &newModes)
- void append (KbMode *newMode)
- void insert (int index, KbMode *newMode)
- void removeAll (KbMode *mode)
- void move (int from, int to)
- int modeCount () const
- int indexOf (KbMode *mode) const
- KbMode * find (const QUuid &id)
- KbMode * currentMode () const
- void currentMode (KbMode *newCurrentMode)

Private Member Functions

- void setNeedsUpdate ()

Private Attributes

- KbMode * _currentMode
- QString _name
- UsbId _id
- KeyMap _keyMap
- ModeList _modes
- bool _needsSave

12.36.1 Detailed Description

Definition at line 11 of file kbprofile.h.

12.36.2 Member Typedef Documentation

12.36.2.1 typedef QList<KbMode*> KbProfile::ModeList

Definition at line 41 of file kbprofile.h.

12.36.3 Constructor & Destructor Documentation

12.36.3.1 KbProfile::KbProfile (Kb * *parent*, const KeyMap & *keyMap*, const KbProfile & *other*) [explicit]

Definition at line 4 of file kbprofile.cpp.

References _currentMode, _modes, and modes().

```
:
    QObject(parent), _currentMode(0), _name(other._name),
    _id(other._id), _keyMap(keyMap), _needsSave(true)
{
    foreach(KbMode* mode, other.modes()){
        KbMode* newMode = new KbMode(parent, keyMap, *mode);
        if(!_currentMode || mode == other._currentMode)
            _currentMode = newMode;
        _modes.append(newMode);
    }
}
```

Here is the call graph for this function:

12.36.3.2 KbProfile::KbProfile (Kb * *parent*, const KeyMap & *keyMap*, const QString & *guid* = "", const QString & *modified* = "") [explicit]

Definition at line 15 of file kbprofile.cpp.

References _id, and UsbId::guid.

```
15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
16     QObject(parent), _currentMode(0), _id(guid, modified.toUInt(0, 16)),
      _keyMap(keyMap), _needsSave(true)
17 {
18     if(_id.guid.isNull())
19         _id.guid = QUuid::createUuid();
20 }
```

12.36.3.3 KbProfile::KbProfile (Kb * *parent*, const KeyMap & *keyMap*, CkbSettings & *settings*, const QString & *guid*) [explicit]

Definition at line 22 of file kbprofile.cpp.

References _currentMode, _id, _keyMap, _modes, _name, CkbSettings::contains(), current, UsbId::guid, UsbId::hwModified, UsbId::hwModifiedString(), KbMode::id(), UsbId::modified, UsbId::modifiedString(), and CkbSettings::value().

```
22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
23     QObject(parent), _currentMode(0), _id(guid, 0),
      _keyMap(keyMap), _needsSave(false)
24 {
25     // Load data from preferences
26     SGroup group(settings, guid);
27     _name = settings.value("Name").toString().trimmed();
28     if(_name == "")
29         _name = "Unnamed";
30     _id.modifiedString(settings.value("Modified").toString());
31     if(settings.contains("HwModified"))
32         _id.hwModifiedString(settings.value("HwModified").toString());
33     else
34         _id.hwModified = _id.modified;
35     QUuid current = settings.value("CurrentMode").toString().trimmed();
36     // Load modes
37     uint count = settings.value("ModeCount").toUInt();
38     for(uint i = 0; i < count; i++){
39         SGroup group(settings, QString::number(i));
40         KbMode* mode = new KbMode(parent, _keyMap, settings);
41         _modes.append(mode);
42         // Set currentMode to the mode matching the current GUID, or the first mode in case it's not found
43         if(current == mode->id().guid || !_currentMode)
44             _currentMode = mode;
45     }
46 }
```

Here is the call graph for this function:

12.36.4 Member Function Documentation

12.36.4.1 void KbProfile::append (KbMode * *newMode*) [inline]

Definition at line 44 of file kbprofile.h.

References _modes, and setNeedsUpdate().

Referenced by Kb::hwSave(), KbWidget::on_modesList_itemClicked(), KbProfileDialog::profileList_reordered(), Kb::readNotify(), and Kb::setCurrentProfile().

```
44 { setNeedsUpdate(); _modes.append(newMode); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.36.4.2 KbMode* KbProfile::currentMode ( ) const [inline]

Definition at line 54 of file kbprofile.h.

References _currentMode.

Referenced by KeyAction::keyEvent(), KbBindWidget::on_copyButton_clicked(), KPerfWidget::on_copyButton_clicked(), MPerfWidget::on_copyButton_clicked(), Kb::setCurrentMode(), and Kb::setCurrentProfile().

```
54 { return _currentMode; }
```

Here is the caller graph for this function:

12.36.4.3 void KbProfile::currentMode (KbMode * *newCurrentMode*) [inline]

Definition at line 55 of file kbprofile.h.

References _currentMode, and _needsSave.

```
55 { _needsSave = true; _currentMode = newCurrentMode; }
```

12.36.4.4 KbMode* KbProfile::find (const QUuid & *id*) [inline]

Definition at line 51 of file kbprofile.h.

References _modes, UsbId::guid, id(), and KbMode::id().

Referenced by KbWidget::modesList_reordered(), and KbWidget::on_modesList_currentItemChanged().

```
51 { foreach(KbMode* mode, _modes) { if(mode->id().guid == id) return mode; } return 0; }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.36.4.5 UsbId& KbProfile::id ( ) [inline]

Definition at line 30 of file kbprofile.h.

References _id.

Referenced by find(), Kb::find(), Kb::hwSave(), KbProfileDialog::on_profileList_customContextMenuRequested(), KbProfileDialog::on_profileList_itemChanged(), KbProfileDialog::on_profileList_itemClicked(), Kb::readNotify(), KbProfileDialog::repopulate(), Kb::save(), and Kb::writeProfileHeader().

```
30 { return _id; }
```

Here is the caller graph for this function:

12.36.4.6 void KbProfile::id (const UsbId & *newId*) [inline]

Definition at line 31 of file kbprofile.h.

References _id, _needsSave, and newId().

```
31 { _needsSave = true; _id = newId; }
```

Here is the call graph for this function:

12.36.4.7 int KbProfile::indexOf (KbMode * *mode*) const [inline]

Definition at line 50 of file kbprofile.h.

References _modes.

Referenced by Kb::frameUpdate(), KeyAction::keyEvent(), KbWidget::modeChanged(), KbWidget::on_modesList_-customContextMenuRequested(), and Kb::readNotify().

```
50 { return _modes.indexOf(mode); }
```

Here is the caller graph for this function:

12.36.4.8 void KbProfile::insert (int *index*, KbMode * *newMode*) [inline]

Definition at line 45 of file kbprofile.h.

References _modes, and setNeedsUpdate().

Referenced by KbWidget::on_modesList_customContextMenuRequested().

```
45 { setNeedsUpdate(); _modes.insert(index, newMode); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.36.4.9 const KeyMap& KbProfile::keyMap ( ) const [inline]

Definition at line 37 of file kbprofile.h.

References _keyMap.

Referenced by KPerfWidget::setPerf(), and Kb::updateLayout().

```
37 { return _keyMap; }
```

Here is the caller graph for this function:

12.36.4.10 void KbProfile::keyMap (const KeyMap & *newKeyMap*)

Definition at line 85 of file kbprofile.cpp.

References _keyMap, _modes, KbMode::keyMap(), and setNeedsUpdate().

```
85                                          {
86     _keyMap = newKeyMap;
87     foreach(KbMode* mode, _modes)
88         mode->keyMap(newKeyMap);
89     setNeedsUpdate();
90 }
```

Here is the call graph for this function:

12.36.4.11 int KbProfile::modeCount ( ) const [inline]

Definition at line 49 of file kbprofile.h.

References _modes.

Referenced by Kb::hwSave(), KeyAction::keyEvent(), KbWidget::on_modesList_customContextMenuRequested(), Kb::readNotify(), save(), and Kb::setCurrentProfile().

```
49 { return _modes.count(); }
```

Here is the caller graph for this function:

12.36.4.12 const ModeList& KbProfile::modes ( ) const [inline]

Definition at line 42 of file kbprofile.h.

References _modes.

Referenced by Kb::hwSave(), KbProfile(), KeyAction::keyEvent(), KbWidget::modesList_reordered(), KbBindWidget::on_copyButton_clicked(), KPerfWidget::on_copyButton_clicked(), MPerfWidget::on_copyButton_clicked(), KbWidget::on_modesList_customContextMenuRequested(), KbWidget::profileChanged(), Kb::readNotify(), RebindWidget::setBind(), Kb::setCurrentMode(), Kb::setCurrentProfile(), and Kb::updateLayout().

```
42 { return _modes; }
```

Here is the caller graph for this function:

12.36.4.13 void KbProfile::modes (const QList< KbMode * > & *newModes*) [inline]

Definition at line 43 of file kbprofile.h.

References _modes, and setNeedsUpdate().

```
43 { setNeedsUpdate(); _modes = newModes; }
```

Here is the call graph for this function:

12.36.4.14 void KbProfile::move (int *from*, int *to*) [inline]

Definition at line 47 of file kbprofile.h.

References _modes, and setNeedsUpdate().

Referenced by Kb::readNotify().

```
47 { setNeedsUpdate(); _modes.move(from, to); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.36.4.15 QString KbProfile::name ( ) const [inline]

Definition at line 28 of file kbprofile.h.

References _name.

Referenced by KbProfileDialog::on_profileList_itemChanged(), Kb::readNotify(), KbProfileDialog::repopulate(), save(), KbWidget::updateProfileList(), and Kb::writeProfileHeader().

```
28 { return _name; }
```

Here is the caller graph for this function:

12.36.4.16 void KbProfile::name (const QString & *newName*) [inline]

Definition at line 29 of file kbprofile.h.

References _name, and _needsSave.

```
29 { _needsSave = true; _name = newName.trimmed(); if(_name == "")
     _name = "Unnamed"; }
```

12.36.4.17 bool KbProfile::needsSave ( ) const

Definition at line 68 of file kbprofile.cpp.

References _modes, _needsSave, and KbMode::needsSave().

Referenced by Kb::needsSave().

```
68                                  {
69      if(_needsSave)
70          return true;
71      foreach(KbMode* mode, _modes){
72          if(mode->needsSave())
73              return true;
74      }
75      return false;
76  }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.36.4.18 void KbProfile::newId ( )

Definition at line 78 of file kbprofile.cpp.

References _id, _modes, _needsSave, and KbMode::newId().

Referenced by id(), and KbProfileDialog::on_profileList_customContextMenuRequested().

```
78                          {
79      _needsSave = true;
80      _id = UsbId();
81      foreach(KbMode* mode, _modes)
82          mode->newId();
83  }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.36.4.19 void KbProfile::removeAll (KbMode * *mode*) [inline]

Definition at line 46 of file kbprofile.h.

References _modes, and setNeedsUpdate().

Referenced by KbWidget::on_modesList_customContextMenuRequested(), and KbProfileDialog::on_profileList_-customContextMenuRequested().

```
46 { setNeedsUpdate(); _modes.removeAll(mode); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.36.4.20 void KbProfile::save (CkbSettings & *settings*)

Definition at line 48 of file kbprofile.cpp.

References _currentMode, _id, _modes, _needsSave, UsbId::guidString(), UsbId::hwModifiedString(), KbMode::id(), modeCount(), UsbId::modifiedString(), name(), UsbId::newModified(), KbMode::save(), and CkbSettings::setValue().

Referenced by Kb::save().

```
48                                          {
49     _needsSave = false;
50     _id.newModified();
51     // Save data to preferences
52     SGroup group(settings, id().guidString());
53     settings.setValue("Name", name());
54     settings.setValue("Modified", _id.modifiedString());
55     settings.setValue("HwModified", _id.hwModifiedString());
56     if(_currentMode)
57         settings.setValue("CurrentMode", _currentMode->id().
    guidString());
58     // Save modes
59     uint count = modeCount();
60     settings.setValue("ModeCount", count);
61     for(uint i = 0; i < count; i++){
62         SGroup group(settings, QString::number(i));
63         KbMode* mode = _modes.at(i);
64         mode->save(settings);
65     }
66 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.36.4.21 void KbProfile::setNeedsSave ( ) [inline]

Definition at line 25 of file kbprofile.h.

References _needsSave.

Referenced by Kb::hwSave(), Kb::readNotify(), and setNeedsUpdate().

```
25 { _needsSave = true; }
```

Here is the caller graph for this function:

12.36.4.22 void KbProfile::setNeedsUpdate ( ) [inline],[private]

Definition at line 66 of file kbprofile.h.

References _modes, setNeedsSave(), and KbMode::setNeedsUpdate().

Referenced by append(), insert(), keyMap(), modes(), move(), and removeAll().

```
66 { setNeedsSave(); foreach(KbMode* mode, _modes){ mode->
     setNeedsUpdate(); } }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.36.5 Field Documentation

12.36.5.1 KbMode* KbProfile::_currentMode [private]

Definition at line 58 of file kbprofile.h.

Referenced by currentMode(), KbProfile(), and save().

12.36.5.2 UsbId KbProfile::_id [private]

Definition at line 60 of file kbprofile.h.

Referenced by id(), KbProfile(), newId(), and save().

12.36.5.3 KeyMap KbProfile::_keyMap [private]

Definition at line 61 of file kbprofile.h.

Referenced by KbProfile(), and keyMap().

12.36.5.4 ModeList KbProfile::_modes [private]

Definition at line 62 of file kbprofile.h.

Referenced by append(), find(), indexOf(), insert(), KbProfile(), keyMap(), modeCount(), modes(), move(), needsSave(), newId(), removeAll(), save(), and setNeedsUpdate().

12.36.5.5 QString KbProfile::_name [private]

Definition at line 59 of file kbprofile.h.

Referenced by KbProfile(), and name().

12.36.5.6 bool KbProfile::_needsSave [private]

Definition at line 63 of file kbprofile.h.

Referenced by currentMode(), id(), name(), needsSave(), newId(), save(), and setNeedsSave().

The documentation for this class was generated from the following files:

- src/ckb/kbprofile.h
- src/ckb/kbprofile.cpp

12.37 KbProfileDialog Class Reference

```
#include <src/ckb/kbprofiledialog.h>
```

Inheritance diagram for KbProfileDialog:

Collaboration diagram for KbProfileDialog:

Public Member Functions

- KbProfileDialog (KbWidget *parent=0)
- ~KbProfileDialog ()

Private Slots

- void profileList_reordered ()
- void on_profileList_currentItemChanged (QListWidgetItem *current, QListWidgetItem *previous)
- void on_profileList_itemClicked (QListWidgetItem *item)
- void on_profileList_itemChanged (QListWidgetItem *item)
- void on_profileList_customContextMenuRequested (const QPoint &pos)

Private Member Functions

- void repopulate ()
- void addNewProfileItem ()

Private Attributes

- Ui::KbProfileDialog * ui
- Kb * device

Static Private Attributes

- static const int GUID = Qt::UserRole
- static const int NEW_FLAG = Qt::UserRole + 1

12.37.1 Detailed Description

Definition at line 11 of file kbprofiledialog.h.

12.37.2 Constructor & Destructor Documentation

12.37.2.1 KbProfileDialog::KbProfileDialog (KbWidget * *parent* = 0) [explicit]

Definition at line 5 of file kbprofiledialog.cpp.

References Ui_KbProfileDialog::profileList, profileList_reordered(), repopulate(), Ui_KbProfileDialog::setupUi(), and ui.

```
5                                                   :
6     QDialog(parent),
7     ui(new Ui::KbProfileDialog), device(parent->
      device)
8 {
9     ui->setupUi(this);
10     connect(ui->profileList, SIGNAL(orderChanged()), this, SLOT(
      profileList_reordered()));
11
12     // Populate profile list
13     repopulate();
14 }
```

Here is the call graph for this function:

12.37.2.2 KbProfileDialog::~KbProfileDialog ( )

Definition at line 16 of file kbprofiledialog.cpp.

References ui.

```
16                                      {
17     delete ui;
18 }
```

12.37.3 Member Function Documentation

12.37.3.1 void KbProfileDialog::addNewProfileItem ( ) [private]

Definition at line 66 of file kbprofiledialog.cpp.

References NEW_FLAG, Ui_KbProfileDialog::profileList, and ui.

Referenced by on_profileList_itemClicked(), and repopulate().

```
66                                          {
67     // Add an item for creating a new profile. Make it editable but not dragable.
68     QListWidgetItem* item = new QListWidgetItem("New profile...", ui->
      profileList);
69     item->setFlags((item->flags() | Qt::ItemIsEditable) & ~Qt::ItemIsDragEnabled & ~Qt::ItemIsDropEnabled);
70     item->setData(NEW_FLAG, 1);
```

```
    QFont font = item->font();
    font.setItalic(true);
    item->setFont(font);
    item->setIcon(QIcon(":/img/icon_plus.png"));
    ui->profileList->addItem(item);
}
```

Here is the caller graph for this function:

12.37.3.2 void KbProfileDialog::on_profileList_currentItemChanged (QListWidgetItem * *current*, QListWidgetItem * *previous*) [private], [slot]

Definition at line 39 of file kbprofiledialog.cpp.

References device, Kb::find(), GUID, and Kb::setCurrentProfile().

```
39                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                {
40     if(!current)
41         return;
42     KbProfile* profile = device->find(current->data(
      GUID).toUuid());
43     if(!profile)
44         return;
45     device->setCurrentProfile(profile);
46 }
```

Here is the call graph for this function:

12.37.3.3 void KbProfileDialog::on_profileList_customContextMenuRequested (const QPoint & *pos*) [private], [slot]

Definition at line 109 of file kbprofiledialog.cpp.

References Kb::currentProfile(), device, Kb::find(), UsbId::guid, GUID, Kb::hwProfile(), Kb::hwSave(), KbProfile::id(), Kb::indexOf(), NEW_FLAG, KbProfile::newId(), Kb::newProfile(), Ui_KbProfileDialog::profileList, Kb::profiles(), KbProfile::removeAll(), repopulate(), Kb::setCurrentProfile(), and ui.

```
                                                                                {
    QListWidgetItem* item = ui->profileList->itemAt(pos);
    KbProfile* currentProfile = device->currentProfile();
    if(!item || !currentProfile || item->data(GUID).toUuid() != currentProfile->id().guid)
        return;
    int index = device->indexOf(currentProfile);
    QList<KbProfile*> profiles = device->profiles();

    QMenu menu(this);
    QAction* rename = new QAction("Rename...", this);
    QAction* duplicate = new QAction("Duplicate", this);
    QAction* del = new QAction("Delete", this);
    bool canDelete = (profiles.count() > 1);
    if(!canDelete)
        // Can't delete the last profile on the device
        del->setEnabled(false);
    QAction* hwsave = new QAction("Save to Hardware", this);
    QAction* moveup = new QAction("Move Up", this);
    if(index == 0)
        moveup->setEnabled(false);
    QAction* movedown = new QAction("Move Down", this);
    if(index >= profiles.count() - 1)
        movedown->setEnabled(false);
    menu.addAction(rename);
    menu.addAction(duplicate);
    menu.addAction(del);
    menu.addSeparator();
    menu.addAction(hwsave);
    menu.addSeparator();
    menu.addAction(moveup);
    menu.addAction(movedown);
    QAction* result = menu.exec(QCursor::pos());
    if(result == rename){
        ui->profileList->editItem(item);
    } else if(result == duplicate){
        KbProfile* newProfile = device->newProfile(currentProfile);
        newProfile->newId();
        profiles.insert(index + 1, newProfile);
        device->profiles(profiles);
        device->setCurrentProfile(newProfile);
    } else if(result == del){
        if(!canDelete)
            return;
        profiles.removeAll(currentProfile);
        device->profiles(profiles);
        currentProfile->deleteLater();
        // Select next profile
        if(index < profiles.count())
            device->setCurrentProfile(profiles.at(index));
        else
            device->setCurrentProfile(profiles.last());
    } else if(result == hwsave){
        device->hwSave();
        // Refresh item icons
        int count = ui->profileList->count();
        for(int i = 0; i < count; i++){
            QListWidgetItem* item = ui->profileList->item(i);
            if(item->data(NEW_FLAG).toUInt() == 1)
                continue;
            KbProfile* profile = device->find(item->data(GUID).toUuid());
            item->setIcon(QIcon((profile == device->hwProfile()) ? ":/img/icon_profile_hardware.png" : ":/img/icon_profile.png"));
        }
    } else if(result == moveup){
        profiles.removeAll(currentProfile);
        profiles.insert(index - 1, currentProfile);
        device->profiles(profiles);
    } else if(result == movedown){
        profiles.removeAll(currentProfile);
        profiles.insert(index + 1, currentProfile);
        device->profiles(profiles);
    }
    repopulate();
}
```

Here is the call graph for this function:

12.37.3.4 void KbProfileDialog::on_profileList_itemChanged (QListWidgetItem * *item*) [private],[slot]

Definition at line 100 of file kbprofiledialog.cpp.

References Kb::currentProfile(), device, UsbId::guid, GUID, KbProfile::id(), and KbProfile::name().

```
100                                                                 {
101     KbProfile* currentProfile = device->currentProfile();
102     if(!item || !currentProfile || item->data(GUID).toUuid() != currentProfile->
    id().guid)
103         return;
104     currentProfile->name(item->text());
105     // Set the text to the actual name (trimmed, "" replaced with "Unnamed")
106     item->setText(currentProfile->name());
107 }
```

Here is the call graph for this function:

12.37.3.5 void KbProfileDialog::on_profileList_itemClicked (QListWidgetItem * *item*) [private],[slot]

Definition at line 78 of file kbprofiledialog.cpp.

References addNewProfileItem(), Kb::appendProfile(), device, UsbId::guid, GUID, KbProfile::id(), NEW_FLAG, Kb::newProfile(), Ui_KbProfileDialog::profileList, Kb::setCurrentProfile(), and ui.

```
78                                                                  {
79     QUuid guid = item->data(GUID).toUuid();
80     if(guid.isNull() && item->data(NEW_FLAG).toInt() == 1){
81         // New profile
82         item->setText("");
83         ui->profileList->editItem(item);
84         item->setFlags(item->flags() | Qt::ItemIsEditable | Qt::ItemIsDragEnabled | Qt::ItemIsDropEnabled);
85         QFont font = item->font();
86         font.setItalic(false);
87         item->setFont(font);
88         item->setIcon(QIcon(":/img/icon_profile.png"));
89         // Add the new profile and assign it to this item
90         KbProfile* newProfile = device->newProfile();
91         device->appendProfile(newProfile);
92         item->setData(GUID, newProfile->id().guid);
93         item->setData(NEW_FLAG, 0);
94         device->setCurrentProfile(newProfile);
95         // Create another "new profile" item to replace this one
96         addNewProfileItem();
97     }
98 }
```

Here is the call graph for this function:

12.37.3.6 void KbProfileDialog::profileList_reordered ( ) [private],[slot]

Definition at line 20 of file kbprofiledialog.cpp.

References KbProfile::append(), device, Kb::find(), GUID, Ui_KbProfileDialog::profileList, Kb::profiles(), and ui.

Referenced by KbProfileDialog().

```
20                                          {
21     // Rebuild profile list from items
22     QList<KbProfile*> newProfiles;
23     int count = ui->profileList->count();
24     for(int i = 0; i < count; i++){
25         QListWidgetItem* item = ui->profileList->item(i);
26         KbProfile* profile = device->find(item->data(GUID).toUuid());
27         if(profile && !newProfiles.contains(profile))
28             newProfiles.append(profile);
29         item->setFlags(item->flags() | Qt::ItemIsEditable);
30     }
31     // Add any missing profiles at the end of the list
32     foreach(KbProfile* profile, device->profiles()){
33         if(!newProfiles.contains(profile))
34             newProfiles.append(profile);
35     }
36     device->profiles(newProfiles);
37 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.37.3.7 void KbProfileDialog::repopulate ( ) [private]

Definition at line 48 of file kbprofiledialog.cpp.

References addNewProfileItem(), current, Kb::currentProfile(), device, UsbId::guid, GUID, Kb::hwProfile(), KbProfile::id(), KbProfile::name(), Ui_KbProfileDialog::profileList, Kb::profiles(), and ui.

Referenced by KbProfileDialog(), and on_profileList_customContextMenuRequested().

```
48                                          {
49     ui->profileList->clear();
50     QListWidgetItem* current = 0;
51     foreach(KbProfile* profile, device->profiles()){
52         QListWidgetItem* item = new QListWidgetItem(QIcon((profile == device->
      hwProfile()) ? ":/img/icon_profile_hardware.png" : ":/img/icon_profile.png"), profile->
```

```
    name(), ui->profileList);
        item->setData(GUID, profile->id().guid);
        item->setFlags(item->flags() | Qt::ItemIsEditable);
        if(profile == device->currentProfile()){
            item->setSelected(true);
            current = item;
        }
        ui->profileList->addItem(item);
    }
    if(current)
        ui->profileList->setCurrentItem(current);
    addNewProfileItem();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.37.4 Field Documentation

12.37.4.1 Kb* KbProfileDialog::device [private]

Definition at line 29 of file kbprofiledialog.h.

Referenced by on_profileList_currentItemChanged(), on_profileList_customContextMenuRequested(), on_profileList_itemChanged(), on_profileList_itemClicked(), profileList_reordered(), and repopulate().

12.37.4.2 const int KbProfileDialog::GUID = Qt::UserRole [static], [private]

Definition at line 30 of file kbprofiledialog.h.

Referenced by on_profileList_currentItemChanged(), on_profileList_customContextMenuRequested(), on_profileList_itemChanged(), on_profileList_itemClicked(), profileList_reordered(), and repopulate().

12.37.4.3 const int KbProfileDialog::NEW_FLAG = Qt::UserRole + 1 [static], [private]

Definition at line 31 of file kbprofiledialog.h.

Referenced by addNewProfileItem(), on_profileList_customContextMenuRequested(), and on_profileList_itemClicked().

12.37.4.4 Ui::KbProfileDialog* KbProfileDialog::ui [private]

Definition at line 27 of file kbprofiledialog.h.

Referenced by addNewProfileItem(), KbProfileDialog(), on_profileList_customContextMenuRequested(), on_profileList_itemClicked(), profileList_reordered(), repopulate(), and ~KbProfileDialog().

The documentation for this class was generated from the following files:

- src/ckb/kbprofiledialog.h
- src/ckb/kbprofiledialog.cpp

12.38 Ui::KbProfileDialog Class Reference

```
#include <src/ckb/ui_kbprofiledialog.h>
```

Inheritance diagram for Ui::KbProfileDialog:

Collaboration diagram for Ui::KbProfileDialog:

Public Member Functions

- void setupUi (QDialog *KbProfileDialog)
- void retranslateUi (QDialog *KbProfileDialog)

Data Fields

- QGridLayout * gridLayout
- QSpacerItem * horizontalSpacer
- QSpacerItem * horizontalSpacer_2
- RListWidget * profileList
- QDialogButtonBox * buttonBox

12.38.1 Detailed Description

Definition at line 81 of file ui_kbprofiledialog.h.

12.38.2 Member Function Documentation

12.38.2.1 void Ui_KbProfileDialog::retranslateUi (QDialog * *KbProfileDialog*) [inline],[inherited]

Definition at line 73 of file ui_kbprofiledialog.h.

Referenced by Ui_KbProfileDialog::setupUi().

```
74     {
75         KbProfileDialog->setWindowTitle(QApplication::translate("KbProfileDialog", "Keyboard Profiles",
       Q_NULLPTR));
76     } // retranslateUi
```

Here is the caller graph for this function:

12.38.2.2 void Ui_KbProfileDialog::setupUi (QDialog * *KbProfileDialog*) [inline],[inherited]

Definition at line 34 of file ui_kbprofiledialog.h.

References Ui_KbProfileDialog::buttonBox, Ui_KbProfileDialog::gridLayout, Ui_KbProfileDialog::horizontalSpacer, Ui_KbProfileDialog::horizontalSpacer_2, Ui_KbProfileDialog::profileList, and Ui_KbProfileDialog::retranslateUi().

Referenced by KbProfileDialog::KbProfileDialog().

```
35     {
36         if (KbProfileDialog->objectName().isEmpty())
37             KbProfileDialog->setObjectName(QStringLiteral("KbProfileDialog"));
38         KbProfileDialog->resize(400, 300);
39         KbProfileDialog->setFocusPolicy(Qt::ClickFocus);
40         gridLayout = new QGridLayout(KbProfileDialog);
41         gridLayout->setObjectName(QStringLiteral("gridLayout"));
42         horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding,
       QSizePolicy::Minimum);
43
44         gridLayout->addItem(horizontalSpacer, 0, 0, 1, 1);
45
46         horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
       QSizePolicy::Minimum);
47
48         gridLayout->addItem(horizontalSpacer_2, 0, 2, 1, 1);
49
50         profileList = new RListWidget(KbProfileDialog);
51         profileList->setObjectName(QStringLiteral("profileList"));
52         profileList->setContextMenuPolicy(Qt::CustomContextMenu);
53         profileList->setFrameShadow(QFrame::Plain);
54         profileList->setIconSize(QSize(24, 24));
55
56         gridLayout->addWidget(profileList, 0, 1, 1, 1);
57
58         buttonBox = new QDialogButtonBox(KbProfileDialog);
59         buttonBox->setObjectName(QStringLiteral("buttonBox"));
60         buttonBox->setOrientation(Qt::Horizontal);
61         buttonBox->setStandardButtons(QDialogButtonBox::Ok);
62
63         gridLayout->addWidget(buttonBox, 1, 0, 1, 3);
64
65
66         retranslateUi(KbProfileDialog);
67         QObject::connect(buttonBox, SIGNAL(accepted()), KbProfileDialog, SLOT(accept()));
68         QObject::connect(buttonBox, SIGNAL(rejected()), KbProfileDialog, SLOT(reject()));
69
70         QMetaObject::connectSlotsByName(KbProfileDialog);
71     } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.38.3 Field Documentation

12.38.3.1 QDialogButtonBox* Ui_KbProfileDialog::buttonBox [inherited]

Definition at line 32 of file ui_kbprofiledialog.h.

Referenced by Ui_KbProfileDialog::setupUi().

12.38.3.2 QGridLayout* Ui_KbProfileDialog::gridLayout [inherited]

Definition at line 28 of file ui_kbprofiledialog.h.

Referenced by Ui_KbProfileDialog::setupUi().

12.38.3.3 QSpacerItem* Ui_KbProfileDialog::horizontalSpacer [inherited]

Definition at line 29 of file ui_kbprofiledialog.h.

Referenced by Ui_KbProfileDialog::setupUi().

12.38.3.4 QSpacerItem* Ui_KbProfileDialog::horizontalSpacer_2 [inherited]

Definition at line 30 of file ui_kbprofiledialog.h.

Referenced by Ui_KbProfileDialog::setupUi().

12.38.3.5 RListWidget* Ui_KbProfileDialog::profileList [inherited]

Definition at line 31 of file ui_kbprofiledialog.h.

Referenced by KbProfileDialog::addNewProfileItem(), KbProfileDialog::KbProfileDialog(), KbProfileDialog::on_profileList_customContextMenuRequested(), KbProfileDialog::on_profileList_itemClicked(), KbProfileDialog::profileList_reordered(), KbProfileDialog::repopulate(), and Ui_KbProfileDialog::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kbprofiledialog.h

12.39 KbWidget Class Reference

`#include <src/ckb/kbwidget.h>`

Inheritance diagram for KbWidget:

Collaboration diagram for KbWidget:

Public Slots

- void showFirstTab ()
- void showLastTab ()
- void showFwUpdate ()

Public Member Functions

- KbWidget (QWidget ∗parent, Kb ∗_device)
- ∼KbWidget ()
- QString name () const
- void updateFwButton ()

Data Fields

- Kb ∗ device
- bool hasShownNewFW

Private Slots

- void updateProfileList ()
- void profileChanged ()
- void on_profileBox_activated (int index)
- QIcon modeIcon (int i)
- void addNewModeItem ()
- void modeChanged (bool spontaneous=true)
- void on_modesList_currentItemChanged (QListWidgetItem *current, QListWidgetItem *previous)
- void modesList_reordered ()
- void on_modesList_itemChanged (QListWidgetItem *item)
- void on_modesList_itemClicked (QListWidgetItem *item)
- void on_modesList_customContextMenuRequested (const QPoint &pos)

  KbWidget::on_modesList_customContextMenuRequested.
- void devUpdate ()
- void modeUpdate ()
- void on_hwSaveButton_clicked ()
- void on_tabWidget_currentChanged (int index)
- void on_fwUpdButton_clicked ()

Private Attributes

- Ui::KbWidget * ui
- quint64 lastAutoSave
- KbMode * currentMode

Static Private Attributes

- static const int GUID = Qt::UserRole
- static const int NEW_FLAG = Qt::UserRole + 1

12.39.1 Detailed Description

Definition at line 15 of file kbwidget.h.

12.39.2 Constructor & Destructor Documentation

12.39.2.1 KbWidget::KbWidget (QWidget * *parent*, Kb * *_device*) [explicit]

Definition at line 15 of file kbwidget.cpp.

References device, devUpdate(), Kb::features, Ui_KbWidget::fwUpdButton, Ui_KbWidget::fwUpdLabel, Ui_KbWidget::fwUpdLayout, Kb::isKeyboard(), Kb::isMouse(), Ui_KbWidget::kPerfTab, Ui_KbWidget::lightTab, Ui_KbWidget::lightWidget, modeChanged(), Ui_KbWidget::modesList, modesList_reordered(), Kb::monochrome, Ui_KbWidget::mPerfTab, Ui_KbWidget::pollLabel, Ui_KbWidget::pollLabel2, profileChanged(), KbLightWidget::setMonochrome(), Ui_KbWidget::setupUi(), Ui_KbWidget::tabWidget, ui, and updateProfileList().

```
15                                                  :
16     QWidget(parent),
17     device(_device), hasShownNewFW(false),
18     ui(new Ui::KbWidget),
19     currentMode(0)
20 {
21     ui->setupUi(this);
22     connect(ui->modesList, SIGNAL(orderChanged()), this, SLOT(
       modesList_reordered()));
23
```

```
    connect(device, SIGNAL(infoUpdated()), this, SLOT(devUpdate()));
    connect(device, SIGNAL(profileAdded()), this, SLOT(updateProfileList()));
    connect(device, SIGNAL(profileChanged()), this, SLOT(profileChanged()));
    connect(device, SIGNAL(profileRenamed()), this, SLOT(updateProfileList()));
    connect(device, SIGNAL(modeRenamed()), this, SLOT(profileChanged()));
    connect(device, SIGNAL(modeRenamed()), this, SLOT(modeChanged()));
    connect(device, SIGNAL(modeChanged(bool)), this, SLOT(modeChanged(bool)));

    // Remove the Lighting and Performance tabs from non-RGB keyboards
    if(!device->features.contains("rgb")){
        ui->tabWidget->removeTab(ui->tabWidget->indexOf(ui->lightTab));
        ui->tabWidget->removeTab(ui->tabWidget->indexOf(ui->kPerfTab));
        ui->tabWidget->removeTab(ui->tabWidget->indexOf(ui->mPerfTab));
    } else {
        // Remove mouse Performance tab from non-mice
        if(!device->isMouse())
            ui->tabWidget->removeTab(ui->tabWidget->indexOf(ui->mPerfTab));
        // Remove keyboard Performance tab from non-keyboards
        if(!device->isKeyboard())
            ui->tabWidget->removeTab(ui->tabWidget->indexOf(ui->kPerfTab));
    }
    // Hide poll rate and FW update as appropriate
    if(!device->features.contains("pollrate")){
        ui->pollLabel->hide();
        ui->pollLabel2->hide();
    }
    if(!device->features.contains("fwupdate")){
        ui->fwUpdButton->hide();
        ui->fwUpdLabel->hide();
        ui->fwUpdLayout->removeItem(ui->fwUpdLayout->itemAt(1));
    }
    // Set monochrome mode according to hardware
    if(device->monochrome)
        ui->lightWidget->setMonochrome();
}
```

Here is the call graph for this function:

12.39.2.2 KbWidget::~KbWidget ( )

Definition at line 60 of file kbwidget.cpp.

References ui.

```
60                  {
61      delete ui;
62  }
```

12.39.3 Member Function Documentation

12.39.3.1 void KbWidget::addNewModeItem ( ) [private],[slot]

Definition at line 136 of file kbwidget.cpp.

References Ui_KbWidget::modesList, NEW_FLAG, and ui.

Referenced by on_modesList_itemClicked(), and profileChanged().

```
                                {
    // Add an item for creating a new mode. Make it editable but not dragable.
    QListWidgetItem* item = new QListWidgetItem("New mode...", ui->modesList);
    item->setFlags((item->flags() | Qt::ItemIsEditable) & ~Qt::ItemIsDragEnabled & ~Qt::ItemIsDropEnabled);
    item->setData(NEW_FLAG, 1);
    QFont font = item->font();
    font.setItalic(true);
    item->setFont(font);
    item->setIcon(QIcon(":/img/icon_plus.png"));
    ui->modesList->addItem(item);
}
```

Here is the caller graph for this function:

12.39.3.2 void KbWidget::devUpdate ( ) [private],[slot]

Definition at line 300 of file kbwidget.cpp.

References device, Kb::firmware, Ui_KbWidget::fwLabel, Ui_KbWidget::pollLabel, Kb::pollrate, Ui_KbWidget::serialLabel, ui, and Kb::usbSerial.

Referenced by KbWidget().

```
                        {
    // Update device tab
    ui->serialLabel->setText(device->usbSerial);
    ui->fwLabel->setText(device->firmware);
    ui->pollLabel->setText(device->pollrate);
}
```

Here is the caller graph for this function:

12.39.3.3 void KbWidget::modeChanged (bool *spontaneous* = true) [private],[slot]

Definition at line 148 of file kbwidget.cpp.

References Ui_KbWidget::bindWidget, Kb::currentBind(), Kb::currentLight(), currentMode, Kb::currentMode(), Kb::currentPerf(), Kb::currentProfile(), device, KbProfile::indexOf(), Ui_KbWidget::kPerfWidget, Ui_KbWidget::lightWidget, Ui_KbWidget::modesList, modeUpdate(), Ui_KbWidget::mPerfWidget, KbBindWidget::setBind(), KbLightWidget::setLight(), KPerfWidget::setPerf(), MPerfWidget::setPerf(), and ui.

Referenced by KbWidget(), and on_modesList_customContextMenuRequested().

```
                                        {
    int index = device->currentProfile()->indexOf(device->currentMode());
    if(index < 0)
        return;
    // Update tabs
    ui->lightWidget->setLight(device->currentLight());
    ui->bindWidget->setBind(device->currentBind(), device->currentProfile());
    ui->kPerfWidget->setPerf(device->currentPerf(), device->currentProfile());
    ui->mPerfWidget->setPerf(device->currentPerf(), device->currentProfile());
    // Update selection
    if(spontaneous)
        ui->modesList->setCurrentRow(index);
    // Connect signals
    if(currentMode)
        disconnect(currentMode, SIGNAL(updated()), this, SLOT(modeUpdate()));
    currentMode = device->currentMode();
    connect(currentMode, SIGNAL(updated()), this, SLOT(modeUpdate()));
    modeUpdate();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.39.3.4 QIcon KbWidget::modeIcon (int *i*) [private], [slot]

Definition at line 127 of file kbwidget.cpp.

References Kb::currentProfile(), device, Kb::hwModeCount, and Kb::hwProfile().

Referenced by modesList_reordered(), and profileChanged().

```
127                                 {
128     KbProfile* currentProfile = device->currentProfile(), *hwProfile =
      device->hwProfile();
129     int hwModeCount = device->hwModeCount;
130     if(i >= hwModeCount)
131         return QIcon(":/img/icon_mode.png");
132     else
133         return QIcon(QString(currentProfile == hwProfile ? ":/img/icon_mode%1_hardware.png" : "
      :/img/icon_mode%1.png").arg(i + 1));
134 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.39.3.5 void KbWidget::modesList_reordered ( ) [private],[slot]

Definition at line 177 of file kbwidget.cpp.

References Kb::currentProfile(), device, KbProfile::find(), GUID, modeIcon(), KbProfile::modes(), Ui_KbWidget::modesList, NEW_FLAG, and ui.

Referenced by KbWidget().

```
177                                 {
178     KbProfile* currentProfile = device->currentProfile();
179     // Rebuild mode list from items
180     QList<KbMode*> newModes;
181     int count = ui->modesList->count();
182     for(int i = 0; i < count; i++){
183         QListWidgetItem* item = ui->modesList->item(i);
184         KbMode* mode = currentProfile->find(item->data(GUID).toUuid());
185         if(mode && !newModes.contains(mode))
186             newModes.append(mode);
187         if(item->data(NEW_FLAG).toInt() != 1)
188             item->setIcon(modeIcon(i));
189         item->setFlags(item->flags() | Qt::ItemIsEditable);
190     }
191     // Add any missing modes at the end of the list
192     foreach(KbMode* mode, currentProfile->modes()){
193         if(!newModes.contains(mode))
194             newModes.append(mode);
195     }
196     currentProfile->modes(newModes);
197 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.39.3.6 void KbWidget::modeUpdate ( ) [private],[slot]

Definition at line 307 of file kbwidget.cpp.

Referenced by modeChanged().

```
307                         {
308 }
```

Here is the caller graph for this function:

12.39.3.7 QString KbWidget::name ( ) const [inline]

Definition at line 25 of file kbwidget.h.

References device, and Kb::usbModel.

Referenced by MainWindow::addDevice().

```
25 { return device->usbModel; }
```

Here is the caller graph for this function:

12.39.3.8 void KbWidget::on_fwUpdButton_clicked ( ) [private],[slot]

Definition at line 339 of file kbwidget.cpp.

References device, FwUpgradeDialog::exec(), Kb::features, Kb::firmware, Ui_KbWidget::fwUpdButton, KbFirmware::hasDownloaded(), ui, updateFwButton(), and KbFirmware::versionForBoard().

Referenced by showFwUpdate().

```
339                                     {
340     // If alt is pressed, ignore upgrades and go straight to the manual prompt
341     if(!(qApp->keyboardModifiers() & Qt::AltModifier)){
342         // Check version numbers
343         if(!KbFirmware::hasDownloaded()){
344             ui->fwUpdButton->setText("Checking...");
345             ui->fwUpdButton->setEnabled(false);
346         }
347         float newVersion = KbFirmware::versionForBoard(
    device->features, true);
348         float oldVersion = device->firmware.toFloat();
349         ui->fwUpdButton->setEnabled(true);
350         updateFwButton();
351         if(newVersion == -1.f){
352             QMessageBox::information(this, "Firmware update", "<center>There is a new firmware available
     for this device.<br />However, it requires a newer version of ckb.<br />Please upgrade ckb and try
     again.</center>");
353             return;
354         } else if(newVersion == 0.f){
355             if(QMessageBox::question(this, "Firmware update", "<center>There was a problem getting the
     status for this device.<br />Would you like to select a file manually?</center>") != QMessageBox::Yes)
356                 return;
357             // "Yes" -> fall through to browse file
358         } else if(newVersion <= oldVersion){
359             if(QMessageBox::question(this, "Firmware update", "<center>Your firmware is already up to
     date.<br />Would you like to select a file manually?</center>") != QMessageBox::Yes)
360                 return;
361             // "Yes" -> fall through to browse file
362         } else {
363             // Automatic upgrade. Fetch file from web.
364             // FwUpgradeDialog can't be parented to KbWidget because KbWidget may be deleted before the
     dialog exits
365             FwUpgradeDialog dialog(parentWidget(), newVersion, "",
    device);
366             dialog.exec();
367             return;
368         }
369     }
370     // Browse for file
371     QString path = QFileDialog::getOpenFileName(this, "Select firmware file",
    QStandardPaths::writableLocation(QStandardPaths::DownloadLocation), "Firmware blobs (*.bin)");
372     if(path.isEmpty())
373         return;
374     QFile file(path);
375     if(!file.open(QIODevice::ReadOnly)){
376         QMessageBox::warning(parentWidget(), "Error", "<center>File could not be read.</center>");
377         return;
378     }
379     QByteArray blob = file.readAll();
380     FwUpgradeDialog dialog(parentWidget(), 0.f, blob, device);
381     dialog.exec();
382 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.39.3.9 void KbWidget::on_hwSaveButton_clicked ( ) [private], [slot]

Definition at line 310 of file kbwidget.cpp.

References device, Kb::hwSave(), profileChanged(), Kb::save(), and updateProfileList().

```
310                                         {
311     device->save();
312     device->hwSave();
313     updateProfileList();
314     profileChanged();
315 }
```

Here is the call graph for this function:

12.39.3.10 void KbWidget::on_modesList_currentItemChanged (QListWidgetItem * *current*, QListWidgetItem * *previous*) [private],[slot]

Definition at line 168 of file kbwidget.cpp.

References Kb::currentProfile(), device, KbProfile::find(), GUID, and Kb::setCurrentMode().

```
168                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                {
169     if(!current)
170         return;
171     KbMode* mode = device->currentProfile()->find(current->data(GUID).toUuid());
172     if(!mode)
173         return;
174     device->setCurrentMode(mode, false);
175 }
```

Here is the call graph for this function:

12.39.3.11 void KbWidget::on_modesList_customContextMenuRequested (const QPoint & *pos*) [private], [slot]

Parameters

pos	Opens on right click in the profiles list a context sensitive menue at position pos.

When clicking on a command it is located and executed.

Definition at line 236 of file kbwidget.cpp.

References currentMode, Kb::currentProfile(), device, UsbId::guid, GUID, Kb::hwModeCount, KbMode::id(), KbProfile::indexOf(), KbProfile::insert(), modeChanged(), KbProfile::modeCount(), KbProfile::modes(), Ui_KbWidget::modesList, KbMode::newId(), Kb::newMode(), profileChanged(), KbProfile::removeAll(), Kb::setCurrentMode(), and ui.

```
236                                                                                 {
237     QListWidgetItem* item = ui->modesList->itemAt(pos);
238     if(!item || !currentMode || item->data(GUID).toUuid() !=
    currentMode->id().guid)
239         return;
240     KbProfile* currentProfile = device->currentProfile();
241     int index = currentProfile->indexOf(currentMode);
242
243     QMenu menu(this);
244     QAction* rename = new QAction("Rename...", this);
245     QAction* duplicate = new QAction("Duplicate", this);
246     QAction* del = new QAction("Delete", this);
247     bool canDelete = (device->currentProfile()->modeCount() >
    device->hwModeCount);
248     if(!canDelete)
249         // Can't delete modes if they're required by hardware
250         del->setEnabled(false);
251     QAction* moveup = new QAction("Move Up", this);
252     if(index == 0)
253         moveup->setEnabled(false);
254     QAction* movedown = new QAction("Move Down", this);
255     if(index >= currentProfile->modeCount() - 1)
256         movedown->setEnabled(false);
257     menu.addAction(rename);
258     menu.addAction(duplicate);
259     menu.addAction(del);
260     menu.addSeparator();
261     menu.addAction(moveup);
262     menu.addAction(movedown);
263     QAction* result = menu.exec(QCursor::pos());
264     if(result == rename){
265         ui->modesList->editItem(item);
266     } else if(result == duplicate){
267         KbMode* newMode = device->newMode(currentMode);
268         newMode->newId();
269         currentProfile->insert(index + 1, newMode);
270         // Update UI
271         profileChanged();
272         device->setCurrentMode(newMode);
273     } else if(result == del){
274         if(!canDelete)
275             return;
276         currentProfile->removeAll(currentMode);
277         currentMode->deleteLater();
```

```
        currentMode = 0;
        // Select next mode
        profileChanged();
        if(index < currentProfile->modeCount())
            device->setCurrentMode(currentProfile->modes()[index]);
        else
            device->setCurrentMode(currentProfile->modes().last());
    } else if(result == moveup){
        currentProfile->removeAll(currentMode);
        currentProfile->insert(index - 1, currentMode);
        // Update UI
        profileChanged();
        modeChanged(true);
    } else if(result == movedown){
        currentProfile->removeAll(currentMode);
        currentProfile->insert(index + 1, currentMode);
        // Update UI
        profileChanged();
        modeChanged(true);
    }
}
```

Here is the call graph for this function:

12.39.3.12 void KbWidget::on_modesList_itemChanged (QListWidgetItem * *item*) [private],[slot]

Definition at line 199 of file kbwidget.cpp.

References currentMode, UsbId::guid, GUID, KbMode::id(), and KbMode::name().

```
199                                                                 {
200     if(!item || !currentMode || item->data(GUID).toUuid() !=
      currentMode->id().guid)
201         return;
202     currentMode->name(item->text());
203     // Set the text to the actual name (trimmed, "" replaced with "Unnamed")
204     item->setText(currentMode->name());
205 }
```

Here is the call graph for this function:

12.39.3.13 void KbWidget::on_modesList_itemClicked (QListWidgetItem * *item*) [private],[slot]

Definition at line 207 of file kbwidget.cpp.

References addNewModeItem(), KbProfile::append(), Kb::currentProfile(), device, UsbId::guid, GUID, KbMode::id(), Ui_KbWidget::modesList, NEW_FLAG, Kb::newMode(), Kb::setCurrentMode(), and ui.

```
207                                                                 {
208     QUuid guid = item->data(GUID).toUuid();
209     if(guid.isNull() && item->data(NEW_FLAG).toInt() == 1){
210         // "New mode" item. Clear text and start editing
211         item->setText("");
212         ui->modesList->editItem(item);
213         item->setFlags(item->flags() | Qt::ItemIsEditable | Qt::ItemIsDragEnabled | Qt::ItemIsDropEnabled);
214         QFont font = item->font();
215         font.setItalic(false);
216         item->setFont(font);
217         item->setIcon(QIcon(":/img/icon_mode.png"));
218         // Add the new mode and assign it to this item
219         KbMode* newMode = device->newMode();
220         device->currentProfile()->append(newMode);
221         item->setData(GUID, newMode->id().guid);
222         item->setData(NEW_FLAG, 0);
223         device->setCurrentMode(newMode, false);
224         // Create another "new mode" item to replace this one
225         addNewModeItem();
226     }
227 }
```

Here is the call graph for this function:

12.39.3.14 void KbWidget::on_profileBox_activated (int *index*) [private],[slot]

Definition at line 113 of file kbwidget.cpp.

References device, Kb::profiles(), Kb::setCurrentProfile(), and updateProfileList().

```
113                                                 {
114     if(index < 0)
115         return;
116     if(index >= device->profiles().count()){
117         // "Manage profiles" option
118         KbProfileDialog dialog(this);
119         dialog.exec();
120         updateProfileList();
121         return;
122     }
123     device->setCurrentProfile(device->profiles()[index]);
124     // Device will emit profileChanged() and modeChanged() signals to update UI
125 }
```

Here is the call graph for this function:

12.39.3.15 void KbWidget::on_tabWidget_currentChanged (int *index*) [private],[slot]

Definition at line 317 of file kbwidget.cpp.

References device, Ui_KbWidget::tabWidget, ui, and updateFwButton().

```
317                                                 {
318     if(!device)
319         return;
320     if(index == ui->tabWidget->count() - 1){
321         // Device tab
```

```
        updateFwButton();
    }
}
```

Here is the call graph for this function:

12.39.3.16 void KbWidget::profileChanged ( ) [private], [slot]

Definition at line 91 of file kbwidget.cpp.

References addNewModeItem(), current, currentMode, Kb::currentProfile(), device, UsbId::guid, GUID, KbMode::id(), modeIcon(), KbProfile::modes(), Ui_KbWidget::modesList, KbMode::name(), and ui.

Referenced by KbWidget(), on_hwSaveButton_clicked(), and on_modesList_customContextMenuRequested().

```
91                              {
92     // Rebuild mode list
93     ui->modesList->clear();
94     int i = 0;
95     QListWidgetItem* current = 0;
96     foreach(KbMode* mode, device->currentProfile()->
       modes()){
97         QListWidgetItem* item = new QListWidgetItem(modeIcon(i), mode->
       name(), ui->modesList);
98         item->setData(GUID, mode->id().guid);
99         item->setFlags(item->flags() | Qt::ItemIsEditable);
100         if(mode == currentMode){
101             item->setSelected(true);
102             current = item;
103         }
104         ui->modesList->addItem(item);
105         i++;
106     }
107     if(current)
108         ui->modesList->setCurrentItem(current);
109     addNewModeItem();
110     // Wait for modeChanged() to refresh the rest of the UI
111 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.39.3.17 void KbWidget::showFirstTab ( ) [slot]

Definition at line 64 of file kbwidget.cpp.

References Ui_KbWidget::tabWidget, and ui.

```
64                              {
65     ui->tabWidget->setCurrentIndex(0);
66 }
```

12.39.3.18 void KbWidget::showFwUpdate ( ) [inline],[slot]

Definition at line 38 of file kbwidget.h.

References on_fwUpdButton_clicked().

Referenced by MainWindow::showFwUpdateNotification().

```
38 { on_fwUpdButton_clicked(); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.39.3.19 void KbWidget::showLastTab ( ) [slot]

Definition at line 68 of file kbwidget.cpp.

References Ui_KbWidget::tabWidget, and ui.

Referenced by MainWindow::showFwUpdateNotification().

```
68                                  {
69      ui->tabWidget->setCurrentIndex(ui->tabWidget->count() - 1);
70  }
```

Here is the caller graph for this function:

12.39.3.20 void KbWidget::updateFwButton ( )

Definition at line 326 of file kbwidget.cpp.

References device, Kb::features, Kb::firmware, Ui_KbWidget::fwUpdButton, KbFirmware::hasDownloaded(), ui, and KbFirmware::versionForBoard().

Referenced by MainWindow::checkFwUpdates(), on_fwUpdButton_clicked(), and on_tabWidget_currentChanged().

```
326                                 {
327     if(!KbFirmware::hasDownloaded())
328         ui->fwUpdButton->setText("Check for updates");
329     else {
330         float newVersion = KbFirmware::versionForBoard(
      device->features);
331         float oldVersion = device->firmware.toFloat();
332         if(newVersion <= 0.f || newVersion <= oldVersion)
333             ui->fwUpdButton->setText("Up to date");
334         else
335             ui->fwUpdButton->setText(tr("Upgrade to v%1").arg(QString::number(newVersion, 'f',
       2)));
336     }
337 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.39.3.21 void KbWidget::updateProfileList ( ) [private],[slot]

Definition at line 73 of file kbwidget.cpp.

References Kb::currentProfile(), device, Kb::hwProfile(), KbProfile::name(), Ui_KbWidget::profileBox, Kb::profiles(), and ui.

Referenced by KbWidget(), on_hwSaveButton_clicked(), and on_profileBox_activated().

```
73                                  {
74     // Clear profile list and rebuild
75     KbProfile* hwProfile = device->hwProfile(), *currentProfile =
      device->currentProfile();
76     ui->profileBox->clear();
77     int i = 0;
78     foreach(KbProfile* profile, device->profiles()){
79         ui->profileBox->addItem((profile == hwProfile) ? QIcon(":/img/icon_profile_hardware.png
      ") : QIcon(":/img/icon_profile.png"),
80                                 profile->name());
81         if(profile == currentProfile)
82             ui->profileBox->setCurrentIndex(i);
```

```
        i++;
    }
    ui->profileBox->addItem(QIcon(":/img/icon_blank.png"), "Manage profiles...");
    QFont font = ui->profileBox->font();
    font.setItalic(true);
    ui->profileBox->setItemData(ui->profileBox->count() - 1, font, Qt::FontRole);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.39.4 Field Documentation

12.39.4.1 KbMode* KbWidget::currentMode [private]

Definition at line 44 of file kbwidget.h.

Referenced by modeChanged(), on_modesList_customContextMenuRequested(), on_modesList_itemChanged(), and profileChanged().

12.39.4.2 Kb* KbWidget::device

Definition at line 24 of file kbwidget.h.

Referenced by MainWindow::addDevice(), MainWindow::checkFwUpdates(), devUpdate(), KbWidget(), modeChanged(), modeIcon(), modesList_reordered(), name(), on_fwUpdButton_clicked(), on_hwSaveButton_clicked(), on_modesList_currentItemChanged(), on_modesList_customContextMenuRequested(), on_modesList_itemClicked(), on_profileBox_activated(), on_tabWidget_currentChanged(), profileChanged(), MainWindow::removeDevice(), MainWindow::showFwUpdateNotification(), updateFwButton(), and updateProfileList().

12.39.4.3 const int KbWidget::GUID = Qt::UserRole [static], [private]

Definition at line 46 of file kbwidget.h.

Referenced by modesList_reordered(), on_modesList_currentItemChanged(), on_modesList_customContextMenuRequested(), on_modesList_itemChanged(), on_modesList_itemClicked(), and profileChanged().

12.39.4.4 bool KbWidget::hasShownNewFW

Definition at line 28 of file kbwidget.h.

Referenced by MainWindow::checkFwUpdates().

12.39.4.5 quint64 KbWidget::lastAutoSave [private]

Definition at line 42 of file kbwidget.h.

12.39.4.6 const int KbWidget::NEW_FLAG = Qt::UserRole + 1 [static], [private]

Definition at line 47 of file kbwidget.h.

Referenced by addNewModeItem(), modesList_reordered(), and on_modesList_itemClicked().

12.39.4.7 Ui::KbWidget* KbWidget::ui [private]

Definition at line 41 of file kbwidget.h.

Referenced by addNewModeItem(), devUpdate(), KbWidget(), modeChanged(), modesList_reordered(), on_fwUpdButton_clicked(), on_modesList_customContextMenuRequested(), on_modesList_itemClicked(), on_tabWidget_currentChanged(), profileChanged(), showFirstTab(), showLastTab(), updateFwButton(), updateProfileList(), and ~KbWidget().

The documentation for this class was generated from the following files:

- src/ckb/kbwidget.h
- src/ckb/kbwidget.cpp

12.40 Ui::KbWidget Class Reference

```
#include <src/ckb/ui_kbwidget.h>
```

Inheritance diagram for Ui::KbWidget:

Collaboration diagram for Ui::KbWidget:

Public Member Functions

- void setupUi (QWidget *KbWidget)
- void retranslateUi (QWidget *KbWidget)

Data Fields

- QGridLayout * gridLayout
- QComboBox * profileBox
- QTabWidget * tabWidget
- QWidget * lightTab
- QGridLayout * gridLayout_2
- KbLightWidget * lightWidget
- QLabel * label_3
- QWidget * bindTab
- QGridLayout * gridLayout_5
- KbBindWidget * bindWidget
- QWidget * kPerfTab
- QGridLayout * gridLayout_4
- KPerfWidget * kPerfWidget
- QWidget * mPerfTab
- QGridLayout * gridLayout_7
- MPerfWidget * mPerfWidget
- QWidget * devTab
- QGridLayout * gridLayout_3
- QLabel * fwUpdLabel
- QSpacerItem * verticalSpacer
- QLabel * fwLabel
- QLabel * label_4
- QSpacerItem * horizontalSpacer_2
- QLabel * label_9
- QLabel * serialLabel
- QHBoxLayout * fwUpdLayout
- QPushButton * fwUpdButton
- QSpacerItem * horizontalSpacer_3
- QLabel * pollLabel2
- QLabel * pollLabel
- RListWidget * modesList
- QPushButton * hwSaveButton

12.40.1 Detailed Description

Definition at line 291 of file ui_kbwidget.h.

12.40.2 Member Function Documentation

12.40.2.1 void Ui_KbWidget::retranslateUi (QWidget * *KbWidget*) [inline],[inherited]

Definition at line 268 of file ui_kbwidget.h.

References Ui_KbWidget::bindTab, Ui_KbWidget::devTab, Ui_KbWidget::fwLabel, Ui_KbWidget::fwUpdButton, Ui_KbWidget::fwUpdLabel, Ui_KbWidget::hwSaveButton, Ui_KbWidget::kPerfTab, Ui_KbWidget::label_3, Ui_KbWidget::label_4, Ui_KbWidget::label_9, Ui_KbWidget::lightTab, Ui_KbWidget::mPerfTab, Ui_KbWidget::pollLabel, Ui_KbWidget::pollLabel2, Ui_KbWidget::serialLabel, and Ui_KbWidget::tabWidget.

Referenced by Ui_KbWidget::setupUi().

```
    {
        KbWidget->setWindowTitle(QApplication::translate("KbWidget", "Form", Q_NULLPTR));
        label_3->setText(QApplication::translate("KbWidget", "Tip: Drag+drop items to reorder. Right-click for menu.", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(lightTab), QApplication::translate("KbWidget", "Lighting", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(bindTab), QApplication::translate("KbWidget", "Binding", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(kPerfTab), QApplication::translate("KbWidget", "Performance", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(mPerfTab), QApplication::translate("KbWidget", "Performance", Q_NULLPTR));
        fwUpdLabel->setText(QApplication::translate("KbWidget", "Status:", Q_NULLPTR));
        fwLabel->setText(QApplication::translate("KbWidget", "N/A", Q_NULLPTR));
        label_4->setText(QApplication::translate("KbWidget", "USB device ID:", Q_NULLPTR));
        label_9->setText(QApplication::translate("KbWidget", "Firmware version:", Q_NULLPTR));
        serialLabel->setText(QApplication::translate("KbWidget", "N/A", Q_NULLPTR));
        fwUpdButton->setText(QApplication::translate("KbWidget", "Check for updates", Q_NULLPTR));
        pollLabel2->setText(QApplication::translate("KbWidget", "Poll rate:", Q_NULLPTR));
        pollLabel->setText(QApplication::translate("KbWidget", "N/A", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(devTab), QApplication::translate("KbWidget", "Device", Q_NULLPTR));
        hwSaveButton->setText(QApplication::translate("KbWidget", "Save to hardware", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.40.2.2 void Ui_KbWidget::setupUi (QWidget * *KbWidget*) [inline], [inherited]

Definition at line 69 of file ui_kbwidget.h.

References Ui_KbWidget::bindTab, Ui_KbWidget::bindWidget, Ui_KbWidget::devTab, Ui_KbWidget::fwLabel, Ui_KbWidget::fwUpdButton, Ui_KbWidget::fwUpdLabel, Ui_KbWidget::fwUpdLayout, Ui_KbWidget::gridLayout, Ui_KbWidget::gridLayout_2, Ui_KbWidget::gridLayout_3, Ui_KbWidget::gridLayout_4, Ui_KbWidget::gridLayout_5, Ui_KbWidget::gridLayout_7, Ui_KbWidget::horizontalSpacer_2, Ui_KbWidget::horizontalSpacer_3, Ui_KbWidget::hwSaveButton, Ui_KbWidget::kPerfTab, Ui_KbWidget::kPerfWidget, Ui_KbWidget::label_3, Ui_KbWidget::label_4, Ui_KbWidget::label_9, Ui_KbWidget::lightTab, Ui_KbWidget::lightWidget, Ui_KbWidget::modesList, Ui_KbWidget::mPerfTab, Ui_KbWidget::mPerfWidget, Ui_KbWidget::pollLabel, Ui_KbWidget::pollLabel2, Ui_KbWidget::profileBox, Ui_KbWidget::retranslateUi(), Ui_KbWidget::serialLabel, Ui_KbWidget::tabWidget, and Ui_KbWidget::verticalSpacer.

Referenced by KbWidget::KbWidget().

```
    {
        if (KbWidget->objectName().isEmpty())
            KbWidget->setObjectName(QStringLiteral("KbWidget"));
        KbWidget->resize(773, 539);
        gridLayout = new QGridLayout(KbWidget);
        gridLayout->setSpacing(9);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        gridLayout->setContentsMargins(9, -1, 9, 9);
        profileBox = new QComboBox(KbWidget);
        profileBox->setObjectName(QStringLiteral("profileBox"));
        QSizePolicy sizePolicy(QSizePolicy::Preferred, QSizePolicy::Fixed);
        sizePolicy.setHorizontalStretch(18);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(profileBox->sizePolicy().hasHeightForWidth());
        profileBox->setSizePolicy(sizePolicy);
        profileBox->setIconSize(QSize(24, 24));

        gridLayout->addWidget(profileBox, 0, 0, 1, 1);

```

```
        tabWidget = new QTabWidget(KbWidget);
        tabWidget->setObjectName(QStringLiteral("tabWidget"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Expanding);
        sizePolicy1.setHorizontalStretch(82);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(tabWidget->sizePolicy().hasHeightForWidth());
        tabWidget->setSizePolicy(sizePolicy1);
        lightTab = new QWidget();
        lightTab->setObjectName(QStringLiteral("lightTab"));
        gridLayout_2 = new QGridLayout(lightTab);
        gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
         gridLayout_2->setHorizontalSpacing(0);
         gridLayout_2->setVerticalSpacing(6);
         gridLayout_2->setContentsMargins(6, 6, 6, 6);
         lightWidget = new KbLightWidget(lightTab);
         lightWidget->setObjectName(QStringLiteral("lightWidget"));
         QSizePolicy sizePolicy2(QSizePolicy::Preferred, QSizePolicy::Expanding);
         sizePolicy2.setHorizontalStretch(0);
         sizePolicy2.setVerticalStretch(0);
         sizePolicy2.setHeightForWidth(lightWidget->sizePolicy().hasHeightForWidth());
         lightWidget->setSizePolicy(sizePolicy2);

         gridLayout_2->addWidget(lightWidget, 0, 0, 1, 1);

         label_3 = new QLabel(lightTab);
         label_3->setObjectName(QStringLiteral("label_3"));
         QSizePolicy sizePolicy3(QSizePolicy::Preferred, QSizePolicy::Minimum);
         sizePolicy3.setHorizontalStretch(0);
         sizePolicy3.setVerticalStretch(0);
         sizePolicy3.setHeightForWidth(label_3->sizePolicy().hasHeightForWidth());
         label_3->setSizePolicy(sizePolicy3);

         gridLayout_2->addWidget(label_3, 1, 0, 1, 1);

         tabWidget->addTab(lightTab, QString());
         bindTab = new QWidget();
         bindTab->setObjectName(QStringLiteral("bindTab"));
         gridLayout_5 = new QGridLayout(bindTab);
         gridLayout_5->setSpacing(0);
         gridLayout_5->setObjectName(QStringLiteral("gridLayout_5"));
         gridLayout_5->setContentsMargins(6, 6, 6, 6);
         bindWidget = new KbBindWidget(bindTab);
         bindWidget->setObjectName(QStringLiteral("bindWidget"));
         sizePolicy2.setHeightForWidth(bindWidget->sizePolicy().hasHeightForWidth());
         bindWidget->setSizePolicy(sizePolicy2);

         gridLayout_5->addWidget(bindWidget, 0, 0, 1, 1);

         tabWidget->addTab(bindTab, QString());
         kPerfTab = new QWidget();
         kPerfTab->setObjectName(QStringLiteral("kPerfTab"));
         gridLayout_4 = new QGridLayout(kPerfTab);
         gridLayout_4->setObjectName(QStringLiteral("gridLayout_4"));
         gridLayout_4->setContentsMargins(6, 6, 6, 6);
         kPerfWidget = new KPerfWidget(kPerfTab);
         kPerfWidget->setObjectName(QStringLiteral("kPerfWidget"));

         gridLayout_4->addWidget(kPerfWidget, 0, 0, 1, 1);

         tabWidget->addTab(kPerfTab, QString());
         mPerfTab = new QWidget();
         mPerfTab->setObjectName(QStringLiteral("mPerfTab"));
         gridLayout_7 = new QGridLayout(mPerfTab);
         gridLayout_7->setObjectName(QStringLiteral("gridLayout_7"));
         gridLayout_7->setContentsMargins(6, 6, 6, 6);
         mPerfWidget = new MPerfWidget(mPerfTab);
         mPerfWidget->setObjectName(QStringLiteral("mPerfWidget"));

         gridLayout_7->addWidget(mPerfWidget, 0, 0, 1, 1);

         tabWidget->addTab(mPerfTab, QString());
         devTab = new QWidget();
         devTab->setObjectName(QStringLiteral("devTab"));
         gridLayout_3 = new QGridLayout(devTab);
         gridLayout_3->setObjectName(QStringLiteral("gridLayout_3"));
         gridLayout_3->setContentsMargins(6, 6, 6, 6);
         fwUpdLabel = new QLabel(devTab);
         fwUpdLabel->setObjectName(QStringLiteral("fwUpdLabel"));
         fwUpdLabel->setMinimumSize(QSize(0, 34));

         gridLayout_3->addWidget(fwUpdLabel, 4, 0, 1, 1);

         verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding
    );

         gridLayout_3->addItem(verticalSpacer, 6, 2, 1, 1);

```

```
        fwLabel = new QLabel(devTab);
        fwLabel->setObjectName(QStringLiteral("fwLabel"));
        fwLabel->setCursor(QCursor(Qt::IBeamCursor));
        fwLabel->setTextInteractionFlags(Qt::LinksAccessibleByMouse|Qt::TextSelectableByMouse);

        gridLayout_3->addWidget(fwLabel, 2, 2, 1, 1);

        label_4 = new QLabel(devTab);
        label_4->setObjectName(QStringLiteral("label_4"));
        label_4->setMinimumSize(QSize(0, 34));

        gridLayout_3->addWidget(label_4, 0, 0, 1, 1);

        horizontalSpacer_2 = new QSpacerItem(40, 1, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_2, 2, 1, 1, 1);

        label_9 = new QLabel(devTab);
        label_9->setObjectName(QStringLiteral("label_9"));
        label_9->setMinimumSize(QSize(0, 34));

        gridLayout_3->addWidget(label_9, 2, 0, 1, 1);

        serialLabel = new QLabel(devTab);
        serialLabel->setObjectName(QStringLiteral("serialLabel"));
        serialLabel->setCursor(QCursor(Qt::IBeamCursor));
        serialLabel->setTextInteractionFlags(Qt::LinksAccessibleByMouse|
    Qt::TextSelectableByMouse);

        gridLayout_3->addWidget(serialLabel, 0, 2, 1, 1);

        fwUpdLayout = new QHBoxLayout();
        fwUpdLayout->setObjectName(QStringLiteral("fwUpdLayout"));
        fwUpdButton = new QPushButton(devTab);
        fwUpdButton->setObjectName(QStringLiteral("fwUpdButton"));

        fwUpdLayout->addWidget(fwUpdButton);

        horizontalSpacer_3 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        fwUpdLayout->addItem(horizontalSpacer_3);


        gridLayout_3->addLayout(fwUpdLayout, 4, 2, 1, 1);

        pollLabel2 = new QLabel(devTab);
        pollLabel2->setObjectName(QStringLiteral("pollLabel2"));
        pollLabel2->setMinimumSize(QSize(0, 34));

        gridLayout_3->addWidget(pollLabel2, 1, 0, 1, 1);

        pollLabel = new QLabel(devTab);
        pollLabel->setObjectName(QStringLiteral("pollLabel"));

        gridLayout_3->addWidget(pollLabel, 1, 2, 1, 1);

        tabWidget->addTab(devTab, QString());

        gridLayout->addWidget(tabWidget, 0, 1, 3, 1);

        modesList = new RListWidget(KbWidget);
        modesList->setObjectName(QStringLiteral("modesList"));
        QSizePolicy sizePolicy4(QSizePolicy::Expanding, QSizePolicy::Expanding);
        sizePolicy4.setHorizontalStretch(18);
        sizePolicy4.setVerticalStretch(0);
        sizePolicy4.setHeightForWidth(modesList->sizePolicy().hasHeightForWidth());
        modesList->setSizePolicy(sizePolicy4);
        modesList->setContextMenuPolicy(Qt::CustomContextMenu);
        modesList->setFrameShadow(QFrame::Plain);
        modesList->setDragDropMode(QAbstractItemView::InternalMove);
        modesList->setIconSize(QSize(24, 24));
        modesList->setMovement(QListView::Snap);

        gridLayout->addWidget(modesList, 1, 0, 1, 1);

        hwSaveButton = new QPushButton(KbWidget);
        hwSaveButton->setObjectName(QStringLiteral("hwSaveButton"));
        QSizePolicy sizePolicy5(QSizePolicy::Minimum, QSizePolicy::Fixed);
        sizePolicy5.setHorizontalStretch(18);
        sizePolicy5.setVerticalStretch(0);
        sizePolicy5.setHeightForWidth(hwSaveButton->sizePolicy().hasHeightForWidth());
        hwSaveButton->setSizePolicy(sizePolicy5);

        gridLayout->addWidget(hwSaveButton, 2, 0, 1, 1);

```

```
        retranslateUi(KbWidget);

        tabWidget->setCurrentIndex(0);


        QMetaObject::connectSlotsByName(KbWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.40.3 Field Documentation

12.40.3.1 QWidget* Ui_KbWidget::bindTab [inherited]

Definition at line 43 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.2 KbBindWidget* Ui_KbWidget::bindWidget [inherited]

Definition at line 45 of file ui_kbwidget.h.

Referenced by KbWidget::modeChanged(), and Ui_KbWidget::setupUi().

12.40.3.3 QWidget* Ui_KbWidget::devTab [inherited]

Definition at line 52 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.4 QLabel* Ui_KbWidget::fwLabel [inherited]

Definition at line 56 of file ui_kbwidget.h.

Referenced by KbWidget::devUpdate(), Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.5 QPushButton* Ui_KbWidget::fwUpdButton [inherited]

Definition at line 62 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), KbWidget::on_fwUpdButton_clicked(), Ui_KbWidget::retranslateUi(), Ui_KbWidget::setupUi(), and KbWidget::updateFwButton().

12.40.3.6 QLabel* Ui_KbWidget::fwUpdLabel [inherited]

Definition at line 54 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.7 QHBoxLayout* Ui_KbWidget::fwUpdLayout [inherited]

Definition at line 61 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), and Ui_KbWidget::setupUi().

12.40.3.8 QGridLayout* Ui_KbWidget::gridLayout [inherited]

Definition at line 36 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::setupUi().

12.40.3.9 QGridLayout* Ui_KbWidget::gridLayout_2 [inherited]

Definition at line 40 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::setupUi().

12.40.3.10 QGridLayout* Ui_KbWidget::gridLayout_3 [inherited]

Definition at line 53 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::setupUi().

12.40.3.11 QGridLayout* Ui_KbWidget::gridLayout_4 [inherited]

Definition at line 47 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::setupUi().

12.40.3.12 QGridLayout* Ui_KbWidget::gridLayout_5 [inherited]

Definition at line 44 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::setupUi().

12.40.3.13 QGridLayout* Ui_KbWidget::gridLayout_7 [inherited]

Definition at line 50 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::setupUi().

12.40.3.14 QSpacerItem* Ui_KbWidget::horizontalSpacer_2 [inherited]

Definition at line 58 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::setupUi().

12.40.3.15 QSpacerItem* Ui_KbWidget::horizontalSpacer_3 [inherited]

Definition at line 63 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::setupUi().

12.40.3.16 QPushButton* Ui_KbWidget::hwSaveButton [inherited]

Definition at line 67 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.17 QWidget* Ui_KbWidget::kPerfTab [inherited]

Definition at line 46 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.18 KPerfWidget* Ui_KbWidget::kPerfWidget [inherited]

Definition at line 48 of file ui_kbwidget.h.

Referenced by KbWidget::modeChanged(), and Ui_KbWidget::setupUi().

12.40.3.19 QLabel* Ui_KbWidget::label_3 [inherited]

Definition at line 42 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.20 QLabel* Ui_KbWidget::label_4 [inherited]

Definition at line 57 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.21 QLabel* Ui_KbWidget::label_9 [inherited]

Definition at line 59 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.22 QWidget* Ui_KbWidget::lightTab [inherited]

Definition at line 39 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.23 KbLightWidget* Ui_KbWidget::lightWidget [inherited]

Definition at line 41 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), KbWidget::modeChanged(), and Ui_KbWidget::setupUi().

12.40.3.24 RListWidget* Ui_KbWidget::modesList [inherited]

Definition at line 66 of file ui_kbwidget.h.

Referenced by KbWidget::addNewModeItem(), KbWidget::KbWidget(), KbWidget::modeChanged(), KbWidget::modesList_reordered(), KbWidget::on_modesList_customContextMenuRequested(), KbWidget::on_modesList_itemClicked(), KbWidget::profileChanged(), and Ui_KbWidget::setupUi().

12.40.3.25 QWidget* Ui_KbWidget::mPerfTab [inherited]

Definition at line 49 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.26 MPerfWidget* Ui_KbWidget::mPerfWidget [inherited]

Definition at line 51 of file ui_kbwidget.h.

Referenced by KbWidget::modeChanged(), and Ui_KbWidget::setupUi().

12.40.3.27 QLabel* Ui_KbWidget::pollLabel [inherited]

Definition at line 65 of file ui_kbwidget.h.

Referenced by KbWidget::devUpdate(), KbWidget::KbWidget(), Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.28 QLabel* Ui_KbWidget::pollLabel2 [inherited]

Definition at line 64 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.29 QComboBox* Ui_KbWidget::profileBox [inherited]

Definition at line 37 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::setupUi(), and KbWidget::updateProfileList().

12.40.3.30 QLabel* Ui_KbWidget::serialLabel [inherited]

Definition at line 60 of file ui_kbwidget.h.

Referenced by KbWidget::devUpdate(), Ui_KbWidget::retranslateUi(), and Ui_KbWidget::setupUi().

12.40.3.31 QTabWidget* Ui_KbWidget::tabWidget [inherited]

Definition at line 38 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), KbWidget::on_tabWidget_currentChanged(), Ui_KbWidget::retranslateUi(), Ui_KbWidget::setupUi(), KbWidget::showFirstTab(), and KbWidget::showLastTab().

12.40.3.32 QSpacerItem* Ui_KbWidget::verticalSpacer [inherited]

Definition at line 55 of file ui_kbwidget.h.

Referenced by Ui_KbWidget::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kbwidget.h

12.41 Key Struct Reference

`#include <src/ckb/keymap.h>`

Collaboration diagram for Key:

Public Member Functions

- const char * storageName () const
- QString friendlyName (bool os=true) const
- operator bool () const
- bool operator! () const

Data Fields

- const char * _storageName
- const char * _friendlyName
- const char * name

- short x
- short y
- short width
- short height
- bool hasLed
- bool hasScan

12.41.1 Detailed Description

Definition at line 8 of file keymap.h.

12.41.2 Member Function Documentation

12.41.2.1 QString Key::friendlyName (bool *os* = `true`) const [inline]

Definition at line 23 of file keymap.h.

References _friendlyName, and name.

Referenced by KbBind::friendlyName(), KeyWidget::mouseMoveEvent(), KeyWidget::paintEvent(), RebindWidget::setBind(), and KbBindWidget::updateSelDisplay().

```
23                                                      {
24          if(os){
25  #ifdef Q_OS_MACX
26              if(!strcmp(name, "lwin")) return "Left Cmd";
27              if(!strcmp(name, "rwin")) return "Right Cmd";
28              if(!strcmp(name, "lalt")) return "Left Option";
29              if(!strcmp(name, "ralt")) return "Right Option";
30              if(!strcmp(name, "prtscn")) return "F13";
31              if(!strcmp(name, "scroll")) return "F14";
32              if(!strcmp(name, "pause")) return "F15";
33              if(!strcmp(name, "ins")) return "Help";
34              if(!strcmp(name, "numlock")) return "Clear";
35  #elif defined(Q_OS_LINUX)
36              if(!strcmp(name, "lwin")) return "Left Super";
37              if(!strcmp(name, "rwin")) return "Right Super";
38  #endif
39          }
40          return _friendlyName ? _friendlyName : QString(
        name).toUpper();
41      }
```

Here is the caller graph for this function:

12.41.2.2 Key::operator bool ( ) const [inline]

Definition at line 44 of file keymap.h.

References name.

```
44 { return name != 0; }
```

12.41.2.3 bool Key::operator! ( ) const [inline]

Definition at line 45 of file keymap.h.

```
45 { return !(bool)*this; }
```

12.41.2.4 const char* Key::storageName ( ) const [inline]

Definition at line 11 of file keymap.h.

References _storageName, and name.

Referenced by KeyMap::toStorage().

```
11 { return _storageName ? _storageName : name; }
```

Here is the caller graph for this function:

12.41.3 Field Documentation

12.41.3.1 const char* Key::_friendlyName

Definition at line 13 of file keymap.h.

Referenced by _patch(), and friendlyName().

12.41.3.2 const char* Key::_storageName

Definition at line 10 of file keymap.h.

Referenced by _patch(), and storageName().

12.41.3.3 bool Key::hasLed

Definition at line 19 of file keymap.h.

Referenced by ColorMap::init(), KeyWidget::mouseMoveEvent(), KeyWidget::mousePressEvent(), KeyWidget::paintEvent(), and KeyWidget::selectAll().

12.41.3.4 bool Key::hasScan

Definition at line 20 of file keymap.h.

Referenced by KeyWidget::mouseMoveEvent(), KeyWidget::mousePressEvent(), KeyWidget::paintEvent(), and KeyWidget::selectAll().

12.41.3.5 short Key::height

Definition at line 17 of file keymap.h.

Referenced by getMap(), KeyWidget::mouseMoveEvent(), KeyWidget::mousePressEvent(), KeyWidget::paintEvent(), and patchANSI().

12.41.3.6 const char* Key::name

Definition at line 14 of file keymap.h.

Referenced by friendlyName(), ColorMap::init(), KeyWidget::mouseMoveEvent(), KeyWidget::mousePressEvent(), operator bool(), KeyWidget::paintEvent(), KeyWidget::selectAll(), and storageName().

12.41.3.7 short Key::width

Definition at line 17 of file keymap.h.

Referenced by getMap(), KeyWidget::mouseMoveEvent(), KeyWidget::mousePressEvent(), KeyWidget::paintEvent(), and patchANSI().

12.41.3.8 short Key::x

Definition at line 16 of file keymap.h.

Referenced by AnimScript::begin(), KeyMap::byPosition(), getMap(), AnimScript::keypress(), KeyWidget::mouseMoveEvent(), KeyWidget::mousePressEvent(), KeyWidget::paintEvent(), and patchANSI().

12.41.3.9 short Key::y

Definition at line 16 of file keymap.h.

Referenced by AnimScript::begin(), KeyMap::byPosition(), getMap(), AnimScript::keypress(), KeyWidget::mouseMoveEvent(), KeyWidget::mousePressEvent(), KeyWidget::paintEvent(), and patchANSI().

The documentation for this struct was generated from the following file:

- src/ckb/keymap.h

12.42 KeyAction Class Reference

```
#include <src/ckb/keyaction.h>
```

Inheritance diagram for KeyAction:

Collaboration diagram for KeyAction:

Public Types

- enum Type { UNBOUND, NORMAL, SPECIAL }

Public Member Functions

- KeyAction (const QString &action, QObject *parent=0)
- QString value () const
- operator QString () const
- KeyAction (QObject *parent=0)
- QString friendlyName (const KeyMap &map) const
- QString driverName () const

- QString macroFullLine () const

  macroFullLine If a macro command and a macro definition exists for the given key, returns the complete string except the leading "$" (the $ may confuse some caller).
- bool isValidMacro () const

  isValidMacro checks whether a keyAction contains a valid macro. This is done easily: If the macro action starts with $macro: and has four elements, delimited by ":", we may assume, that is a structural correct macro action.
- QStringList macroLine () const

  macroLine returns all interresting content for a macro definition.
- QString macroContent () const

  macroContent returns the macro key definition only (the second part of the macro action).
- void macroDisplay ()

  Debug output for invalid macro Definitions.
- Type type () const
- bool isUnbound () const
- bool isNormal () const
- bool isSpecial () const
- bool isMedia () const
- bool isProgram () const
- bool isAnim () const
- bool isMacro () const
- bool isDPI () const
- bool isMouse () const
- QString specialInfo (int &parameter) const
- int programInfo (QString &onPress, QString &onRelease) const
- int dpiInfo (QPoint &custom) const
- QUuid animInfo (bool &onlyOnce, bool &stopOnRelease) const
- void keyEvent (KbBind *bind, bool down)
- void keyRelease (KbBind *bind)
- void adjustDisplay ()
- ~KeyAction ()

Static Public Member Functions

- static QString noAction ()
- static QString defaultAction (const QString &key)
- static QString modeAction (int mode)
- static QString dpiAction (int level, int customX=0, int customY=0)
- static QString lightAction (int type=LIGHT_UP_WRAP)
- static QString lockAction (int type=LOCK_TOGGLE)
- static QString programAction (const QString &onPress, const QString &onRelease, int stop)
- static QString animAction (const QUuid &guid, bool onlyOnce, bool stopOnRelease)
- static QString macroAction (QString macroDef)

  well documented in cpp file

Static Public Attributes

- static const int MODE_PREV = -2
- static const int MODE_NEXT = -1
- static const int MODE_PREV_WRAP = -4
- static const int MODE_NEXT_WRAP = -3
- static const int DPI_UP = -2
- static const int DPI_DOWN = -1
- static const int DPI_SNIPER = 0

- static const int DPI_CUSTOM = 6
- static const int LIGHT_UP = 0
- static const int LIGHT_DOWN = 1
- static const int LIGHT_UP_WRAP = 2
- static const int LIGHT_DOWN_WRAP = 3
- static const int LOCK_TOGGLE = 0
- static const int LOCK_ON = 1
- static const int LOCK_OFF = 2
- static const int PROGRAM_PR_MULTI = 0x04
- static const int PROGRAM_PR_INDEF = 0x00
- static const int PROGRAM_PR_KRSTOP = 0x01
- static const int PROGRAM_PR_KPSTOP = 0x02
- static const int PROGRAM_RE_MULTI = 0x40
- static const int PROGRAM_RE_INDEF = 0x00
- static const int PROGRAM_RE_KPSTOP = 0x20

Private Member Functions

- void operator= (const KeyAction &rhs)

  ccMSC: Don't copy key actions (the old one needs to be deleted first) frickler24: statement left as described, but copying is done in KbBind copy constructor
- KeyAction (const KeyAction &rhs)

Private Attributes

- QString _value
- QProcess * preProgram
- QProcess * relProgram
- quint64 sniperValue

12.42.1 Detailed Description

Definition at line 13 of file keyaction.h.

12.42.2 Member Enumeration Documentation

12.42.2.1 enum KeyAction::Type

Enumerator

UNBOUND

NORMAL

SPECIAL

Definition at line 125 of file keyaction.h.

```
125             {
126         UNBOUND,
127         NORMAL,
128         SPECIAL,
129     };
```

12.42.3 Constructor & Destructor Documentation

12.42.3.1 KeyAction::KeyAction (const QString & *action*, QObject * *parent* = 0)

Definition at line 22 of file keyaction.cpp.

```
23     : QObject(parent), _value(action), preProgram(0),
      relProgram(0), sniperValue(0)
24 {
25 }
```

12.42.3.2 KeyAction::KeyAction (QObject * *parent* = 0) [explicit]

Definition at line 27 of file keyaction.cpp.

```
28     : QObject(parent), _value(""), preProgram(0),
      relProgram(0), sniperValue(0)
29 {
30 }
```

12.42.3.3 KeyAction::~KeyAction ( )

Definition at line 32 of file keyaction.cpp.

References preProgram, and relProgram.

```
32                     {
33     // Clean up processes
34     if(preProgram){
35         preProgram->kill();
36         delete preProgram;
37     }
38     if(relProgram){
39         relProgram->kill();
40         delete relProgram;
41     }
42 }
```

12.42.3.4 KeyAction::KeyAction (const KeyAction & *rhs*) [inline],[private]

Definition at line 166 of file keyaction.h.

```
166 : QObject() {}
```

12.42.4 Member Function Documentation

12.42.4.1 void KeyAction::adjustDisplay ( )

Definition at line 445 of file keyaction.cpp.

Referenced by keyEvent().

```
445                             {
446 #ifdef USE_LIBX11
447     // Try to get the current display from the X server
448     char* display_name = XDisplayName(NULL);
449     if(!display_name)
450         return;
451     Display* display = XOpenDisplay(display_name);
452     if(!display)
453         return;
454     char* display_string = DisplayString(display);
455     if(!display_string || strlen(display_string) == 0){
```

```
        XCloseDisplay(display);
        return;
    }
    size_t envstr_size = strlen(display_string) + 4;
    char* envstr = new char[envstr_size];
    strncpy(envstr, display_string, envstr_size);
    envstr[envstr_size - 1] = 0;

    Window root_window = XRootWindow(display, DefaultScreen(display));
    Window root_window_ret, child_window_ret, window;
    XWindowAttributes attr;
    int root_x, root_y, win_x, win_y;
    unsigned int mask_ret;

    // Find the screen which currently has the mouse
    XQueryPointer(display, root_window, &root_window_ret, &child_window_ret, &root_x, &root_y, &win_x, &
win_y, &mask_ret);
    if(child_window_ret == (Window)NULL)
        window = root_window_ret;
    else
        window = child_window_ret;
    XGetWindowAttributes(display, window,  &attr);

    char* ptr = strchr(envstr, ':');
    if(ptr){
        ptr = strchr(ptr, '.');
        if(ptr)
            *ptr = '\0';
        char buf[16];
        snprintf(buf, sizeof(buf), ".%i", XScreenNumberOfScreen(attr.screen));
        strncat(envstr, buf, envstr_size - 1 - strlen(envstr));

        // Update environment variable
        setenv("DISPLAY", envstr, 1);
    }

    delete[] envstr;
    XCloseDisplay(display);
#endif
}
```

Here is the caller graph for this function:

12.42.4.2 QString KeyAction::animAction (const QUuid & *guid*, bool *onlyOnce*, bool *stopOnRelease*) [static]

Definition at line 175 of file keyaction.cpp.

References ANIM_KRSTOP, and ANIM_ONCE.

Referenced by RebindWidget::applyChanges().

```
175                                                                                                    {
176     int flags = (onlyOnce ? ANIM_ONCE : 0) | (stopOnRelease ?
    ANIM_KRSTOP : 0);
177     return "$anim:" + guid.toString() + QString("+%1").arg(flags);
178 }
```

Here is the caller graph for this function:

12.42.4.3 QUuid KeyAction::animInfo (bool & *onlyOnce*, bool & *stopOnRelease*) const

Definition at line 216 of file keyaction.cpp.

References _value, ANIM_KRSTOP, ANIM_ONCE, and isAnim().

Referenced by keyEvent(), and RebindWidget::setSelection().

```
216                                                                 {
217     if(!isAnim())
218         return QUuid();
219     QString param = _value.mid(6);
220     QStringList split = param.split("+");
221     if(split.length() < 2)
222         return QUuid();
223     QUuid id = split[0];
224     int flags = split[1].toInt();
225     onlyOnce = !!(flags & ANIM_ONCE);
226     stopOnRelease = !!(flags & ANIM_KRSTOP);
227     return id;
228 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.4 QString KeyAction::defaultAction (const QString & *key*) [static]

Definition at line 44 of file keyaction.cpp.

Referenced by KbBind::bindAction(), KbBind::defaultAction(), and KbBind::save().

```
44                                                  {
45     // G1-G18 are unbound by default
46     if(key.length() >= 2 && key[0] == 'g'
47         && ((key.length() == 2 && key[1] >= '0' && key[1] <= '9')
48         || (key.length() == 3 && key[1] == '1' && key[2] >= '0' && key[2] <= '8')))
49         return "";
50     // So are thumbgrid buttons
51     if(key.startsWith("thumb"))
52         return "";
53     // TODO: default action for MR
54     if(key == "mr")
55         return "";
56     // M1-M3 switch modes
```

```
    if(key == "m1")
        return "$mode:0";
    if(key == "m2")
        return "$mode:1";
    if(key == "m3")
        return "$mode:2";
    // Brightness and Win Lock are their own functions
    if(key == "light")
        return "$light:2";
    if(key == "lock")
        return "$lock:0";
    // DPI buttons
    if(key == "dpiup")
        return "$dpi:-2";
    if(key == "dpidn")
        return "$dpi:-1";
    if(key == "sniper")
        return "$dpi:0";
    // Everything else is a standard keypress
    return key;
}
```

Here is the caller graph for this function:

12.42.4.5 QString KeyAction::dpiAction (int *level*, int *customX* = 0, int *customY* = 0) [static]

Definition at line 153 of file keyaction.cpp.

References DPI_CUSTOM.

Referenced by RebindWidget::applyChanges().

```
153                                                                 {
154     QString action = tr("$dpi:%1").arg(level);
155     if(level == DPI_CUSTOM)
156         action += tr("+%1+%2").arg(customX).arg(customY);
157     return action;
158 }
```

Here is the caller graph for this function:

12.42.4.6 int KeyAction::dpiInfo (QPoint & *custom*) const

Definition at line 202 of file keyaction.cpp.

References _value, DPI_CUSTOM, and isDPI().

Referenced by friendlyName(), keyEvent(), and RebindWidget::setSelection().

```
                                        {
    if(!isDPI())
        return 0;
    QString param = _value.mid(5);
    QStringList lxy = param.split("+");
    int level = lxy[0].toInt();
    if(level == DPI_CUSTOM){
        if(lxy.length() != 3)
            return 0;
        custom = QPoint(lxy[1].toInt(), lxy[2].toInt());
    }
    return level;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.7 QString KeyAction::driverName ( ) const

Definition at line 230 of file keyaction.cpp.

References _value, and isSpecial().

Referenced by KbBind::update().

```
                                        {
    if(isSpecial())
        return "";
    return _value;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.8 QString KeyAction::friendlyName (const KeyMap & *map*) const

Definition at line 79 of file keyaction.cpp.

References _value, DPI_CUSTOM, DPI_DOWN, DPI_SNIPER, DPI_UP, dpiInfo(), KeyMap::friendlyName(), KeyMap::layout(), LIGHT_DOWN, LIGHT_DOWN_WRAP, LIGHT_UP, LIGHT_UP_WRAP, LOCK_OFF, LOCK_ON, LOCK_TOGGLE, MODE_NEXT, MODE_NEXT_WRAP, MODE_PREV, and MODE_PREV_WRAP.

```
79                                                          {
80      if(_value.isEmpty())
81          return "Unbound";
82      QStringList parts = _value.split(":");
83      QString prefix = parts[0];
84      if(parts.length() < 2){
85          KeyMap::Layout layout = map.layout();
86          QString name = KeyMap::friendlyName(_value, layout);
87          if(name.isEmpty())
88              return "(Unknown)";
89          return name;
90      }
91      int suffix = parts[1].toInt();
92      if(prefix == "$mode"){
93          switch(suffix){
94          case MODE_PREV:
95          case MODE_PREV_WRAP:
96              return "Switch to previous mode";
97          case MODE_NEXT:
98          case MODE_NEXT_WRAP:
99              return "Switch to next mode";
100         default:
101             return tr("Switch to mode %1").arg(suffix + 1);
102         }
103     } else if(prefix == "$dpi"){
104         // Split off custom parameters (if any)
105         int level = parts[1].split("+")[0].toInt();
106         switch(level){
107         case DPI_UP:
108             return "DPI up";
109         case DPI_DOWN:
110             return "DPI down";
111         case DPI_SNIPER:
112             return "Sniper";
113         case DPI_CUSTOM:{
114             QPoint xy;
115             dpiInfo(xy);
116             return tr("DPI: %1, %2").arg(xy.x()).arg(xy.y());
117         }
118         default:
119             return tr("DPI stage %1").arg(level);
120         }
121     } else if(prefix == "$light"){
122         switch(suffix){
123         case LIGHT_UP:
124         case LIGHT_UP_WRAP:
125             return "Brightness up";
126         case LIGHT_DOWN:
127         case LIGHT_DOWN_WRAP:
128             return "Brightness down";
129         }
130     } else if(prefix == "$lock"){
131         switch(suffix){
132         case LOCK_TOGGLE:
133             return "Toggle Windows lock";
134         case LOCK_ON:
135             return "Windows lock on";
136         case LOCK_OFF:
```

```
            return "Windows lock off";
        }
    } else if(prefix == "$anim"){
        return "Start animation";
    } else if(prefix == "$program"){
        return "Launch program";
    } else if(prefix == "$macro"){
        return "Send G-key macro";
    }
    return "(Unknown)";
}
```

Here is the call graph for this function:

12.42.4.9 bool KeyAction::isAnim ( ) const [inline]

Definition at line 138 of file keyaction.h.

References _value.

Referenced by animInfo(), and RebindWidget::setSelection().

```
138 { return _value.startsWith("$anim:"); }
```

Here is the caller graph for this function:

12.42.4.10 bool KeyAction::isDPI ( ) const [inline]

Definition at line 141 of file keyaction.h.

References _value.

Referenced by dpiInfo(), isMouse(), and RebindWidget::setSelection().

```
141 { return _value.startsWith("$dpi:"); }
```

Here is the caller graph for this function:

12.42.4.11 bool KeyAction::isMacro ( ) const [inline]

Definition at line 139 of file keyaction.h.

References _value.

Referenced by isValidMacro(), macroDisplay(), and macroFullLine().

```
139 { return _value.startsWith("$macro:"); }
```

Here is the caller graph for this function:

12.42.4.12 bool KeyAction::isMedia ( ) const [inline]

Definition at line 135 of file keyaction.h.

References _value.

```
135 { return _value == "mute" || _value == "volup" || _value == "voldn" ||
      _value == "stop" || _value == "prev" || _value == "play" ||
      _value == "next"; }
```

12.42.4.13 bool KeyAction::isMouse ( ) const [inline]

Definition at line 142 of file keyaction.h.

References _value, isDPI(), and isNormal().

Referenced by RebindWidget::setSelection().

```
142 { return (isNormal() && (_value.startsWith("mouse") || _value.startsWith("wheel"))) ||
      isDPI(); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.14 bool KeyAction::isNormal ( ) const [inline]

Definition at line 132 of file keyaction.h.

References NORMAL, and type().

Referenced by isMouse(), RebindWidget::setBind(), and RebindWidget::setSelection().

```
132 { return type() == NORMAL; }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.15 bool KeyAction::isProgram ( ) const [inline]

Definition at line 137 of file keyaction.h.

References _value.

Referenced by programInfo(), and RebindWidget::setSelection().

```
137 { return _value.startsWith("$program:"); }
```

Here is the caller graph for this function:

12.42.4.16 bool KeyAction::isSpecial ( ) const [inline]

Definition at line 133 of file keyaction.h.

References SPECIAL, and type().

Referenced by driverName(), keyEvent(), and RebindWidget::setSelection().

```
133 { return type() == SPECIAL; }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.17 bool KeyAction::isUnbound ( ) const [inline]

Definition at line 131 of file keyaction.h.

References type(), and UNBOUND.

```
131 { return type() == UNBOUND; }
```

Here is the call graph for this function:

12.42.4.18 bool KeyAction::isValidMacro ( ) const [inline]

Returns

bool as true iff the macro definition contains all four elements.

Definition at line 54 of file keyaction.h.

References _value, and isMacro().

Referenced by macroContent(), macroDisplay(), macroLine(), RebindWidget::setSelection(), and KbBind::update().

```
54                                          {
55          if (isMacro()) {
56              QStringList ret;
57              ret =_value.split(":");
58              return (ret.count() == 4);
59          } else {
60              return false;
61          }
62      }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.19 void KeyAction::keyEvent (KbBind * *bind*, bool *down*)

Definition at line 236 of file keyaction.cpp.

References _value, adjustDisplay(), anim, animInfo(), KbProfile::currentMode(), Kb::currentProfile(), KbBind::devParent(), KbLight::dimming(), KbPerf::dpi(), KbPerf::DPI_COUNT, DPI_CUSTOM, DPI_DOWN, DPI_SNIPER, DPI_UP, KbPerf::dpiDown(), dpiInfo(), KbPerf::dpiUp(), KbLight::findAnim(), KbProfile::indexOf(), KbAnim::isActive(), isSpecial(), KbBind::light(), LIGHT_DOWN, LIGHT_DOWN_WRAP, LIGHT_UP, LIGHT_UP_WRAP, LOCK_OFF, LOCK_ON, LOCK_TOGGLE, KbLight::MAX_DIM, MODE_NEXT, MODE_NEXT_WRAP, MODE_PREV, MODE_PREV_WRAP, KbProfile::modeCount(), KbProfile::modes(), KbBind::perf(), KbPerf::popDpi(), preProgram, PROGRAM_PR_KPSTOP, PROGRAM_PR_KRSTOP, PROGRAM_PR_MULTI, PROGRAM_RE_KPSTOP, PROGRAM_RE_MULTI, programInfo(), KbPerf::pushDpi(), KbPerf::pushSniper(), relProgram, Kb::setCurrentMode(), sniperValue, KbAnim::stop(), KbAnim::trigger(), and KbBind::winLock().

Referenced by KbBind::keyEvent().

```
236                                                 {
237     // No need to respond to standard actions
238     if(!isSpecial())
239         return;
240     QStringList parts = _value.split(":");
241     if(parts.length() < 2)
242         return;
243     QString prefix = parts[0];
244     int suffix = parts[1].toInt();
245     if(prefix == "$mode"){
246         if(!down)
247             return;
248         // Change mode
249         Kb* device = bind->devParent();
250         KbProfile* currentProfile = device->currentProfile();
251         int mode = currentProfile->indexOf(currentProfile->currentMode());
252         int modeCount = currentProfile->modeCount();
253         switch(suffix){
254         case MODE_PREV_WRAP:
255             mode--;
256             if(mode < 0)
257                 mode = modeCount - 1;
258             break;
259         case MODE_NEXT_WRAP:
260             mode++;
261             if(mode >= modeCount)
262                 mode = 0;
263             break;
264         case MODE_PREV:
265             mode--;
266             break;
267         case MODE_NEXT:
268             mode++;
269             break;
270         default:
271             // Absolute
272             mode = suffix;
273             break;
274         }
275         if(mode < 0 || mode >= modeCount)
276             return;
277         device->setCurrentMode(currentProfile->modes()[mode]);
278     } else if(prefix == "$dpi"){
279         KbPerf* perf = bind->perf();
280         int level = parts[1].split("+")[0].toInt();
281         switch(level){
282         case DPI_UP:
```

```
            if(!down)
                return;
            perf->dpiUp();
            break;
        case DPI_DOWN:
            if(!down)
                return;
            perf->dpiDown();
            break;
        case DPI_SNIPER:
            if(down)
                sniperValue = perf->pushSniper();
            else {
                perf->popDpi(sniperValue);
                sniperValue = 0;
            }
            break;
        case DPI_CUSTOM:{
            QPoint xy;
            dpiInfo(xy);
            if(xy.x() <= 0 || xy.y() <= 0)
                break;
            if(down)
                sniperValue = perf->pushDpi(xy);
            else {
                perf->popDpi(sniperValue);
                sniperValue = 0;
            }
            break;
        }
        default:
            if(level < 1 || level >= KbPerf::DPI_COUNT
                    || !down)
                return;
            perf->dpi(level);
            break;
        }
    } else if(prefix == "$light"){
        if(!down)
            return;
        // Change brightness
        KbLight* light = bind->light();
        int dim = light->dimming();
        switch(suffix){
        case LIGHT_UP:
            if(dim > 0)
                dim--;
            break;
        case LIGHT_DOWN:
            if(dim < KbLight::MAX_DIM)
                dim++;
            break;
        case LIGHT_UP_WRAP:
            dim--;
            if(dim < 0)
                dim = KbLight::MAX_DIM;
            break;
        case LIGHT_DOWN_WRAP:
            dim++;
            if(dim > KbLight::MAX_DIM)
                dim = 0;
            break;
        }
        light->dimming(dim);
    } else if(prefix == "$lock"){
        if(!down)
            return;
        // Change win lock
        switch(suffix){
        case LOCK_TOGGLE:
            bind->winLock(!bind->winLock());
            break;
        case LOCK_ON:
            bind->winLock(true);
            break;
        case LOCK_OFF:
            bind->winLock(false);
            break;
        }
    } else if(prefix == "$anim"){
        // Start animation
        bool onlyOnce = false, stopOnRelease = false;
        QUuid id = animInfo(onlyOnce, stopOnRelease);
        KbAnim* anim = bind->light()->findAnim(id);
        if(!anim)
            return;
        if(down){
```

```
            if(!onlyOnce || !anim->isActive())
                // If "only once" is enabled, don't start the animation when it's already running
                anim->trigger(QDateTime::currentMSecsSinceEpoch(), true);
        } else if(stopOnRelease){
            // Key released - stop animation
            anim->stop();
        }
    } else if(prefix == "$program"){
        // Launch program
        QString onPress, onRelease;
        int stop = programInfo(onPress, onRelease);
        // Stop running programs based on setting
        QProcess* process = 0;
        if(down){
            if(stop & PROGRAM_PR_KPSTOP){
                process = preProgram;
                if(process)
                    process->kill();
                process = 0;
            }
            if(stop & PROGRAM_RE_KPSTOP)
                process = relProgram;
        } else {
            if(stop & PROGRAM_PR_KRSTOP)
                process = preProgram;
        }
        if(process)
            process->kill();
        // Launch new process if requested
        QString& program = down ? onPress : onRelease;
        if(program.isEmpty())
            return;
        // Check if the program is running already. If so, don't start it again.
        process = down ? preProgram : relProgram;
        if(process){
            if(process->state() == QProcess::NotRunning)
                delete process;
            else
                return;
        }

        // Adjust the selected display.
        adjustDisplay();

        // Start the program. Wrap it around sh to parse arguments.
        if((down && (stop & PROGRAM_PR_MULTI))
                || (!down && (stop & PROGRAM_RE_MULTI))){
            // Multiple instances allowed? Start detached process
            QProcess::startDetached("sh", QStringList() << "-c" << program);
        } else {
            process = new QProcess(this);
            process->start("sh", QStringList() << "-c" << program);
            if(down)
                preProgram = process;
            else
                relProgram = process;
        }
    } else if (prefix == "$macro") {
        // Do nothing, because all work is done by the keyboard itself.
        // For now, there is no reason to react on G-key press or release.
        // If u find some reason, then here is the place for it.
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.20 void KeyAction::keyRelease (KbBind * *bind*)

12.42.4.21 QString KeyAction::lightAction (int *type* = LIGHT_UP_WRAP) [static]

Definition at line 160 of file keyaction.cpp.

Referenced by RebindWidget::applyChanges().

```
160                                     {
161     return QString("$light:%1").arg(type);
162 }
```

Here is the caller graph for this function:

12.42.4.22 QString KeyAction::lockAction (int *type* = LOCK_TOGGLE) [static]

Definition at line 164 of file keyaction.cpp.

Referenced by RebindWidget::applyChanges().

```
164                                     {
165     return QString("$lock:%1").arg(type);
166 }
```

Here is the caller graph for this function:

12.42.4.23 QString KeyAction::macroAction (QString *macroDef*) [static]

KeyAction::macroAction is called when applying changes on a macro definition. macroAction ist called while being in the macro pane and clicking Apply with something in the Macro Text Box. It tags that input with "$macro:" for further recognition.

Parameters

macroDef	holds the String containing parts 2-4 of a complete macro definition.

Returns

QString holding the complete G-Key macro definition (parts 1-4)

Definition at line 504 of file keyaction.cpp.

Referenced by RebindWidget::applyChanges().

```
504                                     {
505     return QString ("$macro:%1").arg(macroDef);
506 }
```

Here is the caller graph for this function:

12.42.4.24 QString KeyAction::macroContent ( ) const [inline]

Returns

QString macroContent

Definition at line 83 of file keyaction.h.

References _value, and isValidMacro().

Referenced by RebindWidget::setSelection(), and KbBind::update().

```
83                                      {
84          return isValidMacro() ? _value.split(":")[1] : "";
85      }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.25 void KeyAction::macroDisplay ( )

KeyAction::macroDisplay is just for debugging. It shows the content of the key action and some other info.

General Info on KeyAction::_value for macros: That string consists of 4 elements, all delimited by ":".

1. Macro command indicator "$macro:"
2. Macro Key Definition (coming from pteMacroBox): This sequence will program the keyboard and is hardly readable

3. Readable Macro String: This is displayed in pteMacroText

4. Readable Macro Comment:This is displayed in pteMacroComment

Definition at line 437 of file keyaction.cpp.

References _value, isMacro(), and isValidMacro().

Referenced by RebindWidget::setSelection().

```
437                                 {
438     qDebug() << "isMacro returns" << (isMacro() ? "true" : "false");
439     qDebug() << "isValidMacro returns" << (isValidMacro() ? "true" : "false");
440     QStringList ret =_value.split(":");
441     qDebug() << "Macro definition conains" << ret.count() << "elements";
442     qDebug() << "Macro definition is" << _value;
443 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.26 QString KeyAction::macroFullLine ( ) const [inline]

Returns

QString All 4 parts are returned in one QString. If no definition exists, return ""

Definition at line 43 of file keyaction.h.

References _value, and isMacro().

```
43                                          {
44          return isMacro() ? _value.right(_value.length()-1) : "";
45      }
```

Here is the call graph for this function:

12.42.4.27 QStringList KeyAction::macroLine ( ) const [inline]

Returns

QStringList returns the Macro Key Definition, Readble Macro String and Readable Macro Comment as QStringList.

Definition at line 70 of file keyaction.h.

References _value, and isValidMacro().

Referenced by RebindWidget::setSelection().

```
70                                          {
71          if (isValidMacro()) {
72              QStringList ret =_value.split(":");
73              ret.removeFirst();
74              return ret;
75          } else return QStringList();
76      }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.28 QString KeyAction::modeAction (int *mode*) [static]

Definition at line 149 of file keyaction.cpp.

Referenced by RebindWidget::applyChanges().

```
149                                     {
150     return QString("$mode:%1").arg(mode);
151 }
```

Here is the caller graph for this function:

12.42.4.29 static QString KeyAction::noAction ( ) [inline], [static]

Definition at line 25 of file keyaction.h.

```
25 { return ""; }
```

12.42.4.30 KeyAction::operator QString ( ) const [inline]

Definition at line 20 of file keyaction.h.

References _value.

```
20 { return _value; }
```

12.42.4.31 void KeyAction::operator= (const KeyAction & *rhs*) [inline], [private]

Definition at line 165 of file keyaction.h.

```
165 {}
```

12.42.4.32 QString KeyAction::programAction (const QString & *onPress*, const QString & *onRelease*, int *stop*) [static]

Definition at line 168 of file keyaction.cpp.

Referenced by RebindWidget::applyChanges().

```
168                                                                                                    {
169     // URL-encode the commands and place them in the string (":" and "+" are both replaced, so they won't
       interfere)
170     return "$program:" + QString::fromUtf8(QUrl::toPercentEncoding(onPress.trimmed())) + "+" +
      QString::fromUtf8(QUrl::toPercentEncoding(onRelease.trimmed())) + QString("+%1").arg(stop);
171 }
```

Here is the caller graph for this function:

12.42.4.33 int KeyAction::programInfo (QString & *onPress*, QString & *onRelease*) const

Definition at line 190 of file keyaction.cpp.

References _value, and isProgram().

Referenced by keyEvent(), and RebindWidget::setSelection().

```
190                                                                                    {
191     if(!isProgram())
192         return 0;
193     QString param = _value.mid(9);
194     QStringList programs = param.split("+");
195     if(programs.length() != 3)
196         return 0;
197     onPress = QUrl::fromPercentEncoding(programs[0].toUtf8());
198     onRelease = QUrl::fromPercentEncoding(programs[1].toUtf8());
199     return programs[2].toInt();
200 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.42.4.34 QString KeyAction::specialInfo (int & *parameter*) const

Definition at line 180 of file keyaction.cpp.

References _value.

Referenced by RebindWidget::setSelection().

```
180                                                 {
181     QStringList list = _value.split(":");
182     if(list.length() < 2){
183         parameter = INT_MIN;
184         return "";
185     }
186     parameter = list[1].toInt();
187     return list[0].replace("$", "");
188 }
```

Here is the caller graph for this function:

12.42.4.35 KeyAction::Type KeyAction::type ( ) const

Definition at line 14 of file keyaction.cpp.

References _value, NORMAL, SPECIAL, and UNBOUND.

Referenced by isNormal(), isSpecial(), isUnbound(), KbBindWidget::on_copyButton_clicked(), and KbBindWidget::on_resetButton_clicked().

```
14                                  {
15     if(_value.isEmpty())
16         return UNBOUND;
17     if(_value.at(0) == '$')
18         return SPECIAL;
19     return NORMAL;
20 }
```

Here is the caller graph for this function:

12.42.4.36 QString KeyAction::value ( ) const [inline]

Definition at line 19 of file keyaction.h.

References _value.

Referenced by KbBind::action(), KbBind::KbBind(), KbBind::save(), and KbBind::update().

```
19 { return _value; }
```

Here is the caller graph for this function:

12.42.5 Field Documentation

12.42.5.1 QString KeyAction::_value [private]

Definition at line 168 of file keyaction.h.

Referenced by animInfo(), dpiInfo(), driverName(), friendlyName(), isAnim(), isDPI(), isMacro(), isMedia(), isMouse(), isProgram(), isValidMacro(), keyEvent(), macroContent(), macroDisplay(), macroFullLine(), macroLine(), operator QString(), programInfo(), specialInfo(), type(), and value().

12.42.5.2 const int KeyAction::DPI_CUSTOM = 6 [static]

Definition at line 107 of file keyaction.h.

Referenced by dpiAction(), dpiInfo(), friendlyName(), keyEvent(), and RebindWidget::setSelection().

12.42.5.3 const int KeyAction::DPI_DOWN = -1 [static]

Definition at line 106 of file keyaction.h.

Referenced by friendlyName(), and keyEvent().

12.42.5.4 const int KeyAction::DPI_SNIPER = 0 [static]

Definition at line 107 of file keyaction.h.

Referenced by friendlyName(), and keyEvent().

12.42.5.5 const int KeyAction::DPI_UP = -2 [static]

Definition at line 106 of file keyaction.h.

Referenced by friendlyName(), and keyEvent().

12.42.5.6 const int KeyAction::LIGHT_DOWN = 1 [static]

Definition at line 110 of file keyaction.h.

Referenced by friendlyName(), keyEvent(), and RebindWidget::setSelection().

12.42.5.7 const int KeyAction::LIGHT_DOWN_WRAP = 3 [static]

Definition at line 111 of file keyaction.h.

Referenced by friendlyName(), keyEvent(), and RebindWidget::setSelection().

12.42.5.8 const int KeyAction::LIGHT_UP = 0 [static]

Definition at line 110 of file keyaction.h.

Referenced by friendlyName(), keyEvent(), and RebindWidget::setSelection().

12.42.5.9 const int KeyAction::LIGHT_UP_WRAP = 2 [static]

Definition at line 111 of file keyaction.h.

Referenced by friendlyName(), keyEvent(), and RebindWidget::setSelection().

12.42.5.10 const int KeyAction::LOCK_OFF = 2 [static]

Definition at line 114 of file keyaction.h.

Referenced by friendlyName(), and keyEvent().

12.42.5.11 const int KeyAction::LOCK_ON = 1 [static]

Definition at line 114 of file keyaction.h.

Referenced by friendlyName(), and keyEvent().

12.42.5.12 const int KeyAction::LOCK_TOGGLE = 0 [static]

Definition at line 114 of file keyaction.h.

Referenced by friendlyName(), and keyEvent().

12.42.5.13 const int KeyAction::MODE_NEXT = -1 [static]

Definition at line 102 of file keyaction.h.

Referenced by friendlyName(), keyEvent(), and RebindWidget::setSelection().

12.42.5.14 const int KeyAction::MODE_NEXT_WRAP = -3 [static]

Definition at line 103 of file keyaction.h.

Referenced by friendlyName(), keyEvent(), and RebindWidget::setSelection().

12.42.5.15 const int KeyAction::MODE_PREV = -2 [static]

Definition at line 102 of file keyaction.h.

Referenced by friendlyName(), keyEvent(), and RebindWidget::setSelection().

12.42.5.16 const int KeyAction::MODE_PREV_WRAP = -4 [static]

Definition at line 103 of file keyaction.h.

Referenced by friendlyName(), keyEvent(), and RebindWidget::setSelection().

12.42.5.17 QProcess* KeyAction::preProgram [private]

Definition at line 171 of file keyaction.h.

Referenced by keyEvent(), and ~KeyAction().

12.42.5.18 const int KeyAction::PROGRAM_PR_INDEF = 0x00 [static]

Definition at line 117 of file keyaction.h.

12.42.5.19 const int KeyAction::PROGRAM_PR_KPSTOP = 0x02 [static]

Definition at line 117 of file keyaction.h.

Referenced by keyEvent().

12.42.5.20 const int KeyAction::PROGRAM_PR_KRSTOP = 0x01 [static]

Definition at line 117 of file keyaction.h.

Referenced by keyEvent().

12.42.5.21 const int KeyAction::PROGRAM_PR_MULTI = 0x04 [static]

Definition at line 117 of file keyaction.h.

Referenced by RebindWidget::applyChanges(), keyEvent(), and RebindWidget::setSelection().

12.42.5.22 const int KeyAction::PROGRAM_RE_INDEF = 0x00 [static]

Definition at line 118 of file keyaction.h.

Referenced by RebindWidget::applyChanges(), and RebindWidget::setSelection().

12.42.5.23 const int KeyAction::PROGRAM_RE_KPSTOP = 0x20 [static]

Definition at line 118 of file keyaction.h.

Referenced by RebindWidget::applyChanges(), keyEvent(), and RebindWidget::setSelection().

12.42.5.24 const int KeyAction::PROGRAM_RE_MULTI = 0x40 [static]

Definition at line 118 of file keyaction.h.

Referenced by RebindWidget::applyChanges(), keyEvent(), and RebindWidget::setSelection().

12.42.5.25 QProcess* KeyAction::relProgram [private]

Definition at line 172 of file keyaction.h.

Referenced by keyEvent(), and ~KeyAction().

12.42.5.26 quint64 KeyAction::sniperValue [private]

Definition at line 175 of file keyaction.h.

Referenced by keyEvent().

The documentation for this class was generated from the following files:

- src/ckb/keyaction.h
- src/ckb/keyaction.cpp

12.43 KeyMap Class Reference

```
#include <src/ckb/keymap.h>
```

Collaboration diagram for KeyMap:

Public Types

- enum Model {
  NO_MODEL = -1, K65, K70, K95,
  STRAFE, M65, SABRE, SCIMITAR,
  _MODEL_MAX }
- enum Layout {
  NO_LAYOUT = -1, DK, EU, EU_DVORAK,
  GB, GB_DVORAK, US, US_DVORAK,
  FR, DE, IT, NO,
  PL, MX, ES, SE,
  _LAYOUT_MAX }

Public Member Functions

- bool isISO () const
- bool isKeyboard () const
- bool isMouse () const
- KeyMap ()
- KeyMap (Model _keyModel, Layout _keyLayout)
- QString strLayout () const
- QString strModel () const
- Model model () const
- Layout layout () const
- QString name () const
- uint count () const
- uint width () const
- uint height () const
- Key key (const QString &name) const
- Key operator[] (const QString &name) const
- bool contains (const QString &name) const
- const QHash< QString, Key > & map () const
- operator const QHash< QString, Key > & () const
- QStringList keys () const
- QList< Key > positions () const
- QString toStorage (const QString &name)
- QString fromStorage (const QString &storage)
- QStringList byPosition () const

Static Public Member Functions

- static QStringList layoutNames ()
- static bool isISO (Layout layout)
- static Layout locale ()
- static bool isKeyboard (Model model)
- static bool isMouse (Model model)
- static KeyMap fromName (const QString &name)
- static Layout getLayout (const QString &name)
- static QString getLayout (Layout layout)
- static Model getModel (const QString &name)
- static QString getModel (Model model)
- static QString friendlyName (const QString &key, Layout layout=US)

Static Private Member Functions

- static int modelWidth (Model model)
- static int modelHeight (Model model)

Private Attributes

- QHash< QString, Key > _keys
- short keyWidth
- short keyHeight
- Model keyModel:8
- Layout keyLayout:8

12.43.1 Detailed Description

Definition at line 49 of file keymap.h.

12.43.2 Member Enumeration Documentation

12.43.2.1 enum KeyMap::Layout

Enumerator

NO_LAYOUT

DK

EU

EU_DVORAK

GB

GB_DVORAK

US

US_DVORAK

FR

DE

IT

NO

PL

MX

ES

SE

_LAYOUT_MAX

Definition at line 65 of file keymap.h.

```
65                  {
66          NO_LAYOUT = -1,
67          DK,                     // Danish
68          EU,                     // English (EU)
69          EU_DVORAK,
70          GB,                     // English (UK)
71          GB_DVORAK,
72          US,                     // English (US)
73          US_DVORAK,
74          FR,                     // French
75          DE,                     // German
76          IT,                     // Italian
77          NO,                     // Norwegian
78          PL,                     // Polish (identical to US)
79          MX,                     // Spanish (Mexico/Latin America)
80          ES,                     // Spanish (Spain)
81          SE,                     // Swedish
82          _LAYOUT_MAX
83      };
```

12.43.2.2 enum KeyMap::Model

Enumerator

NO_MODEL

K65

K70

K95

STRAFE

M65

SABRE

SCIMITAR

_MODEL_MAX

Definition at line 51 of file keymap.h.

```
51                {
52          NO_MODEL = -1,
53          // Keyboard models
54          K65,
55          K70,
56          K95,
57          STRAFE,
58          // Mouse models
59          M65,
60          SABRE,
61          SCIMITAR,
62          _MODEL_MAX
63      };
```

12.43.3 Constructor & Destructor Documentation

12.43.3.1 KeyMap::KeyMap ( )

Definition at line 583 of file keymap.cpp.

Referenced by friendlyName(), and fromName().

```
583                 :
584       keyWidth(0), keyHeight(0),
585       keyModel(NO_MODEL), keyLayout(NO_LAYOUT)
586 {}
```

Here is the caller graph for this function:

12.43.3.2 KeyMap::KeyMap (Model *_keyModel,* Layout *_keyLayout*)

Definition at line 577 of file keymap.cpp.

```
577                                                 :
578     _keys(getMap(_keyModel, _keyLayout)),
579     keyWidth(modelWidth(_keyModel)), keyHeight(
      modelHeight(_keyModel)),
580     keyModel(_keyModel), keyLayout(_keyLayout)
581 {}
```

12.43.4 Member Function Documentation

12.43.4.1 QStringList KeyMap::byPosition ( ) const

Definition at line 588 of file keymap.cpp.

References Key::x, x, Key::y, and y.

Referenced by RebindWidget::setBind().

```
588                                     {
589     // Use QMaps to order the keys
590     QMap<int, QMap<int, QString> > ordered;
591     QHashIterator<QString, Key> i(*this);
592     while(i.hasNext()){
593         i.next();
594         const Key& key = i.value();
595         ordered[key.y][key.x] = i.key();
596     }
597     // Merge them into a single list
598     QStringList result;
599     QMapIterator<int, QMap<int, QString> > y(ordered);
600     while(y.hasNext()){
601         y.next();
602         QMapIterator<int, QString> x(y.value());
603         while(x.hasNext()){
604             x.next();
605             result << x.value();
606         }
607     }
608     return result;
609 }
```

Here is the caller graph for this function:

12.43.4.2 bool KeyMap::contains (const QString & *name*) const [inline]

Definition at line 127 of file keymap.h.

References _keys.

Referenced by friendlyName(), and KbAnimWidget::on_keyButton_clicked().

```
127 { return _keys.contains(name); }
```

Here is the caller graph for this function:

12.43.4.3 uint KeyMap::count ( ) const [inline]

Definition at line 118 of file keymap.h.

References _keys.

Referenced by KeyWidget::map(), KbBindWidget::on_copyButton_clicked(), and KbBindWidget::on_resetButton_clicked().

```
118 { return _keys.count(); }
```

Here is the caller graph for this function:

12.43.4.4 QString KeyMap::friendlyName (const QString & *key*, Layout *layout* = US) [static]

Definition at line 611 of file keymap.cpp.

References contains(), K95, KeyMap(), M65, map(), SCIMITAR, and STRAFE.

Referenced by KeyAction::friendlyName(), and RebindWidget::RebindWidget().

```
611                                                                 {
612     // Try K95 map first
613     // FIXME: This is an odd function and probably should be refactored
614     // it would probably be best to remove the friendly names from the maps and have a completely separate
      name->friendlyName store
615     KeyMap map(K95, layout);
616     if(map.contains(key))
617         return map[key].friendlyName();
618
619     // The only key missing from it should be Fn, which is found on STRAFE
620     map = KeyMap(STRAFE, layout);
621     if(map.contains(key))
622         return map[key].friendlyName();
623
624     // Additionally, there are a handful of keys not present on any physical keyboard, but we need names
      for them
625     if(key == "f13" || key == "f14" || key == "f15" || key == "f16" ||
      key == "f17" || key == "f18" || key == "f19" || key == "f20")
626         return key.toUpper();
627     else if(key == "lightup")
628         return "Screen Brightness Up";
629     else if(key == "lightdn")
630         return "Screen Brightness Down";
631     else if(key == "eject" || key == "power")
632         return key[0].toUpper() + key.mid(1);   // capitalize first letter
633
634     // All other names are found on mice
635     map = KeyMap(SCIMITAR, layout);
```

```
    if(map.contains(key))
        return map[key].friendlyName();
    map = KeyMap(M65, layout);
    if(map.contains(key))
        return map[key].friendlyName();

    // Not found at all
    return "";
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.43.4.5 KeyMap KeyMap::fromName (const QString & *name*) [static]

Definition at line 535 of file keymap.cpp.

References getLayout(), getModel(), and KeyMap().

Referenced by KbBind::load(), and KbLight::load().

```
535                                         {
536     QStringList list = name.trimmed().split(" ");
537     if(list.length() != 2)
538         return KeyMap();
539     return KeyMap(getModel(list[0]), getLayout(list[1]));
540 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.43.4.6 QString KeyMap::fromStorage (const QString & *storage*) [inline]

Definition at line 135 of file keymap.h.

Referenced by KbAnim::KbAnim(), KbBind::load(), and KbLight::load().

```
135 { QHashIterator<QString, Key> i(*this); while(i.hasNext()) { i.next(); const char* s = i.value().
      storageName(); if(s == storage) return i.value().name; } return storage; }
```

Here is the caller graph for this function:

12.43.4.7 KeyMap::Layout KeyMap::getLayout (const QString & *name*) [static]

Definition at line 407 of file keymap.cpp.

References DE, DK, ES, EU, EU_DVORAK, FR, GB, GB_DVORAK, IT, MX, NO, NO_LAYOUT, PL, SE, US, and US_DVORAK.

Referenced by fromName(), SettingsWidget::on_layoutBox_activated(), SettingsWidget::SettingsWidget(), and strLayout().

```
407                                                 {
408     QString lower = name.toLower();
409     if(lower == "dk")
410         return DK;
411     if(lower == "eu")
412         return EU;
413     if(lower == "eu_dvorak")
414         return EU_DVORAK;
415     if(lower == "gb_dvorak")
416         return GB_DVORAK;
417     if(lower == "us")
418         return US;
419     if(lower == "us_dvorak")
420         return US_DVORAK;
421     if(lower == "fr")
422         return FR;
423     if(lower == "de")
424         return DE;
425     if(lower == "it")
426         return IT;
427     if(lower == "no")
428         return NO;
429     if(lower == "pl")
430         return PL;
431     if(lower == "mx")
432         return MX;
433     if(lower == "es")
434         return ES;
435     if(lower == "se")
436         return SE;
437     if(lower == "gb")
438         return GB;
439     return NO_LAYOUT;
440 }
```

Here is the caller graph for this function:

12.43.4.8 QString KeyMap::getLayout (KeyMap::Layout *layout*) [static]

Definition at line 442 of file keymap.cpp.

References DE, DK, ES, EU, EU_DVORAK, FR, GB, GB_DVORAK, IT, MX, NO, PL, SE, US, and US_DVORAK.

```
442                                                 {
443     switch(layout){
444     case DK:
445         return "dk";
446     case EU:
447         return "eu";
448     case EU_DVORAK:
449         return "eu_dvorak";
450     case GB:
451         return "gb";
452     case GB_DVORAK:
453         return "gb_dvorak";
454     case US:
```

```
        return "us";
    case US_DVORAK:
        return "us_dvorak";
    case FR:
        return "fr";
    case DE:
        return "de";
    case IT:
        return "it";
    case NO:
        return "no";
    case PL:
        return "pl";
    case MX:
        return "mx";
    case ES:
        return "es";
    case SE:
        return "se";
    default:
        return "";
    }
}
```

12.43.4.9 KeyMap::Model KeyMap::getModel (const QString & *name*) [static]

Definition at line 495 of file keymap.cpp.

References K65, K70, K95, M65, NO_MODEL, SABRE, SCIMITAR, and STRAFE.

Referenced by fromName(), Kb::Kb(), and strModel().

```
495                                                 {
496     QString lower = name.toLower();
497     if(lower == "k65")
498         return K65;
499     if(lower == "k70")
500         return K70;
501     if(lower == "k95")
502         return K95;
503     if(lower == "strafe")
504         return STRAFE;
505     if(lower == "m65")
506         return M65;
507     if(lower == "sabre")
508         return SABRE;
509     if(lower == "scimitar")
510         return SCIMITAR;
511     return NO_MODEL;
512 }
```

Here is the caller graph for this function:

12.43.4.10 QString KeyMap::getModel (KeyMap::Model *model*) [static]

Definition at line 514 of file keymap.cpp.

References K65, K70, K95, M65, SABRE, SCIMITAR, and STRAFE.

```
514                                             {
515     switch(model){
516     case K65:
517         return "k65";
518     case K70:
519         return "k70";
```

```
    case K95:
        return "k95";
    case STRAFE:
        return "strafe";
    case M65:
        return "m65";
    case SABRE:
        return "sabre";
    case SCIMITAR:
        return "scimitar";
    default:
        return "";
    }
}
```

12.43.4.11 uint KeyMap::height ( ) const [inline]

Definition at line 122 of file keymap.h.

References keyHeight.

Referenced by KeyWidget::drawInfo(), and KeyWidget::map().

```
{ return keyHeight; }
```

Here is the caller graph for this function:

12.43.4.12 static bool KeyMap::isISO (Layout *layout*) [inline],[static]

Definition at line 87 of file keymap.h.

References PL, US, and US_DVORAK.

Referenced by KbBind::isISO(), and RebindWidget::setBind().

```
{ return layout != US && layout != US_DVORAK && layout !=
    PL; }
```

Here is the caller graph for this function:

12.43.4.13 bool KeyMap::isISO ( ) const [inline]

Definition at line 88 of file keymap.h.

References isISO(), and keyLayout.

Referenced by getMap(), isISO(), Kb::Kb(), and Kb::updateLayout().

```
88 { return isISO(keyLayout); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.43.4.14 static bool KeyMap::isKeyboard (Model *model*) [inline], [static]

Definition at line 93 of file keymap.h.

References isMouse(), and NO_MODEL.

Referenced by KbBind::isKeyboard().

```
93 { return !isMouse(model) && model != NO_MODEL; }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.43.4.15 bool KeyMap::isKeyboard ( ) const [inline]

Definition at line 94 of file keymap.h.

References isKeyboard(), and keyModel.

Referenced by Kb::isKeyboard(), and isKeyboard().

```
94 { return isKeyboard(keyModel); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.43.4.16 static bool KeyMap::isMouse (Model *model*) [inline], [static]

Definition at line 95 of file keymap.h.

References M65, SABRE, and SCIMITAR.

Referenced by KbBind::isMouse(), KeyWidget::map(), KbLightWidget::newSelection(), and KeyWidget::paintEvent().

```
95 { return model == M65 || model == SABRE || model ==
     SCIMITAR; }
```

Here is the caller graph for this function:

12.43.4.17 bool KeyMap::isMouse ( ) const [inline]

Definition at line 96 of file keymap.h.

References isMouse(), and keyModel.

Referenced by isKeyboard(), Kb::isMouse(), isMouse(), and KeyWidget::paintEvent().

```
96 { return isMouse(keyModel); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.43.4.18 Key KeyMap::key (const QString & *name*) const [inline]

Definition at line 125 of file keymap.h.

References _keys.

Referenced by AnimScript::begin(), AnimScript::keypress(), KbBind::noAction(), operator[]() , KbBind::setAction(), and toStorage().

```
125 { Key empty = {0,0,0,0,0,0,0,0,0}; return _keys.value(name, empty); }
```

Here is the caller graph for this function:

12.43.4.19 QStringList KeyMap::keys ( ) const [inline]

Definition at line 131 of file keymap.h.

References _keys.

Referenced by KeyWidget::mouseReleaseEvent(), KbBindWidget::on_copyButton_clicked(), KbBindWidget::on_-resetButton_clicked(), KeyWidget::setAnimation(), KeyWidget::setSelection(), and KbBindWidget::updateBind().

```
131 { return _keys.keys(); }
```

Here is the caller graph for this function:

12.43.4.20 Layout KeyMap::layout ( ) const [inline]

Definition at line 114 of file keymap.h.

References keyLayout.

Referenced by KeyAction::friendlyName(), KeyWidget::paintEvent(), and RebindWidget::setBind().

```
114 { return keyLayout; }
```

Here is the caller graph for this function:

12.43.4.21 QStringList KeyMap::layoutNames ( ) [static]

Definition at line 479 of file keymap.cpp.

Referenced by LayoutDialog::LayoutDialog(), and SettingsWidget::SettingsWidget().

```
479                                {
480     return QStringList()
481             << "Danish"
482             << "English (ISO/European)" << "English (ISO/European, Dvorak)"
483             << "English (United Kingdom)" << "English (United Kingdom, Dvorak)"
484             << "English (United States)" << "English (United States, Dvorak)"
485             << "French"
486             << "German"
487             << "Italian"
488             << "Norwegian"
489             << "Polish"
490             << "Spanish (Latin America)"
491             << "Spanish (Spain)"
492             << "Swedish";
493 }
```

Here is the caller graph for this function:

12.43.4.22 KeyMap::Layout KeyMap::locale ( ) [static]

Definition at line 375 of file keymap.cpp.

References DE, DK, ES, FR, GB, IT, MX, NO, PL, SE, and US.

Referenced by SettingsWidget::SettingsWidget().

```
375                                 {
376     setlocale(LC_ALL, "");
377     QString loc = setlocale(LC_CTYPE, 0);
378     loc = loc.toLower().replace('_', '-');
379     if(loc.startsWith("dk-"))
380         return KeyMap::DK;
381     else if(loc.startsWith("fr-"))
382         return KeyMap::FR;
383     else if(loc.startsWith("de-"))
384         return KeyMap::DE;
385     else if(loc.startsWith("it-"))
386         return KeyMap::IT;
387     else if(loc.startsWith("pl-"))
388         return KeyMap::PL;
389     else if(loc.startsWith("no-"))
390         return KeyMap::NO;
391     else if(loc.startsWith("es-es"))
392         // Spain uses the ES layout
393         return KeyMap::ES;
394     else if(loc.startsWith("es-"))
395         // Other Spanish locales use MX
396         return KeyMap::MX;
397     else if(loc.startsWith("se-"))
398         return KeyMap::SE;
399     else if(loc.startsWith("en-us") || loc.startsWith("en-au") || loc.startsWith("en-ca") || loc.startsWith
      ("en-hk") || loc.startsWith("en-in") || loc.startsWith("en-nz") || loc.startsWith("en-ph") || loc.startsWith
      ("en-sg") || loc.startsWith("en-za"))
400         // Most English locales use US
401         return KeyMap::US;
402     else
403         // Default to GB
404         return KeyMap::GB;
405 }
```

Here is the caller graph for this function:

12.43.4.23 const QHash<QString, Key>& KeyMap::map ( ) const [inline]

Definition at line 129 of file keymap.h.

References _keys.

Referenced by friendlyName().

```
129 { return _keys; }
```

Here is the caller graph for this function:

12.43.4.24 Model KeyMap::model ( ) const [inline]

Definition at line 113 of file keymap.h.

References keyModel.

Referenced by KeyWidget::mouseMoveEvent(), KeyWidget::paintEvent(), and KPerfWidget::setPerf().

```
113 { return keyModel; }
```

Here is the caller graph for this function:

12.43.4.25 int KeyMap::modelHeight (Model *model*) [static],[private]

Definition at line 561 of file keymap.cpp.

References K65, K70, K95, K95_HEIGHT, M65, M65_HEIGHT, SABRE, SCIMITAR, and STRAFE.

```
561                                     {
562     switch(model){
563     case K65:
564     case K70:
565     case K95:
566     case STRAFE:
567         return K95_HEIGHT;
568     case M65:
569     case SABRE:
570     case SCIMITAR:
571         return M65_HEIGHT;
572     default:
573         return 0;
574     }
575 }
```

12.43.4.26 int KeyMap::modelWidth (Model *model*) [static],[private]

Definition at line 542 of file keymap.cpp.

References K65, K65_WIDTH, K70, K70_WIDTH, K95, K95_WIDTH, KSTRAFE_WIDTH, M65, M65_WIDTH, SABRE, SCIMITAR, and STRAFE.

```
542                                     {
543     switch(model){
544     case K65:
545         return K65_WIDTH;
546     case K70:
547         return K70_WIDTH;
548     case K95:
549         return K95_WIDTH;
550     case STRAFE:
551         return KSTRAFE_WIDTH;
552     case M65:
553     case SABRE:
554     case SCIMITAR:
555         return M65_WIDTH;
556     default:
557         return 0;
558     }
559 }
```

12.43.4.27 QString KeyMap::name ( ) const [inline]

Definition at line 115 of file keymap.h.

References strLayout(), and strModel().

Referenced by KbBind::save(), KbLight::save(), and toStorage().

```
115 { return (strModel() + " " + strLayout()).toUpper(); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.43.4.28 KeyMap::operator const QHash< QString, Key > & ( ) const [inline]

Definition at line 130 of file keymap.h.

References _keys.

```
130 { return _keys; }
```

12.43.4.29 Key KeyMap::operator[] (const QString & *name*) const [inline]

Definition at line 126 of file keymap.h.

References key().

```
126 { return key(name); }
```

Here is the call graph for this function:

12.43.4.30 QList<Key> KeyMap::positions ( ) const [inline]

Definition at line 132 of file keymap.h.

References _keys.

Referenced by ColorMap::init(), and KeyWidget::selectAll().

```
132 { return _keys.values(); }
```

Here is the caller graph for this function:

12.43.4.31 QString KeyMap::strLayout ( ) const [inline]

Definition at line 106 of file keymap.h.

References getLayout(), and keyLayout.

Referenced by name().

```
106 { return getLayout(keyLayout); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.43.4.32 QString KeyMap::strModel ( ) const [inline]

Definition at line 110 of file keymap.h.

References getModel(), and keyModel.

Referenced by name().

```
110 { return getModel(keyModel); }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.43.4.33 QString KeyMap::toStorage (const QString & *name*) [inline]

Definition at line 134 of file keymap.h.

References key(), name(), and Key::storageName().

```
134 { const char* storage = key(name).storageName(); if(!storage) return
      name; return storage; }
```

Here is the call graph for this function:

12.43.4.34 uint KeyMap::width ( ) const [inline]

Definition at line 120 of file keymap.h.

References keyWidth.

Referenced by KeyWidget::drawInfo(), and KeyWidget::map().

```
120 { return keyWidth; }
```

Here is the caller graph for this function:

12.43.5 Field Documentation

12.43.5.1 QHash<QString, Key> KeyMap::_keys [private]

Definition at line 147 of file keymap.h.

Referenced by contains(), count(), key(), keys(), map(), operator const QHash< QString, Key > &(), and positions().

12.43.5.2 short KeyMap::keyHeight [private]

Definition at line 148 of file keymap.h.

Referenced by height().

12.43.5.3 Layout KeyMap::keyLayout [private]

Definition at line 150 of file keymap.h.

Referenced by isISO(), layout(), and strLayout().

12.43.5.4 Model KeyMap::keyModel [private]

Definition at line 149 of file keymap.h.

Referenced by isKeyboard(), isMouse(), model(), and strModel().

12.43.5.5 short KeyMap::keyWidth [private]

Definition at line 148 of file keymap.h.

Referenced by width().

The documentation for this class was generated from the following files:

- src/ckb/keymap.h
- src/ckb/keymap.cpp

12.44 KeyWidget Class Reference

```
#include <src/ckb/keywidget.h>
```

Inheritance diagram for KeyWidget:

Collaboration diagram for KeyWidget:

Public Types

- typedef QHash< QString, QString > BindMap

Public Slots

- void displayColorMap (const ColorMap &newDisplayMap, const QSet< QString > &indicators=QSet< QString >())

Signals

- void selectionChanged (QStringList selected)
- void sidelightToggled ()

Public Member Functions

- KeyWidget (QWidget *parent=0, bool rgbMode=true)
- bool rgbMode ()
- void rgbMode (bool newRgbMode)
- bool monochrome ()
- void monochrome (bool newMono)
- const KeyMap & map () const
- void map (const KeyMap &newMap)
- const QColorMap & colorMap () const
- void colorMap (const QColorMap &newColorMap)
- const BindMap & bindMap () const
- void bindMap (const BindMap &newBindMap)
- void setSelection (const QStringList &keys)
- void selectAll ()
- void clearSelection ()

- void setAnimation (const QStringList &keys)
- void setAnimationToSelection ()
- void clearAnimation ()

Private Types

- enum {
  NONE, SET, ADD, SUBTRACT,
  TOGGLE }

Private Member Functions

- void paintEvent (QPaintEvent ∗)
- void mousePressEvent (QMouseEvent ∗event)
- void mouseMoveEvent (QMouseEvent ∗event)
- void mouseReleaseEvent (QMouseEvent ∗event)
- void drawInfo (float &scale, float &offsetX, float &offsetY, int ratio=1)

Private Attributes

- KeyMap keyMap
- QColorMap _colorMap
- ColorMap _displayColorMap
- BindMap _bindMap
- QSet< QString > _indicators
- QBitArray selection
- QBitArray newSelection
- QBitArray animation
- int mouseDownX
- int mouseDownY
- int mouseCurrentX
- int mouseCurrentY
- enum KeyWidget:: { ... } mouseDownMode
- bool _rgbMode
- bool _monochrome

12.44.1 Detailed Description

Definition at line 11 of file keywidget.h.

12.44.2 Member Typedef Documentation

12.44.2.1 typedef QHash<QString, QString> KeyWidget::BindMap

Definition at line 30 of file keywidget.h.

12.44.3 Member Enumeration Documentation

12.44.3.1 anonymous enum [private]

Enumerator

NONE

SET

ADD

SUBTRACT

TOGGLE

Definition at line 66 of file keywidget.h.

```
66          {
67         NONE,
68         SET,
69         ADD,
70         SUBTRACT,
71         TOGGLE,
72     } mouseDownMode;
```

12.44.4 Constructor & Destructor Documentation

12.44.4.1 KeyWidget::KeyWidget (QWidget * *parent* = 0, bool *rgbMode* = true) [explicit]

Definition at line 17 of file keywidget.cpp.

```
17                                                  :
18     QWidget(parent), mouseDownX(-1), mouseDownY(-1),
      mouseCurrentX(-1), mouseCurrentY(-1), mouseDownMode(
      NONE), _rgbMode(rgbMode), _monochrome(false)
19 {
20     setMouseTracking(true);
21     setAutoFillBackground(false);
22 }
```

12.44.5 Member Function Documentation

12.44.5.1 const BindMap& KeyWidget::bindMap ( ) const [inline]

Definition at line 31 of file keywidget.h.

References _bindMap.

Referenced by KbBindWidget::updateBind().

```
31 { return _bindMap; }
```

Here is the caller graph for this function:

12.44.5.2 void KeyWidget::bindMap (const BindMap & *newBindMap*)

Definition at line 65 of file keywidget.cpp.

References _bindMap.

```
65                                                  {
66     _bindMap = newBindMap;
67     update();
68 }
```

12.44.5.3 void KeyWidget::clearAnimation ( )

Definition at line 632 of file keywidget.cpp.

References animation.

Referenced by KbLightWidget::setLight().

```
632                                 {
633     animation.fill(false);
634     update();
635 }
```

Here is the caller graph for this function:

12.44.5.4 void KeyWidget::clearSelection ( )

Definition at line 605 of file keywidget.cpp.

References mouseDownMode, newSelection, NONE, selection, and selectionChanged().

Referenced by KbLightWidget::changeAnim(), KbBindWidget::setBind(), and KbLightWidget::setLight().

```
605                                 {
606     selection.fill(false);
607     newSelection.fill(false);
608     mouseDownMode = NONE;
609     update();
610     emit selectionChanged(QStringList());
611 }
```

Here is the caller graph for this function:

12.44.5.5 const QColorMap& KeyWidget::colorMap ( ) const [inline]

Definition at line 27 of file keywidget.h.

References _colorMap.

Referenced by KbLightWidget::changeColor(), KbLightWidget::toggleSidelight(), and KbLightWidget::updateLight().

```
27 { return _colorMap; }
```

Here is the caller graph for this function:

12.44.5.6 void KeyWidget::colorMap (const QColorMap & *newColorMap*)

Definition at line 52 of file keywidget.cpp.

References _colorMap.

```
52                                                  {
53     _colorMap = newColorMap;
54     update();
55 }
```

12.44.5.7 void KeyWidget::displayColorMap (const ColorMap & *newDisplayMap*, const QSet< QString > & *indicators* = QSet<QString>()) [slot]

Definition at line 57 of file keywidget.cpp.

References _displayColorMap, and _indicators.

Referenced by KbLightWidget::on_showAnimBox_clicked().

```
57                                                                                                  {
58     if(!isVisible())
59         return;
60     _displayColorMap = newDisplayMap;
61     _indicators = indicators;
62     update();
63 }
```

Here is the caller graph for this function:

12.44.5.8 void KeyWidget::drawInfo (float & *scale*, float & *offsetX*, float & *offsetY*, int *ratio* = 1) [private]

Definition at line 43 of file keywidget.cpp.

References KeyMap::height(), KEY_SIZE, keyMap, width, and KeyMap::width().

Referenced by mouseMoveEvent(), mousePressEvent(), and paintEvent().

```
43                                                                                  {
44     int w = width() * ratio, h = height() * ratio;
45     float xScale = (float)w / (keyMap.width() + KEY_SIZE);
46     float yScale = (float)h / (keyMap.height() + KEY_SIZE);
47     scale = fmin(xScale, yScale);
48     offsetX = (w / scale - keyMap.width()) / 2.f;
49     offsetY = (h / scale - keyMap.height()) / 2.f;
50 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.44.5.9 const KeyMap& KeyWidget::map ( ) const [inline]

Definition at line 24 of file keywidget.h.

References keyMap.

Referenced by KbBindWidget::newLayout(), and KbLightWidget::updateLight().

```
24 { return keyMap; }
```

Here is the caller graph for this function:

12.44.5.10 void KeyWidget::map (const KeyMap & *newMap*)

Definition at line 24 of file keywidget.cpp.

References animation, KeyMap::count(), KeyMap::height(), KeyMap::isMouse(), KEY_SIZE, keyMap, newSelection, selection, width, and KeyMap::width().

```
24                                          {
25     keyMap = newMap;
26     selection = QBitArray(keyMap.count());
27     newSelection = QBitArray(keyMap.count());
28     animation = QBitArray(keyMap.count());
29     int width, height;
30     if(keyMap.isMouse()){
31         width = (keyMap.width() + KEY_SIZE) * 2.6;
32         height = (keyMap.height() + KEY_SIZE) * 2.6;
33     } else {
34         width = (keyMap.width() + KEY_SIZE) * 2.3;
35         height = (keyMap.height() + KEY_SIZE) * 2.3;
36     }
37     if(width < 500)
38         width = 500;
39     setFixedSize(width, height);
40     update();
41 }
```

Here is the call graph for this function:

12.44.5.11 bool KeyWidget::monochrome ( ) [inline]

Definition at line 20 of file keywidget.h.

References _monochrome.

Referenced by KbLightWidget::setMonochrome().

```
20 { return _monochrome; }
```

Here is the caller graph for this function:

12.44.5.12 void KeyWidget::monochrome (bool *newMono*) [inline]

Definition at line 21 of file keywidget.h.

References _monochrome.

```
21 { _monochrome = newMono; update(); }
```

12.44.5.13 void KeyWidget::mouseMoveEvent (QMouseEvent * *event*) [private]

Definition at line 475 of file keywidget.cpp.

References _indicators, _rgbMode, drawInfo(), Key::friendlyName(), Key::hasLed, Key::hasScan, Key::height, keyMap, KeyMap::model(), mouseCurrentX, mouseCurrentY, mouseDownMode, mouseDownX, mouseDownY, Key::name, newSelection, NONE, KeyMap::STRAFE, Key::width, Key::x, and Key::y.

```
475                                                 {
476     event->accept();
477     QString tooltip;
478
479     // Find selection rectangle
480     mouseCurrentX = event->x();
481     mouseCurrentY = event->y();
482     float scale, offX, offY;
483     drawInfo(scale, offX, offY);
484     float mx = mouseCurrentX / scale - offX, my = mouseCurrentY / scale - offY;
485     float mx1, mx2, my1, my2;
486     if(mouseCurrentX >= mouseDownX){
487         mx1 = mouseDownX / scale - offX;
488         mx2 = mouseCurrentX / scale - offX;
489     } else {
490         mx1 = mouseCurrentX / scale - offX;
491         mx2 = mouseDownX / scale - offX;
492     }
493     if(mouseCurrentY >= mouseDownY){
494         my1 = mouseDownY / scale - offY;
495         my2 = mouseCurrentY / scale - offY;
496     } else {
497         my1 = mouseCurrentY / scale - offY;
498         my2 = mouseDownY / scale - offY;
499     }
500     // Clear new selection
501     if(mouseDownMode != NONE)
502         newSelection.fill(false);
503     // See if the event hit any keys
504     QHashIterator<QString, Key> k(keyMap);
505     uint i = -1;
506     while(k.hasNext()){
507         k.next();
508         i++;
509         const Key& key = k.value();
510         if((_rgbMode && !key.hasLed)
511                 || (!_rgbMode && !key.hasScan))
512             continue;
513         // Update tooltip with the mouse hover (if any), even if it's not selectable
514         if(fabs(key.x - mx) <= key.width / 2.f - 1.f && fabs(key.y - my) <= key.
```

```
height / 2.f - 1.f
                && tooltip.isEmpty())
            tooltip = key.friendlyName(false);
        // on STRAFE Sidelights and indicators can't be assigned color the way other keys are colored
        if(keyMap.model() == KeyMap::STRAFE && (!strcmp(key.name, "lsidel") || !strcmp(key.name, "rsidel") || _indicators.contains(key.name))) // FIX: _indicators check fails whenever _indicators is empty because "show animated" is unchecked
            continue;
        float kx1 = key.x - key.width / 2.f + 1.f;
        float ky1 = key.y - key.height / 2.f + 1.f;
        float kx2 = kx1 + key.width - 2.f;
        float ky2 = ky1 + key.height - 2.f;
        // If they overlap, add the key to the selection
        if(!(mx1 >= kx2 || kx1 >= mx2)
                && !(my1 >= ky2 || ky1 >= my2)
                && mouseDownMode != NONE)
            newSelection.setBit(i);
    }

    if(mouseDownMode != NONE)
        update();
    setToolTip(tooltip);
}
```

Here is the call graph for this function:

12.44.5.14 void KeyWidget::mousePressEvent (QMouseEvent * *event*) [private]

Definition at line 443 of file keywidget.cpp.

References _rgbMode, ADD, drawInfo(), Key::hasLed, Key::hasScan, Key::height, keyMap, mouseCurrentX, mouseCurrentY, mouseDownMode, mouseDownX, mouseDownY, Key::name, newSelection, SET, sidelightToggled(), SUBTRACT, TOGGLE, Key::width, Key::x, and Key::y.

```
443                                                 {
444     event->accept();
445     mouseDownMode = (event->modifiers() & Qt::AltModifier) ? SUBTRACT : (event->modifiers() & Qt::ControlModifier) ? TOGGLE : SET;
446     mouseDownX = mouseCurrentX = event->x();
447     mouseDownY = mouseCurrentY = event->y();
448     // See if the event hit a key
449     float scale, offX, offY;
450     drawInfo(scale, offX, offY);
451     float mx = mouseCurrentX / scale - offX, my = mouseCurrentY / scale - offY;
452     QHashIterator<QString, Key> k(keyMap);
453     uint i = -1;
454     while(k.hasNext()){
455         k.next();
456         i++;
457         const Key& key = k.value();
458         if((_rgbMode && !key.hasLed)
459                 || (!_rgbMode && !key.hasScan))
460             continue;
461         if(fabs(key.x - mx) <= key.width / 2.f - 1.f && fabs(key.y - my) <= key.height / 2.f - 1.f){
462             // Sidelights can't have a color, but they can be toggled
463             if(!strcmp(key.name, "lsidel") || !strcmp(key.name, "rsidel")){
```

```
                emit sidelightToggled(); // get the kblightwidget to record it
                update();
                break;
            }
            newSelection.setBit(i);
            update();
            break;
        }
    }
}
```

Here is the call graph for this function:

12.44.5.15 void KeyWidget::mouseReleaseEvent (QMouseEvent * *event*) [private]

Definition at line 536 of file keywidget.cpp.

References ADD, keyMap, KeyMap::keys(), mouseDownMode, newSelection, NONE, selection, selectionChanged(), SET, SUBTRACT, and TOGGLE.

```
{
    event->accept();
    if(mouseDownMode == NONE)
        return;
    // Apply the new selection
    switch(mouseDownMode){
    case SET:
        selection = newSelection;
        break;
    case ADD:
        selection |= newSelection;
        break;
    case SUBTRACT:
        selection &= ~newSelection;
        break;
    case TOGGLE:
        selection ^= newSelection;
        break;
    default:;
    }
    // Clear mousedown state.
    newSelection.fill(false);
    mouseDownMode = NONE;
    // Emit signal with the names of the keys
    QStringList selectedNames;
    uint i = 0;
    foreach(const QString& key, keyMap.keys()){
        if(selection.testBit(i++))
            selectedNames << key;
    }
    emit selectionChanged(selectedNames);
    update();
}
```

Here is the call graph for this function:

12.44.5.16 void KeyWidget::paintEvent (QPaintEvent *) [private]

Definition at line 70 of file keywidget.cpp.

References _bindMap, _colorMap, _displayColorMap, _indicators, _monochrome, _rgbMode, ADD, animation, ColorMap::colorForName(), KbBind::defaultAction(), drawInfo(), KeyMap::EU, KeyMap::EU_DVORAK, Key::friendlyName(), KbBind::globalRemap(), Key::hasLed, Key::hasScan, Key::height, KeyMap::isMouse(), KeyMap::K65, keyMap, KeyMap::layout(), KeyMap::M65, m65Overlay, KeyMap::model(), monoRgb(), mouseCurrentX, mouseCurrentY, mouseDownMode, mouseDownX, mouseDownY, Key::name, newSelection, NONE, sabOverlay, KeyMap::SABRE, KeyMap::SCIMITAR, scimOverlay, selection, SET, KeyMap::STRAFE, SUBTRACT, TOGGLE, Key::width, width, Key::x, x, Key::y, and y.

```
70                                      {
71     const QColor bgColor(68, 64, 64);
72     const QColor keyColor(112, 110, 110);
73     const QColor sniperColor(130, 90, 90);
74     const QColor thumbColor(34, 32, 32);
75     const QColor transparentColor(0, 0, 0, 0);
76     const QColor highlightColor(136, 176, 240);
77     const QColor highlightAnimColor(136, 200, 240);
78     const QColor animColor(112, 200, 110);
79
80     // Determine which keys to highlight
81     QBitArray highlight;
82     switch(mouseDownMode){
83     case SET:
84         highlight = newSelection;
85         break;
86     case ADD:
87         highlight = selection | newSelection;
88         break;
89     case SUBTRACT:
90         highlight = selection & ~newSelection;
91         break;
92     case TOGGLE:
93         highlight = selection ^ newSelection;
94         break;
95     default:
96         highlight = selection;
97     }
98
99     QPainter painter(this);
100 #if QT_VERSION >= QT_VERSION_CHECK(5, 3, 0)
101     int ratio = painter.device()->devicePixelRatio();
102 #else
103     int ratio = 1;
104 #endif
105     int wWidth = width(), wHeight = height();
106     KeyMap::Model model = keyMap.model();
107     KeyMap::Layout layout = keyMap.layout();
108     float scale, offX, offY;
109     drawInfo(scale, offX, offY, ratio);
110     // Draw background
111     painter.setPen(Qt::NoPen);
112     painter.setRenderHint(QPainter::Antialiasing, true);
113
114     if(keyMap.isMouse()){
115         // Draw mouse overlays
116         const QImage* overlay = 0;
117         float xpos = 0.f, ypos = 0.f;
118         if(model == KeyMap::M65){
```

```
            if(!m65Overlay)
                m65Overlay = new QImage(":/img/overlay_m65.png");
            overlay = m65Overlay;
            xpos = 2.f;
            ypos = -2.f;
        } else if(model == KeyMap::SABRE){
            if(!sabOverlay)
                sabOverlay = new QImage(":/img/overlay_sabre.png");
            overlay = sabOverlay;
            xpos = 1.f;
            ypos = -2.f;
        } else if(model == KeyMap::SCIMITAR){
            if(!scimOverlay)
                scimOverlay = new QImage(":/img/overlay_scimitar.png");
            overlay = scimOverlay;
            xpos = 3.5f;
            ypos = -2.f;
        }
        if(overlay){
            painter.setBrush(palette().brush(QPalette::Window));
            painter.drawRect(0, 0, width(), height());
            float oXScale = scale / 9.f, oYScale = scale / 9.f;             // The overlay has a resolution of 9px per keymap unit
            float x = (xpos + offX) * scale, y = (ypos + offY) * scale;
            int w = overlay->width() * oXScale, h = overlay->height() * oYScale;
            // We need to transform the image with QImage::scaled() because painter.drawImage() will butcher it, even with smoothing enabled
            // However, the width/height need to be rounded to integers
            int iW = round(w), iH = round(h);
            painter.drawImage(QRectF((x - (iW - w) / 2.f) / ratio, (y - (iH - h) / 2.f) / ratio, iW / ratio, iH / ratio), overlay->scaled(iW, iH, Qt::IgnoreAspectRatio, Qt::SmoothTransformation));
        }
    } else {
        // Otherwise, draw a solid background
        painter.setBrush(QBrush(bgColor));
        painter.drawRect(0, 0, width(), height());
    }

    // Draw mouse highlight (if any)
    if(mouseDownMode != NONE && (mouseDownX != mouseCurrentX || mouseDownY != mouseCurrentY)){
        int x1 = (mouseDownX > mouseCurrentX) ? mouseCurrentX : mouseDownX;
        int x2 = (mouseDownX > mouseCurrentX) ? mouseDownX : mouseCurrentX;
        int y1 = (mouseDownY > mouseCurrentY) ? mouseCurrentY : mouseDownY;
        int y2 = (mouseDownY > mouseCurrentY) ? mouseDownY : mouseCurrentY;
        painter.setPen(QPen(highlightColor, 0.5));
        QColor bColor = highlightColor;
        bColor.setAlpha(128);
        painter.setBrush(QBrush(bColor));
        painter.drawRect(x1, y1, x2 - x1, y2 - y1);
    }

    // Draw key backgrounds on a separate pixmap so that a drop shadow can be applied to them.
    QPixmap keyBG(wWidth * ratio, wHeight * ratio);
    keyBG.fill(QColor(0, 0, 0, 0));
    QPainter bgPainter(&keyBG);
    bgPainter.setRenderHints(QPainter::Antialiasing | QPainter::TextAntialiasing);
    bgPainter.setPen(Qt::NoPen);
    QHashIterator<QString, Key> k(keyMap);
    uint i = -1;
    while(k.hasNext()){
        k.next();
        i++;
        const Key& key = k.value();
        float x = key.x + offX - key.width / 2.f + 1.f;
        float y = key.y + offY - key.height / 2.f + 1.f;
        float w = key.width - 2.f;
        float h = key.height - 2.f;
        // In RGB mode, ignore keys without LEDs
        if((_rgbMode && !key.hasLed)
                || (!_rgbMode && !key.hasScan))
            continue;
        // Set color based on key highlight
        bgPainter.setOpacity(1.);
        if(highlight.testBit(i)){
            if(animation.testBit(i))
                bgPainter.setBrush(QBrush(highlightAnimColor));
            else
                bgPainter.setBrush(QBrush(highlightColor));
        } else if(animation.testBit(i)){
            bgPainter.setBrush(QBrush(animColor));
        } else {
            if(!strcmp(key.name, "sniper"))
```

```
                // Sniper key uses a reddish base color instead of the usual grey
                bgPainter.setBrush(QBrush(sniperColor));
            else if(model == KeyMap::SCIMITAR && !strncmp(key.name, "thumb", 5) && strcmp(key.name, "thumb"))
                // Thumbgrid keys use a black color
                bgPainter.setBrush(QBrush(thumbColor));
            else if(!strcmp(key.name, "lsidel") || !strcmp(key.name, "rsidel") || !strcmp(key.name, "logo"))
                // Strafe side lights have different background
                bgPainter.setBrush(QBrush(transparentColor));
            else {
                bgPainter.setBrush(QBrush(keyColor));
                if(KeyMap::isMouse(model))
                    bgPainter.setOpacity(0.7);
            }
        }
        if(model != KeyMap::STRAFE && (!strcmp(key.name, "mr") || !strcmp(key.name, "m1") || !strcmp(key.name, "m2") || !strcmp(key.name, "m3")
                || !strcmp(key.name, "light") || !strcmp(key.name, "lock") || (model == KeyMap::K65 && !strcmp(key.name, "mute")))){
            // Switch keys are circular except for Strafe. All Strafe keys are square
            x += w / 8.f;
            y += h / 8.f;
            w *= 0.75f;
            h *= 0.75f;
            bgPainter.drawEllipse(QRectF(x * scale, y * scale, w * scale, h * scale));
        } else {
            if(!strcmp(key.name, "enter")){
                if(key.height == 24){
                    // ISO enter key isn't rectangular
                    y = key.y + 1.f;
                    h = 10.f;
                    bgPainter.drawRect(QRectF((x + w - 13.f) * scale, y * scale, 13.f * scale, 22.f * scale));
                } else {
                    // US enter key isn't perfectly centered, needs an extra pixel on the left to appear correctly
                    x -= 1.f;
                    w += 1.f;
                }
            } else if(!strcmp(key.name, "rshift") || !strcmp(key.name, "stop")){
                // A few other keys also need extra pixels
                x -= 1.f;
                w += 1.f;
            } else if(!strcmp(key.name, "caps") || !strcmp(key.name, "lshift") || !strcmp(key.name, "next")){
                w += 1.f;
            }
            bgPainter.drawRect(QRectF(x * scale, y * scale, w * scale, h * scale));
        }
    }

    // Render the key decorations (RGB -> light circles, binding -> key names) on yet another layer
    QPixmap decoration(wWidth * ratio, wHeight * ratio);
    decoration.fill(QColor(0, 0, 0, 0));
    QPainter decPainter(&decoration);
    decPainter.setRenderHints(QPainter::Antialiasing | QPainter::TextAntialiasing);
    if(_rgbMode){
        // Draw key colors (RGB mode)
        QHashIterator<QString, Key> k(keyMap);
        uint i = -1;
        while(k.hasNext()){
            k.next();
            i++;
            const Key& key = k.value();
            if(!key.hasLed)
                continue;
            float x = key.x + offX - 1.8f;
            float y = key.y + offY - 1.8f;
            float w = 3.6f;
            float h = 3.6f;
            // Display a white circle around regular keys, red circle around indicators
            if(_indicators.contains(key.name))
                decPainter.setPen(QPen(QColor(255, 248, 136), 1.5));
            else
                decPainter.setPen(QPen(QColor(255, 255, 255), 1.5));
            QRgb color;
            const QRgb* inDisplay = _displayColorMap.colorForName(key.name);
            if(inDisplay)
                // Color in display map? Grab it from there
                // (monochrome conversion not necessary as this would have been done by the animation)
                color = *inDisplay;
            else {
                // Otherwise, read from base map
                color = _colorMap.value(k.key());
                if(_monochrome)
```

```
                    color = monoRgb(qRed(color), qGreen(color), qBlue(color));
            }
            decPainter.setBrush(QBrush(color));
            if (model == KeyMap::STRAFE) { // STRAFE custom design and special keys
                float kx = key.x + offX - key.width / 2.f + 1.f;
                float ky = key.y + offY - key.height / 2.f + 1.f;
                float kw = key.width - 2.f;
                float kh = key.height - 2.f;
                decPainter.setPen(QPen(QColor(255, 255, 255), 1.2)); // less invasive outline to show the key color better
                if(!strcmp(key.name, "logo")) { // stylized logo
                    float lx = key.x + offX - key.width / 2.f + 2.f;
                    float ly = key.y + offY - key.height / 2.f + 2.f;
                    float lw = key.width - 4.f;
                    float lh = key.height - 4.f;
                    QPainterPath logo;
                    logo.moveTo(lx*scale,(ly+lh)*scale);
                    logo.quadTo((lx+2.f)*scale,(ly+lh/2.f)*scale,lx*scale,ly*scale);
                    logo.quadTo((lx+lw)*scale,ly*scale,(lx+lw)*scale,(ly+lh)*scale);
                    logo.quadTo((lx+lw/2.f)*scale,(ly+lh-4.f)*scale,lx*scale,(ly+lh)*scale);
                    decPainter.drawPath(logo);
                    //decPainter.setPen(QPen(Qt::green, 1.2)); //QColor(125,125,125)
                    //decPainter.drawRect(QRectF(lx * scale, ly * scale, lw * scale, lh * scale)); // don't really know why the 12 and 24 make it work here, but they do
                } else if(!strcmp(key.name, "lsidel") || !strcmp(key.name, "rsidel")) { // Strafe side lights (toggle lights with no animation)
                    QRadialGradient gradient(QPointF(wWidth/2.f * ratio, wHeight/2.f * ratio), wWidth/2.f * ratio);//,QPointF(10, 5));
                    gradient.setColorAt(0, color);
                    gradient.setColorAt(0.9, color); // bring up intensity
                    gradient.setColorAt(1, bgColor);
                    decPainter.setBrush(QBrush(gradient));
                    decPainter.setPen(QPen(keyColor, 1.2)); //QColor(125,125,125)
                    decPainter.drawRect(QRectF(kx * scale, ky * scale - 12 , kw * scale, kh * scale+24)); // don't really know why the 12 and 24 make it work here, but they do
                } else if(_indicators.contains(key.name)) { // FIX: This check fails whenever _indicators is empty because "show animated" is unchecked
                    decPainter.setPen(QPen(QColor(0,0,0,0), 1));    // no outline for the indicators, you can't change their color the standard way
                    decPainter.drawRect(QRectF((kx+2.f) * scale, (ky+2.f) * scale, (kw-4.f) * scale, (kh-4.f) * scale)); // square indicators
                } else //everything else is a circle, just a tad bigger to show the key color better
                    decPainter.drawEllipse(QRectF((x-1.f) * scale, (y-1.f) * scale, (w+2.f) * scale, (h+2.f) * scale));
            } else
                decPainter.drawEllipse(QRectF(x * scale, y * scale, w * scale, h * scale));
        }
    } else {
        // Draw key names
        decPainter.setBrush(Qt::NoBrush);
        QFont font = painter.font();
        font.setBold(true);
        font.setPixelSize(5.25f * scale);
        QFont font0 = font;
        QHashIterator<QString, Key> k(keyMap);
        uint i = -1;
        while(k.hasNext()){
            k.next();
            i++;
            const Key& key = k.value();
            if(!key.hasScan)
                continue;
            float x = key.x + offX - key.width / 2.f + 1.f;
            float y = key.y + offY - key.height / 2.f;
            float w = key.width - 2.f;
            float h = key.height;
            // Print the key's friendly name (with some exceptions)
            QString keyName = KbBind::globalRemap(key.name);
            QString name = key.friendlyName(false);
            name = name.split(" ").last();
            struct {
                const char* keyName, *displayName;
            } names[] = {
                {"light", ""}, {"lock", ""}, {"mute", ""}, {"volup", keyMap.model() == KeyMap::K65 ? ")" : ""}, {"voldn", keyMap.model() == KeyMap::K65 ? ")" : ""},
                {"prtscn",  "PrtScn\nSysRq"}, {"scroll", "Scroll\nLock"}, {"pause", "Pause\nBreak"}, {"stop", ""}, {"prev", "|"}, {"play", "||"}, {"next", "|"},
                {"pgup", "Page\nUp"}, {"pgdn", "Page\nDown"}, {"numlock", "Num\nLock"},
                {"caps", "Caps"}, {"lshift", "Shift"}, {"rshift", "Shift"},
#ifdef Q_OS_MACX
                {"lctrl", ""}, {"rctrl", ""}, {"lwin", ""}, {"rwin", ""}, {"lalt", ""}, {"ralt", ""},
#else
                {"lctrl", "Ctrl"}, {"rctrl", "Ctrl"}, {"lwin", ""}, {"rwin", ""}, {"lalt", "Alt"}, {"ralt", "Alt"},
#endif
                {"rmenu", ""}, {"up", ""}, {"left", ""}, {"down", ""}, {"right", ""}, {"fn","Fn"},
```

```
                {"mouse1", ""}, {"mouse2", ""}, {"mouse3", ""}, {"dpiup", ""}, {"dpidn", ""}, {"wheelup", ""}, {"wheeldn", ""}, {"dpi", ""}, {"mouse5", ""}, {"mouse4", ""}, {"sniper", ""}
            };
            for(uint k = 0; k < sizeof(names) / sizeof(names[0]); k++){
                if(keyName == names[k].keyName){
                    name = names[k].displayName;
                    break;
                }
            }
            if(keyName == "thumb1" && model == KeyMap::SABRE)
                name = "";
            if(keyName == "mr" || keyName == "m1" || keyName == "m2" || keyName == "m3" || keyName == "up" || keyName == "down" || keyName == "left" || keyName == "right")
                // Use a smaller size for MR, M1 - M3, and arrow keys
                font.setPixelSize(font.pixelSize() * 0.75);
            else if(keyName == "end")
                // Use a smaller size for "End" to match everything else in that area
                font.setPixelSize(font.pixelSize() * 0.65);
            else if(keyName == "light"
#ifndef Q_OS_MACX
                    || keyName == "lwin" || keyName == "rwin"
#endif
                    )
                // Use a larger font size for Super (Linux only) and Brightness to compensate for the unicode symbols looking smaller
                font.setPixelSize(font.pixelSize() * 1.3);
            if((layout == KeyMap::EU || layout == KeyMap::EU_DVORAK) && (keyName == "hash" || keyName == "bslash_iso"))
                // Don't differentiate backslashes on the EU layout
                name = "\\";
            // Determine the appropriate size to draw the text at
            decPainter.setFont(font);
            QRectF rect(x * scale, y * scale - 1, w * scale, h * scale);
            int flags = Qt::AlignHCenter | Qt::AlignVCenter | Qt::TextWordWrap;
            QRectF bounds = decPainter.boundingRect(rect, flags, name);
            while((bounds.height() >= rect.height() - 8. || bounds.width() >= rect.width() - 2.) && font.pixelSize() >= 5){
                // Scale font size down until it fits inside the key
                font.setPixelSize(font.pixelSize() - 2);
                decPainter.setFont(font);
                bounds = decPainter.boundingRect(rect, flags, name);
            }
            // Pick color based on key function
            QString bind = _bindMap.value(key.name);
            QString def = KbBind::defaultAction(key.name);
            if(bind.isEmpty())
                // Unbound - red
                decPainter.setPen(QColor(255, 136, 136));
            else if(KeyAction(bind).isProgram())
                // Custom program - orange
                decPainter.setPen(QColor(255, 224, 192));
            else if(KeyAction(bind).isSpecial() && (bind == def || !KeyAction(def).isSpecial()))
                // Special function - blue (only if not mapped to a different function - if a special function is remapped, color it yellow)
                decPainter.setPen(QColor(128, 224, 255));
            else if(KeyAction(bind).isMedia() && (bind == def || !KeyAction(def).isMedia()))
                // Media key - green
                decPainter.setPen(QColor(160, 255, 168));
            else if(bind == def)
                // Standard key - white
                decPainter.setPen(QColor(255, 255, 255));
            else
                // Remapped key - yellow
                decPainter.setPen(QColor(255, 248, 128));
            decPainter.drawText(rect, flags, name);
            font = font0;
        }
    }
    // Create drop shadow effects
    QGraphicsDropShadowEffect* bgEffect = new QGraphicsDropShadowEffect;  // Have to use "new", creating these on the stack causes a crash...
    bgEffect->setBlurRadius(2.);
    bgEffect->setColor(QColor(0, 0, 0, 32));
    bgEffect->setOffset(0, 1);
    QGraphicsDropShadowEffect* decEffect = new QGraphicsDropShadowEffect;
    decEffect->setBlurRadius(4.);
    decEffect->setColor(QColor(0, 0, 0, 104));
    decEffect->setOffset(0, 1);
    // Apply them to the pixmaps
    QGraphicsPixmapItem* bgItem = new QGraphicsPixmapItem(keyBG);
    bgItem->setGraphicsEffect(bgEffect);
    QGraphicsPixmapItem* decItem = new QGraphicsPixmapItem(decoration);
    decItem->setGraphicsEffect(decEffect);
    // Render everything
    QGraphicsScene* scene = new QGraphicsScene;
```

```
    scene->addItem(bgItem);
    scene->addItem(decItem);
    // It has to be rendered onto yet another pixmap or else DPI scaling will look terrible...
    QPixmap final(wWidth * ratio, wHeight * ratio);
    final.fill(QColor(0, 0, 0, 0));
    QPainter finalPainter(&final);
    scene->render(&finalPainter, QRectF(0, 0, wWidth * ratio, wHeight * ratio), QRectF(0, 0, wWidth * ratio
  , wHeight * ratio));
    delete scene;   // <- Automatically cleans up the rest of the objects
#if QT_VERSION >= QT_VERSION_CHECK(5, 3, 0)
    final.setDevicePixelRatio(ratio);
#endif
    painter.drawPixmap(QPointF(0., 0.), final);
}
```

Here is the call graph for this function:

12.44.5.17 bool KeyWidget::rgbMode ( ) [inline]

Definition at line 17 of file keywidget.h.

References _rgbMode.

Referenced by KbBindWidget::KbBindWidget().

```
17 { return _rgbMode; }
```

Here is the caller graph for this function:

12.44.5.18 void KeyWidget::rgbMode (bool *newRgbMode*) [inline]

Definition at line 18 of file keywidget.h.

References _rgbMode.

```
18 { _rgbMode = newRgbMode; update(); }
```

12.44.5.19 void KeyWidget::selectAll ( )

Definition at line 584 of file keywidget.cpp.

References _rgbMode, Key::hasLed, Key::hasScan, keyMap, mouseDownMode, Key::name, newSelection, NONE, KeyMap::positions(), selection, and selectionChanged().

Referenced by KbLightWidget::on_animButton_clicked(), and KbLightWidget::on_bgButton_clicked().

```
584                         {
585     selection.fill(false);
586     // Fill the selection with all keys that have an LED/scancode (depending on widget mode)
587     int i = 0;
588     QStringList selectedNames;
589     foreach(const Key& key, keyMap.positions()){
590         // Sidelights can't be selected
591         if(strcmp(key.name, "lsidel") && strcmp(key.name, "rsidel")
592            && ((_rgbMode && key.hasLed) || !(_rgbMode && key.
      hasScan))){
593             selection.setBit(i);
594             selectedNames << key.name;
595         }
596         i++;
597     }
598     // Clear mousedown state
599     newSelection.fill(false);
600     mouseDownMode = NONE;
601     update();
602     emit selectionChanged(selectedNames);
603 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.44.5.20 void KeyWidget::selectionChanged (QStringList *selected*) [signal]

Definition at line 164 of file moc_keywidget.cpp.

Referenced by clearSelection(), mouseReleaseEvent(), selectAll(), and setSelection().

```
{
    void *_a[] = { Q_NULLPTR, const_cast<void*>(reinterpret_cast<const void*>(&_t1)) };
    QMetaObject::activate(this, &staticMetaObject, 0, _a);
}
```

Here is the caller graph for this function:

12.44.5.21 void KeyWidget::setAnimation (const QStringList & *keys*)

Definition at line 613 of file keywidget.cpp.

References animation, keyMap, and KeyMap::keys().

Referenced by KbLightWidget::changeAnimKeys(), and KbLightWidget::setLight().

```
{
    animation.fill(false);
    QStringList allNames = keyMap.keys();
    foreach(const QString& key, keys){
        // Sidelights can't be selected
        if(!strcmp(key.toLatin1(), "lsidel") || !strcmp(key.toLatin1(), "rsidel"))
            continue;
        int index = allNames.indexOf(key);
        if(index >= 0)
            animation.setBit(index);
    }
    update();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.44.5.22 void KeyWidget::setAnimationToSelection ( )

Definition at line 627 of file keywidget.cpp.

References animation, and selection.

Referenced by KbLightWidget::changeAnim().

```
627                                         {
628     animation = selection;
629     update();
630 }
```

Here is the caller graph for this function:

12.44.5.23 void KeyWidget::setSelection (const QStringList & *keys*)

Definition at line 570 of file keywidget.cpp.

References keyMap, KeyMap::keys(), mouseDownMode, newSelection, NONE, selection, and selectionChanged().

Referenced by KbLightWidget::changeAnim().

```
570                                                 {
571     selection.fill(false);
572     QStringList allNames = keyMap.keys();
573     foreach(const QString& key, keys){
574         int index = allNames.indexOf(key);
575         if(index >= 0)
```

```
            selection.setBit(index);
    }
    newSelection.fill(false);
    mouseDownMode = NONE;
    update();
    emit selectionChanged(keys);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.44.5.24 void KeyWidget::sidelightToggled ( ) [signal]

Definition at line 171 of file moc_keywidget.cpp.

Referenced by mousePressEvent().

```
{
    QMetaObject::activate(this, &staticMetaObject, 1, Q_NULLPTR);
}
```

Here is the caller graph for this function:

12.44.6 Field Documentation

12.44.6.1 BindMap KeyWidget::_bindMap [private]

Definition at line 58 of file keywidget.h.

Referenced by bindMap(), and paintEvent().

12.44.6.2 QColorMap KeyWidget::_colorMap [private]

Definition at line 56 of file keywidget.h.

Referenced by colorMap(), and paintEvent().

12.44.6.3 ColorMap KeyWidget::_displayColorMap [private]

Definition at line 57 of file keywidget.h.

Referenced by displayColorMap(), and paintEvent().

12.44.6.4 QSet<QString> KeyWidget::_indicators [private]

Definition at line 59 of file keywidget.h.

Referenced by displayColorMap(), mouseMoveEvent(), and paintEvent().

12.44.6.5 bool KeyWidget::_monochrome [private]

Definition at line 73 of file keywidget.h.

Referenced by monochrome(), and paintEvent().

12.44.6.6 bool KeyWidget::_rgbMode [private]

Definition at line 73 of file keywidget.h.

Referenced by mouseMoveEvent(), mousePressEvent(), paintEvent(), rgbMode(), and selectAll().

12.44.6.7 QBitArray KeyWidget::animation [private]

Definition at line 63 of file keywidget.h.

Referenced by clearAnimation(), map(), paintEvent(), setAnimation(), and setAnimationToSelection().

12.44.6.8 KeyMap KeyWidget::keyMap [private]

Definition at line 55 of file keywidget.h.

Referenced by drawInfo(), map(), mouseMoveEvent(), mousePressEvent(), mouseReleaseEvent(), paintEvent(), selectAll(), setAnimation(), and setSelection().

12.44.6.9 int KeyWidget::mouseCurrentX [private]

Definition at line 65 of file keywidget.h.

Referenced by mouseMoveEvent(), mousePressEvent(), and paintEvent().

12.44.6.10 int KeyWidget::mouseCurrentY [private]

Definition at line 65 of file keywidget.h.

Referenced by mouseMoveEvent(), mousePressEvent(), and paintEvent().

12.44.6.11 enum { ... } KeyWidget::mouseDownMode [private]

Referenced by clearSelection(), mouseMoveEvent(), mousePressEvent(), mouseReleaseEvent(), paintEvent(), selectAll(), and setSelection().

12.44.6.12 int KeyWidget::mouseDownX [private]

Definition at line 64 of file keywidget.h.

Referenced by mouseMoveEvent(), mousePressEvent(), and paintEvent().

12.44.6.13 int KeyWidget::mouseDownY [private]

Definition at line 64 of file keywidget.h.

Referenced by mouseMoveEvent(), mousePressEvent(), and paintEvent().

12.44.6.14 QBitArray KeyWidget::newSelection [private]

Definition at line 62 of file keywidget.h.

Referenced by clearSelection(), map(), mouseMoveEvent(), mousePressEvent(), mouseReleaseEvent(), paintEvent(), selectAll(), and setSelection().

12.44.6.15 QBitArray KeyWidget::selection [private]

Definition at line 61 of file keywidget.h.

Referenced by clearSelection(), map(), mouseReleaseEvent(), paintEvent(), selectAll(), setAnimationToSelection(), and setSelection().

The documentation for this class was generated from the following files:

- src/ckb/keywidget.h
- src/ckb/keywidget.cpp
- src/ckb/release/moc_keywidget.cpp

12.45 Ui::KPerfWidget Class Reference

```
#include <src/ckb/ui_kperfwidget.h>
```

Inheritance diagram for Ui::KPerfWidget:

Collaboration diagram for Ui::KPerfWidget:

Public Member Functions

- void setupUi (QWidget *KPerfWidget)
- void retranslateUi (QWidget *KPerfWidget)

Data Fields

- QGridLayout * gridLayout
- QWidget * k95Spacer
- QLabel * label_10
- ColorButton * lockColorOff
- QFrame * line
- QSpacerItem * horizontalSpacer_5
- QLabel * k95Label2
- QLabel * label_12
- ColorButton * modeColorOff
- ColorButton * lightColor3
- QSpacerItem * horizontalSpacer
- QCheckBox * lockBox
- ColorButton * modeColorOn
- QCheckBox * macroBox
- ColorButton * numColorOn
- QComboBox * numBox
- QLabel * label_5
- QSpacerItem * verticalSpacer_2
- ColorButton * lightColor2
- QSpacerItem * horizontalSpacer_7
- QLabel * label_8

- QCheckBox * lightBox
- ColorButton * lightColor1
- QSpacerItem * verticalSpacer_4
- QLabel * label_6
- QLabel * label
- QSpacerItem * horizontalSpacer_6
- ColorButton * lockColorOn
- QLabel * label_4
- QSpacerItem * verticalSpacer
- QSpacerItem * verticalSpacer_3
- QCheckBox * modeBox
- ColorButton * capsColorOff
- ColorButton * numColorOff
- ColorButton * capsColorOn
- QFrame * line_3
- QLabel * label_22
- QComboBox * scrollBox
- QLabel * label_7
- ColorButton * scrollColorOn
- QComboBox * capsBox
- ColorButton * scrollColorOff
- QCheckBox * muteBox
- ColorButton * muteColorOn
- ColorButton * macroColorOff
- QLabel * label_3
- ColorButton * muteColorOff
- QLabel * k95Label3
- ColorButton * macroColorOn
- ColorButton * muteColorNA
- QLabel * label_19
- QFrame * k95Line
- QLabel * label_21
- QLabel * label_24
- QLabel * label_20
- QLabel * label_16
- QLabel * label_14
- QLabel * label_18
- QSpacerItem * horizontalSpacer_2
- QLabel * label_15
- QLabel * k95Label4
- QLabel * label_17
- QLabel * label_11
- QLabel * label_23
- QLabel * k95Label1
- QHBoxLayout * horizontalLayout_2
- QPushButton * copyButton
- QSpacerItem * horizontalSpacer_8
- QHBoxLayout * horizontalLayout
- QLabel * label_2
- QSpacerItem * horizontalSpacer_4
- QSpinBox * intensityBox
- QSpacerItem * horizontalSpacer_3
- QLabel * k95Label5
- QFrame * line_2
- QLabel * k95Label6

12.45.1 Detailed Description

Definition at line 677 of file ui_kperfwidget.h.

12.45.2 Member Function Documentation

12.45.2.1 void Ui_KPerfWidget::retranslateUi (QWidget * *KPerfWidget*) [inline],[inherited]

Definition at line 589 of file ui_kperfwidget.h.

References Ui_KPerfWidget::capsBox, Ui_KPerfWidget::capsColorOff, Ui_KPerfWidget::capsColorOn, Ui_KPerfWidget::copyButton, Ui_KPerfWidget::intensityBox, Ui_KPerfWidget::k95Label1, Ui_KPerfWidget::k95Label2, Ui_KPerfWidget::k95Label3, Ui_KPerfWidget::k95Label4, Ui_KPerfWidget::k95Label5, Ui_KPerfWidget::k95Label6, Ui_KPerfWidget::label, Ui_KPerfWidget::label_10, Ui_KPerfWidget::label_11, Ui_KPerfWidget::label_12, Ui_KPerfWidget::label_14, Ui_KPerfWidget::label_15, Ui_KPerfWidget::label_16, Ui_KPerfWidget::label_17, Ui_KPerfWidget::label_18, Ui_KPerfWidget::label_19, Ui_KPerfWidget::label_2, Ui_KPerfWidget::label_20, Ui_KPerfWidget::label_21, Ui_KPerfWidget::label_22, Ui_KPerfWidget::label_23, Ui_KPerfWidget::label_24, Ui_KPerfWidget::label_3, Ui_KPerfWidget::label_4, Ui_KPerfWidget::label_5, Ui_KPerfWidget::label_6, Ui_KPerfWidget::label_7, Ui_KPerfWidget::label_8, Ui_KPerfWidget::lightBox, Ui_KPerfWidget::lightColor1, Ui_KPerfWidget::lightColor2, Ui_KPerfWidget::lightColor3, Ui_KPerfWidget::lockBox, Ui_KPerfWidget::lockColorOff, Ui_KPerfWidget::lockColorOn, Ui_KPerfWidget::macroBox, Ui_KPerfWidget::macroColorOff, Ui_KPerfWidget::macroColorOn, Ui_KPerfWidget::modeBox, Ui_KPerfWidget::modeColorOff, Ui_KPerfWidget::modeColorOn, Ui_KPerfWidget::muteBox, Ui_KPerfWidget::muteColorNA, Ui_KPerfWidget::muteColorOff, Ui_KPerfWidget::muteColorOn, Ui_KPerfWidget::numBox, Ui_KPerfWidget::numColorOff, Ui_KPerfWidget::numColorOn, Ui_KPerfWidget::scrollBox, Ui_KPerfWidget::scrollColorOff, and Ui_KPerfWidget::scrollColorOn.

Referenced by Ui_KPerfWidget::setupUi().

```
590     {
591         KPerfWidget->setWindowTitle(QApplication::translate("KPerfWidget", "Form", Q_NULLPTR));
592         label_10->setText(QApplication::translate("KPerfWidget", "100%", Q_NULLPTR));
593         lockColorOff->setText(QString());
594         k95Label2->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
595         label_12->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
596         modeColorOff->setText(QString());
597         lightColor3->setText(QString());
598         lockBox->setText(QApplication::translate("KPerfWidget", "Indicate Windows Lock:", Q_NULLPTR)
    );
599         modeColorOn->setText(QString());
600         macroBox->setText(QApplication::translate("KPerfWidget", "Indicate macro recording:",
    Q_NULLPTR));
601         numColorOn->setText(QString());
602         numBox->clear();
603         numBox->insertItems(0, QStringList()
604          << QApplication::translate("KPerfWidget", "Normal", Q_NULLPTR)
605          << QApplication::translate("KPerfWidget", "Always on", Q_NULLPTR)
606          << QApplication::translate("KPerfWidget", "Always off", Q_NULLPTR)
607          << QApplication::translate("KPerfWidget", "RGB indicator", Q_NULLPTR)
608          << QApplication::translate("KPerfWidget", "RGB + normal", Q_NULLPTR)
609         );
610         label_5->setText(QApplication::translate("KPerfWidget", "Num lock:", Q_NULLPTR));
611         lightColor2->setText(QString());
612         label_8->setText(QApplication::translate("KPerfWidget", "Note: many desktop environments do
     not use scroll lock. The indicator may not turn on even when enabled.", Q_NULLPTR));
613         lightBox->setText(QApplication::translate("KPerfWidget", "Indicate brightness:", Q_NULLPTR)
    );
614         lightColor1->setText(QString());
615         label_6->setText(QApplication::translate("KPerfWidget", "Caps lock:", Q_NULLPTR));
616         label->setText(QApplication::translate("KPerfWidget", "Miscellaneous", Q_NULLPTR));
617         lockColorOn->setText(QString());
618         label_4->setText(QApplication::translate("KPerfWidget", "Lock lights", Q_NULLPTR));
619         modeBox->setText(QApplication::translate("KPerfWidget", "Indicate current mode:", Q_NULLPTR)
    );
620         capsColorOff->setText(QString());
621         numColorOff->setText(QString());
622         capsColorOn->setText(QString());
623         label_22->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
624         scrollBox->clear();
625         scrollBox->insertItems(0, QStringList()
626          << QApplication::translate("KPerfWidget", "Normal", Q_NULLPTR)
627          << QApplication::translate("KPerfWidget", "Always on", Q_NULLPTR)
628          << QApplication::translate("KPerfWidget", "Always off", Q_NULLPTR)
629          << QApplication::translate("KPerfWidget", "RGB indicator", Q_NULLPTR)
```

```
         << QApplication::translate("KPerfWidget", "RGB + normal", Q_NULLPTR)
        );
        label_7->setText(QApplication::translate("KPerfWidget", "Scroll lock:", Q_NULLPTR));
        scrollColorOn->setText(QString());
        capsBox->clear();
        capsBox->insertItems(0, QStringList()
         << QApplication::translate("KPerfWidget", "Normal", Q_NULLPTR)
         << QApplication::translate("KPerfWidget", "Always on", Q_NULLPTR)
         << QApplication::translate("KPerfWidget", "Always off", Q_NULLPTR)
         << QApplication::translate("KPerfWidget", "RGB indicator", Q_NULLPTR)
         << QApplication::translate("KPerfWidget", "RGB + normal", Q_NULLPTR)
        );
        scrollColorOff->setText(QString());
        muteBox->setText(QApplication::translate("KPerfWidget", "Indicate mute:", Q_NULLPTR));
        muteColorOn->setText(QString());
        macroColorOff->setText(QString());
        label_3->setText(QApplication::translate("KPerfWidget", "Top row", Q_NULLPTR));
        muteColorOff->setText(QString());
        k95Label3->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        macroColorOn->setText(QString());
#ifndef QT_NO_TOOLTIP
        muteColorNA->setToolTip(QApplication::translate("KPerfWidget", "If the sound device does not support muting, or if mute status is unknown, this color will be displayed.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        muteColorNA->setText(QString());
        label_19->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
        label_21->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
        label_24->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        label_20->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
        label_16->setText(QApplication::translate("KPerfWidget", "67%", Q_NULLPTR));
        label_14->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        label_18->setText(QApplication::translate("KPerfWidget", "33%", Q_NULLPTR));
        label_15->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        k95Label4->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
        label_17->setText(QApplication::translate("KPerfWidget", "Unknown", Q_NULLPTR));
        label_11->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
        label_23->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        k95Label1->setText(QApplication::translate("KPerfWidget", "K95 buttons", Q_NULLPTR));
        copyButton->setText(QApplication::translate("KPerfWidget", "Copy to mode...", Q_NULLPTR)
    ;
        label_2->setText(QApplication::translate("KPerfWidget", "Indicator intensity:", Q_NULLPTR));
        intensityBox->setSuffix(QApplication::translate("KPerfWidget", "%", Q_NULLPTR));
        k95Label5->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        k95Label6->setText(QApplication::translate("KPerfWidget", "Note: macro recording not yet implemented. Indicator will always display \"off\".", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.45.2.2 void Ui_KPerfWidget::setupUi (QWidget * *KPerfWidget*) [inline],[inherited]

Definition at line 111 of file ui_kperfwidget.h.

References Ui_KPerfWidget::capsBox, Ui_KPerfWidget::capsColorOff, Ui_KPerfWidget::capsColorOn, Ui_KPerfWidget::copyButton, Ui_KPerfWidget::gridLayout, Ui_KPerfWidget::horizontalLayout, Ui_KPerfWidget::horizontalLayout_2, Ui_KPerfWidget::horizontalSpacer, Ui_KPerfWidget::horizontalSpacer_2, Ui_KPerfWidget::horizontalSpacer_3, Ui_KPerfWidget::horizontalSpacer_4, Ui_KPerfWidget::horizontalSpacer_5, Ui_KPerfWidget::horizontalSpacer_6, Ui_KPerfWidget::horizontalSpacer_7, Ui_KPerfWidget::horizontalSpacer_8, Ui_KPerfWidget::intensityBox, Ui_KPerfWidget::k95Label1, Ui_KPerfWidget::k95Label2, Ui_KPerfWidget::k95Label3, Ui_KPerfWidget::k95Label4, Ui_KPerfWidget::k95Label5, Ui_KPerfWidget::k95Label6, Ui_KPerfWidget::k95Line, Ui_KPerfWidget::k95Spacer, Ui_KPerfWidget::label, Ui_KPerfWidget::label_10, Ui_KPerfWidget::label_11, Ui_KPerfWidget::label_12, Ui_KPerfWidget::label_14, Ui_KPerfWidget::label_15, Ui_KPerfWidget::label_16, Ui_KPerfWidget::label_17, Ui_KPerfWidget::label_18, Ui_KPerfWidget::label_19, Ui_KPerfWidget::label_2, Ui_KPerfWidget::label_20, Ui_KPerfWidget::label_21, Ui_KPerfWidget::label_22, Ui_KPerfWidget::label_23, Ui_KPerfWidget::label_24, Ui_KPerfWidget::label_3, Ui_KPerfWidget::label_4, Ui_KPerfWidget::label_5, Ui_KPerfWidget::label_6, Ui_KPerfWidget-

::label_7, Ui_KPerfWidget::label_8, Ui_KPerfWidget::lightBox, Ui_KPerfWidget::lightColor1, Ui_KPerfWidget::lightColor2, Ui_KPerfWidget::lightColor3, Ui_KPerfWidget::line, Ui_KPerfWidget::line_2, Ui_KPerfWidget::line_3, Ui_KPerfWidget::lockBox, Ui_KPerfWidget::lockColorOff, Ui_KPerfWidget::lockColorOn, Ui_KPerfWidget::macroBox, Ui_KPerfWidget::macroColorOff, Ui_KPerfWidget::macroColorOn, Ui_KPerfWidget::modeBox, Ui_KPerfWidget::modeColorOff, Ui_KPerfWidget::modeColorOn, Ui_KPerfWidget::muteBox, Ui_KPerfWidget::muteColorNA, Ui_KPerfWidget::muteColorOff, Ui_KPerfWidget::muteColorOn, Ui_KPerfWidget::numBox, Ui_KPerfWidget::numColorOff, Ui_KPerfWidget::numColorOn, Ui_KPerfWidget::retranslateUi(), Ui_KPerfWidget::scrollBox, Ui_KPerfWidget::scrollColorOff, Ui_KPerfWidget::scrollColorOn, Ui_KPerfWidget::verticalSpacer, Ui_KPerfWidget::verticalSpacer_2, Ui_KPerfWidget::verticalSpacer_3, and Ui_KPerfWidget::verticalSpacer_4.

Referenced by KPerfWidget::KPerfWidget().

```
    {
        if (KPerfWidget->objectName().isEmpty())
            KPerfWidget->setObjectName(QStringLiteral("KPerfWidget"));
        KPerfWidget->resize(840, 679);
        gridLayout = new QGridLayout(KPerfWidget);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        k95Spacer = new QWidget(KPerfWidget);
        k95Spacer->setObjectName(QStringLiteral("k95Spacer"));
        QSizePolicy sizePolicy(QSizePolicy::Fixed, QSizePolicy::Fixed);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(k95Spacer->sizePolicy().hasHeightForWidth());
        k95Spacer->setSizePolicy(sizePolicy);
        k95Spacer->setMinimumSize(QSize(15, 10));
        k95Spacer->setMaximumSize(QSize(15, 10));

        gridLayout->addWidget(k95Spacer, 12, 4, 1, 1);

        label_10 = new QLabel(KPerfWidget);
        label_10->setObjectName(QStringLiteral("label_10"));

        gridLayout->addWidget(label_10, 15, 5, 1, 1);

        lockColorOff = new ColorButton(KPerfWidget);
        lockColorOff->setObjectName(QStringLiteral("lockColorOff"));
        sizePolicy.setHeightForWidth(lockColorOff->sizePolicy().hasHeightForWidth());
        lockColorOff->setSizePolicy(sizePolicy);
        lockColorOff->setMinimumSize(QSize(0, 40));
        lockColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(lockColorOff, 16, 7, 1, 1);

        line = new QFrame(KPerfWidget);
        line->setObjectName(QStringLiteral("line"));
        line->setFrameShape(QFrame::HLine);
        line->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line, 2, 0, 1, 13);

        horizontalSpacer_5 = new QSpacerItem(10, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_5, 17, 6, 1, 1);

        k95Label2 = new QLabel(KPerfWidget);
        k95Label2->setObjectName(QStringLiteral("k95Label2"));

        gridLayout->addWidget(k95Label2, 9, 5, 1, 1);

        label_12 = new QLabel(KPerfWidget);
        label_12->setObjectName(QStringLiteral("label_12"));

        gridLayout->addWidget(label_12, 17, 5, 1, 1);

        modeColorOff = new ColorButton(KPerfWidget);
        modeColorOff->setObjectName(QStringLiteral("modeColorOff"));
        sizePolicy.setHeightForWidth(modeColorOff->sizePolicy().hasHeightForWidth());
        modeColorOff->setSizePolicy(sizePolicy);
        modeColorOff->setMinimumSize(QSize(0, 40));
        modeColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(modeColorOff, 9, 7, 1, 1);

        lightColor3 = new ColorButton(KPerfWidget);
        lightColor3->setObjectName(QStringLiteral("lightColor3"));
        sizePolicy.setHeightForWidth(lightColor3->sizePolicy().hasHeightForWidth());
        lightColor3->setSizePolicy(sizePolicy);
        lightColor3->setMinimumSize(QSize(0, 40));
        lightColor3->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(lightColor3, 15, 4, 1, 1);
```

```
        horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer, 15, 12, 1, 1);

        lockBox = new QCheckBox(KPerfWidget);
        lockBox->setObjectName(QStringLiteral("lockBox"));

        gridLayout->addWidget(lockBox, 16, 1, 1, 2);

        modeColorOn = new ColorButton(KPerfWidget);
        modeColorOn->setObjectName(QStringLiteral("modeColorOn"));
        sizePolicy.setHeightForWidth(modeColorOn->sizePolicy().hasHeightForWidth());
        modeColorOn->setSizePolicy(sizePolicy);
        modeColorOn->setMinimumSize(QSize(0, 40));
        modeColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(modeColorOn, 9, 4, 1, 1);

        macroBox = new QCheckBox(KPerfWidget);
        macroBox->setObjectName(QStringLiteral("macroBox"));

        gridLayout->addWidget(macroBox, 10, 1, 1, 2);

        numColorOn = new ColorButton(KPerfWidget);
        numColorOn->setObjectName(QStringLiteral("numColorOn"));
        sizePolicy.setHeightForWidth(numColorOn->sizePolicy().hasHeightForWidth());
        numColorOn->setSizePolicy(sizePolicy);
        numColorOn->setMinimumSize(QSize(0, 40));
        numColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(numColorOn, 21, 4, 1, 1);

        numBox = new QComboBox(KPerfWidget);
        numBox->setObjectName(QStringLiteral("numBox"));

        gridLayout->addWidget(numBox, 21, 2, 1, 1);

        label_5 = new QLabel(KPerfWidget);
        label_5->setObjectName(QStringLiteral("label_5"));

        gridLayout->addWidget(label_5, 21, 1, 1, 1);

        verticalSpacer_2 = new QSpacerItem(20, 20, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_2, 4, 1, 1, 1);

        lightColor2 = new ColorButton(KPerfWidget);
        lightColor2->setObjectName(QStringLiteral("lightColor2"));
        sizePolicy.setHeightForWidth(lightColor2->sizePolicy().hasHeightForWidth());
        lightColor2->setSizePolicy(sizePolicy);
        lightColor2->setMinimumSize(QSize(0, 40));
        lightColor2->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(lightColor2, 15, 7, 1, 1);

        horizontalSpacer_7 = new QSpacerItem(10, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_7, 17, 3, 1, 1);

        label_8 = new QLabel(KPerfWidget);
        label_8->setObjectName(QStringLiteral("label_8"));
        QFont font;
        font.setPointSize(8);
        font.setItalic(true);
        label_8->setFont(font);

        gridLayout->addWidget(label_8, 25, 1, 1, 12);

        lightBox = new QCheckBox(KPerfWidget);
        lightBox->setObjectName(QStringLiteral("lightBox"));

        gridLayout->addWidget(lightBox, 15, 1, 1, 2);

        lightColor1 = new ColorButton(KPerfWidget);
        lightColor1->setObjectName(QStringLiteral("lightColor1"));
        sizePolicy.setHeightForWidth(lightColor1->sizePolicy().hasHeightForWidth());
        lightColor1->setSizePolicy(sizePolicy);
        lightColor1->setMinimumSize(QSize(0, 40));
        lightColor1->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(lightColor1, 15, 10, 1, 1);

        verticalSpacer_4 = new QSpacerItem(0, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);
```

```

        gridLayout->addItem(verticalSpacer_4, 24, 4, 1, 1);

        label_6 = new QLabel(KPerfWidget);
        label_6->setObjectName(QStringLiteral("label_6"));

        gridLayout->addWidget(label_6, 22, 1, 1, 1);

        label = new QLabel(KPerfWidget);
        label->setObjectName(QStringLiteral("label"));
        QFont font1;
        font1.setBold(true);
        font1.setWeight(75);
        label->setFont(font1);

        gridLayout->addWidget(label, 1, 0, 1, 13);

        horizontalSpacer_6 = new QSpacerItem(10, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_6, 17, 9, 1, 1);

        lockColorOn = new ColorButton(KPerfWidget);
        lockColorOn->setObjectName(QStringLiteral("lockColorOn"));
        sizePolicy.setHeightForWidth(lockColorOn->sizePolicy().hasHeightForWidth());
        lockColorOn->setSizePolicy(sizePolicy);
        lockColorOn->setMinimumSize(QSize(0, 40));
        lockColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(lockColorOn, 16, 4, 1, 1);

        label_4 = new QLabel(KPerfWidget);
        label_4->setObjectName(QStringLiteral("label_4"));
        label_4->setFont(font1);

        gridLayout->addWidget(label_4, 19, 0, 1, 13);

        verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout->addItem(verticalSpacer, 26, 2, 1, 1);

        verticalSpacer_3 = new QSpacerItem(20, 20, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_3, 18, 4, 1, 1);

        modeBox = new QCheckBox(KPerfWidget);
        modeBox->setObjectName(QStringLiteral("modeBox"));

        gridLayout->addWidget(modeBox, 9, 1, 1, 2);

        capsColorOff = new ColorButton(KPerfWidget);
        capsColorOff->setObjectName(QStringLiteral("capsColorOff"));
        sizePolicy.setHeightForWidth(capsColorOff->sizePolicy().hasHeightForWidth());
        capsColorOff->setSizePolicy(sizePolicy);
        capsColorOff->setMinimumSize(QSize(0, 40));
        capsColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(capsColorOff, 22, 7, 1, 1);

        numColorOff = new ColorButton(KPerfWidget);
        numColorOff->setObjectName(QStringLiteral("numColorOff"));
        QSizePolicy sizePolicy1(QSizePolicy::Fixed, QSizePolicy::Fixed);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(40);
        sizePolicy1.setHeightForWidth(numColorOff->sizePolicy().hasHeightForWidth());
        numColorOff->setSizePolicy(sizePolicy1);
        numColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(numColorOff, 21, 7, 1, 1);

        capsColorOn = new ColorButton(KPerfWidget);
        capsColorOn->setObjectName(QStringLiteral("capsColorOn"));
        sizePolicy.setHeightForWidth(capsColorOn->sizePolicy().hasHeightForWidth());
        capsColorOn->setSizePolicy(sizePolicy);
        capsColorOn->setMinimumSize(QSize(0, 40));
        capsColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(capsColorOn, 22, 4, 1, 1);

        line_3 = new QFrame(KPerfWidget);
        line_3->setObjectName(QStringLiteral("line_3"));
        line_3->setFrameShape(QFrame::HLine);
        line_3->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_3, 20, 0, 1, 13);
```

```

        label_22 = new QLabel(KPerfWidget);
        label_22->setObjectName(QStringLiteral("label_22"));

        gridLayout->addWidget(label_22, 21, 8, 1, 1);

        scrollBox = new QComboBox(KPerfWidget);
        scrollBox->setObjectName(QStringLiteral("scrollBox"));

        gridLayout->addWidget(scrollBox, 23, 2, 1, 1);

        label_7 = new QLabel(KPerfWidget);
        label_7->setObjectName(QStringLiteral("label_7"));

        gridLayout->addWidget(label_7, 23, 1, 1, 1);

        scrollColorOn = new ColorButton(KPerfWidget);
        scrollColorOn->setObjectName(QStringLiteral("scrollColorOn"));
        sizePolicy.setHeightForWidth(scrollColorOn->sizePolicy().hasHeightForWidth());
        scrollColorOn->setSizePolicy(sizePolicy);
        scrollColorOn->setMinimumSize(QSize(0, 40));
        scrollColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(scrollColorOn, 23, 4, 1, 1);

        capsBox = new QComboBox(KPerfWidget);
        capsBox->setObjectName(QStringLiteral("capsBox"));

        gridLayout->addWidget(capsBox, 22, 2, 1, 1);

        scrollColorOff = new ColorButton(KPerfWidget);
        scrollColorOff->setObjectName(QStringLiteral("scrollColorOff"));
        sizePolicy.setHeightForWidth(scrollColorOff->sizePolicy().hasHeightForWidth());
        scrollColorOff->setSizePolicy(sizePolicy);
        scrollColorOff->setMinimumSize(QSize(0, 40));
        scrollColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(scrollColorOff, 23, 7, 1, 1);

        muteBox = new QCheckBox(KPerfWidget);
        muteBox->setObjectName(QStringLiteral("muteBox"));

        gridLayout->addWidget(muteBox, 17, 1, 1, 2);

        muteColorOn = new ColorButton(KPerfWidget);
        muteColorOn->setObjectName(QStringLiteral("muteColorOn"));
        sizePolicy.setHeightForWidth(muteColorOn->sizePolicy().hasHeightForWidth());
        muteColorOn->setSizePolicy(sizePolicy);
        muteColorOn->setMinimumSize(QSize(0, 40));
        muteColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(muteColorOn, 17, 4, 1, 1);

        macroColorOff = new ColorButton(KPerfWidget);
        macroColorOff->setObjectName(QStringLiteral("macroColorOff"));
        QSizePolicy sizePolicy2(QSizePolicy::Minimum, QSizePolicy::Fixed);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(40);
        sizePolicy2.setHeightForWidth(macroColorOff->sizePolicy().hasHeightForWidth());
        macroColorOff->setSizePolicy(sizePolicy2);
        macroColorOff->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(macroColorOff, 10, 7, 1, 1);

        label_3 = new QLabel(KPerfWidget);
        label_3->setObjectName(QStringLiteral("label_3"));
        label_3->setFont(font1);

        gridLayout->addWidget(label_3, 13, 0, 1, 3);

        muteColorOff = new ColorButton(KPerfWidget);
        muteColorOff->setObjectName(QStringLiteral("muteColorOff"));
        sizePolicy.setHeightForWidth(muteColorOff->sizePolicy().hasHeightForWidth());
        muteColorOff->setSizePolicy(sizePolicy);
        muteColorOff->setMinimumSize(QSize(0, 40));
        muteColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(muteColorOff, 17, 7, 1, 1);

        k95Label3 = new QLabel(KPerfWidget);
        k95Label3->setObjectName(QStringLiteral("k95Label3"));

        gridLayout->addWidget(k95Label3, 9, 8, 1, 1);

        macroColorOn = new ColorButton(KPerfWidget);
        macroColorOn->setObjectName(QStringLiteral("macroColorOn"));
        sizePolicy2.setHeightForWidth(macroColorOn->sizePolicy().hasHeightForWidth());
```

```
        macroColorOn->setSizePolicy(sizePolicy2);
        macroColorOn->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(macroColorOn, 10, 4, 1, 1);

        muteColorNA = new ColorButton(KPerfWidget);
        muteColorNA->setObjectName(QStringLiteral("muteColorNA"));
        muteColorNA->setMinimumSize(QSize(0, 40));
        muteColorNA->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(muteColorNA, 17, 10, 1, 1);

        label_19 = new QLabel(KPerfWidget);
        label_19->setObjectName(QStringLiteral("label_19"));

        gridLayout->addWidget(label_19, 21, 5, 1, 1);

        k95Line = new QFrame(KPerfWidget);
        k95Line->setObjectName(QStringLiteral("k95Line"));
        k95Line->setFrameShape(QFrame::HLine);
        k95Line->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(k95Line, 8, 0, 1, 13);

        label_21 = new QLabel(KPerfWidget);
        label_21->setObjectName(QStringLiteral("label_21"));

        gridLayout->addWidget(label_21, 23, 5, 1, 1);

        label_24 = new QLabel(KPerfWidget);
        label_24->setObjectName(QStringLiteral("label_24"));

        gridLayout->addWidget(label_24, 23, 8, 1, 1);

        label_20 = new QLabel(KPerfWidget);
        label_20->setObjectName(QStringLiteral("label_20"));

        gridLayout->addWidget(label_20, 22, 5, 1, 1);

        label_16 = new QLabel(KPerfWidget);
        label_16->setObjectName(QStringLiteral("label_16"));

        gridLayout->addWidget(label_16, 15, 8, 1, 1);

        label_14 = new QLabel(KPerfWidget);
        label_14->setObjectName(QStringLiteral("label_14"));

        gridLayout->addWidget(label_14, 17, 8, 1, 1);

        label_18 = new QLabel(KPerfWidget);
        label_18->setObjectName(QStringLiteral("label_18"));

        gridLayout->addWidget(label_18, 15, 11, 1, 1);

        horizontalSpacer_2 = new QSpacerItem(5, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_2, 15, 0, 1, 1);

        label_15 = new QLabel(KPerfWidget);
        label_15->setObjectName(QStringLiteral("label_15"));

        gridLayout->addWidget(label_15, 16, 8, 1, 1);

        k95Label4 = new QLabel(KPerfWidget);
        k95Label4->setObjectName(QStringLiteral("k95Label4"));

        gridLayout->addWidget(k95Label4, 10, 5, 1, 1);

        label_17 = new QLabel(KPerfWidget);
        label_17->setObjectName(QStringLiteral("label_17"));

        gridLayout->addWidget(label_17, 17, 11, 1, 1);

        label_11 = new QLabel(KPerfWidget);
        label_11->setObjectName(QStringLiteral("label_11"));

        gridLayout->addWidget(label_11, 16, 5, 1, 1);

        label_23 = new QLabel(KPerfWidget);
        label_23->setObjectName(QStringLiteral("label_23"));

        gridLayout->addWidget(label_23, 22, 8, 1, 1);

        k95Label1 = new QLabel(KPerfWidget);
        k95Label1->setObjectName(QStringLiteral("k95Label1"));
        k95Label1->setFont(font1);
```

```
        gridLayout->addWidget(k95Label1, 7, 0, 1, 5);

        horizontalLayout_2 = new QHBoxLayout();
        horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
        copyButton = new QPushButton(KPerfWidget);
        copyButton->setObjectName(QStringLiteral("copyButton"));

        horizontalLayout_2->addWidget(copyButton);

        horizontalSpacer_8 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer_8);


        gridLayout->addLayout(horizontalLayout_2, 3, 10, 1, 3);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        label_2 = new QLabel(KPerfWidget);
        label_2->setObjectName(QStringLiteral("label_2"));

        horizontalLayout->addWidget(label_2);

        horizontalSpacer_4 = new QSpacerItem(10, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        horizontalLayout->addItem(horizontalSpacer_4);

        intensityBox = new QSpinBox(KPerfWidget);
        intensityBox->setObjectName(QStringLiteral("intensityBox"));
        intensityBox->setMaximum(100);
        intensityBox->setValue(100);

        horizontalLayout->addWidget(intensityBox);

        horizontalSpacer_3 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        horizontalLayout->addItem(horizontalSpacer_3);


        gridLayout->addLayout(horizontalLayout, 3, 1, 1, 9);

        k95Label5 = new QLabel(KPerfWidget);
        k95Label5->setObjectName(QStringLiteral("k95Label5"));

        gridLayout->addWidget(k95Label5, 10, 8, 1, 1);

        line_2 = new QFrame(KPerfWidget);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
        line_2->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_2, 14, 0, 1, 13);

        k95Label6 = new QLabel(KPerfWidget);
        k95Label6->setObjectName(QStringLiteral("k95Label6"));
        k95Label6->setFont(font);

        gridLayout->addWidget(k95Label6, 11, 1, 1, 10);


        retranslateUi(KPerfWidget);

        QMetaObject::connectSlotsByName(KPerfWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.45.3 Field Documentation

12.45.3.1 QComboBox* Ui_KPerfWidget::capsBox [inherited]

Definition at line 74 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.2 ColorButton* Ui_KPerfWidget::capsColorOff [inherited]

Definition at line 66 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.3 ColorButton* Ui_KPerfWidget::capsColorOn [inherited]

Definition at line 68 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.4 QPushButton* Ui_KPerfWidget::copyButton [inherited]

Definition at line 100 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.5 QGridLayout* Ui_KPerfWidget::gridLayout [inherited]

Definition at line 34 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.6 QHBoxLayout* Ui_KPerfWidget::horizontalLayout [inherited]

Definition at line 102 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.7 QHBoxLayout* Ui_KPerfWidget::horizontalLayout_2 [inherited]

Definition at line 99 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.8 QSpacerItem* Ui_KPerfWidget::horizontalSpacer [inherited]

Definition at line 44 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.9 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_2 [inherited]

Definition at line 92 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.10 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_3 [inherited]

Definition at line 106 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.11 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_4 [inherited]

Definition at line 104 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.12 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_5 [inherited]

Definition at line 39 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.13 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_6 [inherited]

Definition at line 60 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.14 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_7 [inherited]

Definition at line 53 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.15 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_8 [inherited]

Definition at line 101 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.16 QSpinBox* Ui_KPerfWidget::intensityBox [inherited]

Definition at line 105 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), KPerfWidget::setPerf(), and Ui_KPerfWidget::setupUi().

12.45.3.17 QLabel* Ui_KPerfWidget::k95Label1 [inherited]

Definition at line 98 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.18 QLabel* Ui_KPerfWidget::k95Label2 [inherited]

Definition at line 40 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.19 QLabel* Ui_KPerfWidget::k95Label3 [inherited]

Definition at line 81 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.20 QLabel* Ui_KPerfWidget::k95Label4 [inherited]

Definition at line 94 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.21 QLabel* Ui_KPerfWidget::k95Label5 [inherited]

Definition at line 107 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.22 QLabel* Ui_KPerfWidget::k95Label6 [inherited]

Definition at line 109 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.23 QFrame* Ui_KPerfWidget::k95Line [inherited]

Definition at line 85 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), and Ui_KPerfWidget::setupUi().

12.45.3.24 QWidget* Ui_KPerfWidget::k95Spacer [inherited]

Definition at line 35 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), and Ui_KPerfWidget::setupUi().

12.45.3.25 QLabel* Ui_KPerfWidget::label [inherited]

Definition at line 59 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.26 QLabel* Ui_KPerfWidget::label_10 [inherited]

Definition at line 36 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.27 QLabel* Ui_KPerfWidget::label_11 [inherited]

Definition at line 96 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.28 QLabel* Ui_KPerfWidget::label_12 [inherited]

Definition at line 41 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), KPerfWidget::setPerf(), and Ui_KPerfWidget::setupUi().

12.45.3.29 QLabel* Ui_KPerfWidget::label_14 [inherited]

Definition at line 90 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), KPerfWidget::setPerf(), and Ui_KPerfWidget::setupUi().

12.45.3.30 QLabel* Ui_KPerfWidget::label_15 [inherited]

Definition at line 93 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.31 QLabel* Ui_KPerfWidget::label_16 [inherited]

Definition at line 89 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.32 QLabel* Ui_KPerfWidget::label_17 [inherited]

Definition at line 95 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), KPerfWidget::setPerf(), and Ui_KPerfWidget::setupUi().

12.45.3.33 QLabel* Ui_KPerfWidget::label_18 [inherited]

Definition at line 91 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.34 QLabel* Ui_KPerfWidget::label_19 [inherited]

Definition at line 84 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.35 QLabel* Ui_KPerfWidget::label_2 [inherited]

Definition at line 103 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.36 QLabel* Ui_KPerfWidget::label_20 [inherited]

Definition at line 88 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.37 QLabel* Ui_KPerfWidget::label_21 [inherited]

Definition at line 86 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.38 QLabel* Ui_KPerfWidget::label_22 [inherited]

Definition at line 70 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.39 QLabel* Ui_KPerfWidget::label_23 [inherited]

Definition at line 97 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.40 QLabel* Ui_KPerfWidget::label_24 [inherited]

Definition at line 87 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.41 QLabel* Ui_KPerfWidget::label_3 [inherited]

Definition at line 79 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.42 QLabel* Ui_KPerfWidget::label_4 [inherited]

Definition at line 62 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.43 QLabel* Ui_KPerfWidget::label_5 [inherited]

Definition at line 50 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.44 QLabel* Ui_KPerfWidget::label_6 [inherited]

Definition at line 58 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.45 QLabel* Ui_KPerfWidget::label_7 [inherited]

Definition at line 72 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.46 QLabel* Ui_KPerfWidget::label_8 [inherited]

Definition at line 54 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.47 QCheckBox* Ui_KPerfWidget::lightBox [inherited]

Definition at line 55 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.48 ColorButton* Ui_KPerfWidget::lightColor1 [inherited]

Definition at line 56 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.49 ColorButton* Ui_KPerfWidget::lightColor2 [inherited]

Definition at line 52 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.50 ColorButton* Ui_KPerfWidget::lightColor3 [inherited]

Definition at line 43 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.51 QFrame* Ui_KPerfWidget::line [inherited]

Definition at line 38 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.52 QFrame* Ui_KPerfWidget::line_2 [inherited]

Definition at line 108 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.53 QFrame* Ui_KPerfWidget::line_3 [inherited]

Definition at line 69 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.54 QCheckBox* Ui_KPerfWidget::lockBox [inherited]

Definition at line 45 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.55 ColorButton* Ui_KPerfWidget::lockColorOff [inherited]

Definition at line 37 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.56 ColorButton* Ui_KPerfWidget::lockColorOn [inherited]

Definition at line 61 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.57 QCheckBox* Ui_KPerfWidget::macroBox [inherited]

Definition at line 47 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.58 ColorButton* Ui_KPerfWidget::macroColorOff [inherited]

Definition at line 78 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.59 ColorButton* Ui_KPerfWidget::macroColorOn [inherited]

Definition at line 82 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.60 QCheckBox* Ui_KPerfWidget::modeBox [inherited]

Definition at line 65 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.61 ColorButton* Ui_KPerfWidget::modeColorOff [inherited]

Definition at line 42 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.62 ColorButton* Ui_KPerfWidget::modeColorOn [inherited]

Definition at line 46 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.63 QCheckBox* Ui_KPerfWidget::muteBox [inherited]

Definition at line 76 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), KPerfWidget::setPerf(), and Ui_KPerfWidget::setupUi().

12.45.3.64 ColorButton* Ui_KPerfWidget::muteColorNA [inherited]

Definition at line 83 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), KPerfWidget::setPerf(), and Ui_KPerfWidget::setupUi().

12.45.3.65 ColorButton* Ui_KPerfWidget::muteColorOff [inherited]

Definition at line 80 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), KPerfWidget::setPerf(), and Ui_KPerfWidget::setupUi().

12.45.3.66 ColorButton* Ui_KPerfWidget::muteColorOn [inherited]

Definition at line 77 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), KPerfWidget::setPerf(), and Ui_KPerfWidget::setupUi().

12.45.3.67 QComboBox* Ui_KPerfWidget::numBox [inherited]

Definition at line 49 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.68 ColorButton* Ui_KPerfWidget::numColorOff [inherited]

Definition at line 67 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.69 ColorButton* Ui_KPerfWidget::numColorOn [inherited]

Definition at line 48 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.70 QComboBox* Ui_KPerfWidget::scrollBox [inherited]

Definition at line 71 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.71 ColorButton* Ui_KPerfWidget::scrollColorOff [inherited]

Definition at line 75 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.72 ColorButton* Ui_KPerfWidget::scrollColorOn [inherited]

Definition at line 73 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), Ui_KPerfWidget::retranslateUi(), and Ui_KPerfWidget::setupUi().

12.45.3.73 QSpacerItem* Ui_KPerfWidget::verticalSpacer [inherited]

Definition at line 63 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.74 QSpacerItem* Ui_KPerfWidget::verticalSpacer_2 [inherited]

Definition at line 51 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.75 QSpacerItem* Ui_KPerfWidget::verticalSpacer_3 [inherited]

Definition at line 64 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

12.45.3.76 QSpacerItem* Ui_KPerfWidget::verticalSpacer_4 [inherited]

Definition at line 57 of file ui_kperfwidget.h.

Referenced by Ui_KPerfWidget::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kperfwidget.h

12.46 KPerfWidget Class Reference

```
#include <src/ckb/kperfwidget.h>
```

Inheritance diagram for KPerfWidget:

Collaboration diagram for KPerfWidget:

Data Structures

- struct IndicatorUi

Public Types

- typedef KbPerf::indicator indicator
- typedef KbPerf::i_hw i_hw

Public Member Functions

- KPerfWidget (QWidget *parent=0)
- ~KPerfWidget ()
- void setPerf (KbPerf *newPerf, KbProfile *newProfile)

Static Public Attributes

- static const int I_COUNT = KbPerf::I_COUNT
- static const int HW_I_COUNT = KbPerf::HW_I_COUNT

Private Types

- enum HwMode {
  NORMAL, ALWAYS_ON, ALWAYS_OFF, RGB,
  BOTH }

Private Slots

- void uiUpdated (int index)
- void on_intensityBox_valueChanged (int arg1)
- void on_copyButton_clicked ()

Private Member Functions

- HwMode raw2Mode (bool sw_enable, i_hw hw_enable)
- void mode2Raw (HwMode mode, bool &sw_enable, i_hw &hw_enable)

Private Attributes

- Ui::KPerfWidget * ui
- KbPerf * perf
- KbProfile * profile
- IndicatorUi indicators [I_COUNT]
- QList< QWidget * > k95Widgets
- QSignalMapper updateMapper

12.46.1 Detailed Description

Definition at line 16 of file kperfwidget.h.

12.46.2 Data Structure Documentation

12.46.2.1 struct KPerfWidget::IndicatorUi

Definition at line 48 of file kperfwidget.h.

Collaboration diagram for KPerfWidget::IndicatorUi:

Data Fields

ColorButton *	color1	
ColorButton *	color2	
ColorButton *	color3	
QCheckBox *	enable	
QComboBox *	hwEnable	

12.46.3 Member Typedef Documentation

12.46.3.1 typedef KbPerf::i_hw KPerfWidget::i_hw

Definition at line 29 of file kperfwidget.h.

12.46.3.2 typedef KbPerf::indicator KPerfWidget::indicator

Definition at line 28 of file kperfwidget.h.

12.46.4 Member Enumeration Documentation

12.46.4.1 enum KPerfWidget::HwMode [private]

Enumerator

NORMAL

ALWAYS_ON

ALWAYS_OFF

RGB

BOTH

Definition at line 38 of file kperfwidget.h.

```
38                  {
39          NORMAL,
40          ALWAYS_ON,
41          ALWAYS_OFF,
42          RGB,
43          BOTH
44      };
```

12.46.5 Constructor & Destructor Documentation

12.46.5.1 KPerfWidget::KPerfWidget (QWidget * *parent* = 0) [explicit]

Definition at line 6 of file kperfwidget.cpp.

References ColorButton::allowAlpha(), ColorButton::bigIcons(), Ui_KPerfWidget::capsBox, Ui_KPerfWidget::capsColorOff, Ui_KPerfWidget::capsColorOn, KPerfWidget::IndicatorUi::color1, KPerfWidget::IndicatorUi::color2, KPerfWidget::IndicatorUi::color3, KPerfWidget::IndicatorUi::enable, KPerfWidget::IndicatorUi::hwEnable, I_COUNT, indicators, Ui_KPerfWidget::k95Label1, Ui_KPerfWidget::k95Label2, Ui_KPerfWidget::k95Label3, Ui_KPerfWidget::k95Label4, Ui_KPerfWidget::k95Label5, Ui_KPerfWidget::k95Label6, Ui_KPerfWidget::k95Line, Ui_KPerfWidget::k95Spacer, k95Widgets, Ui_KPerfWidget::lightBox, Ui_KPerfWidget::lightColor1, Ui_KPerfWidget::lightColor2, Ui_KPerfWidget::lightColor3, Ui_KPerfWidget::lockBox, Ui_KPerfWidget::lockColorOff, Ui_KPerfWidget::lockColorOn, Ui_KPerfWidget::macroBox, Ui_KPerfWidget::macroColorOff, Ui_KPerfWidget::macroColorOn, Ui_KPerfWidget::modeBox, Ui_KPerfWidget::modeColorOff, Ui_KPerfWidget::modeColorOn, Ui_KPerfWidget::muteBox, Ui_KPerfWidget::muteColorNA, Ui_KPerfWidget::muteColorOff, Ui_KPerfWidget::muteColorOn, Ui_KPerfWidget::numBox, Ui_KPerfWidget::numColorOff, Ui_KPerfWidget::numColorOn, Ui_KPerfWidget::scrollBox, Ui_KPerfWidget::scrollColorOff, Ui_KPerfWidget::scrollColorOn, ColorButton::setLabel(), Ui_KPerfWidget::setupUi(), ui, uiUpdated(), and updateMapper.

```
6                                       :
7       QWidget(parent),
8       ui(new Ui::KPerfWidget)
9   {
10       ui->setupUi(this);
11       // Set up indicators
12       indicators[0].enable = 0; indicators[0].hwEnable =
        ui->numBox; indicators[0].color1 = ui->numColorOn;
        indicators[0].color2 = ui->numColorOff; indicators[0].
        color3 = 0;
13       indicators[1].enable = 0; indicators[1].hwEnable =
```

```
    ui->capsBox; indicators[1].color1 = ui->capsColorOn;
    indicators[1].color2 = ui->capsColorOff;
    indicators[1].color3 = 0;
    indicators[2].enable = 0; indicators[2].hwEnable =
    ui->scrollBox; indicators[2].color1 = ui->
    scrollColorOn; indicators[2].color2 = ui->
    scrollColorOff; indicators[2].color3 = 0;
    indicators[3].enable = ui->modeBox; indicators[3].
    hwEnable = 0; indicators[3].color1 = ui->modeColorOn;
    indicators[3].color2 = ui->modeColorOff;
    indicators[3].color3 = 0;
    indicators[4].enable = ui->macroBox; indicators[4].
    hwEnable = 0; indicators[4].color1 = ui->macroColorOn;
    indicators[4].color2 = ui->macroColorOff;
    indicators[4].color3 = 0;
    indicators[5].enable = ui->lightBox; indicators[5].
    hwEnable = 0; indicators[5].color1 = ui->lightColor1;
    indicators[5].color2 = ui->lightColor2; indicators[5].
    color3 = ui->lightColor3;
    indicators[6].enable = ui->lockBox; indicators[6].
    hwEnable = 0; indicators[6].color1 = ui->lockColorOn;
    indicators[6].color2 = ui->lockColorOff;
    indicators[6].color3 = 0;
    indicators[7].enable = ui->muteBox; indicators[7].
    hwEnable = 0; indicators[7].color1 = ui->muteColorOn;
    indicators[7].color2 = ui->muteColorOff;
    indicators[7].color3 = ui->muteColorNA;
    for(int i = 0; i < I_COUNT; i++){
        indicators[i].color1->setLabel(false);
        indicators[i].color1->bigIcons(true);
        indicators[i].color1->allowAlpha(true);
        indicators[i].color2->setLabel(false);
        indicators[i].color2->bigIcons(true);
        indicators[i].color2->allowAlpha(true);
        if(indicators[i].color3){
            indicators[i].color3->setLabel(false);
            indicators[i].color3->bigIcons(true);
            indicators[i].color3->allowAlpha(true);
        }
        // Map signals
        if(indicators[i].enable){
            connect(indicators[i].enable, SIGNAL(clicked(bool)), &
    updateMapper, SLOT(map()));
            updateMapper.setMapping(indicators[i].enable, i);
        }
        if(indicators[i].hwEnable){
            connect(indicators[i].hwEnable, SIGNAL(activated(int)), &
    updateMapper, SLOT(map()));
            updateMapper.setMapping(indicators[i].hwEnable, i);
        }
        connect(indicators[i].color1, SIGNAL(colorChanged(QColor)), &
    updateMapper, SLOT(map()));
        updateMapper.setMapping(indicators[i].color1, i);
        connect(indicators[i].color2, SIGNAL(colorChanged(QColor)), &
    updateMapper, SLOT(map()));
        updateMapper.setMapping(indicators[i].color2, i);
        if(indicators[i].color3){
            connect(indicators[i].color3, SIGNAL(colorChanged(QColor)), &
    updateMapper, SLOT(map()));
            updateMapper.setMapping(indicators[i].color3, i);
        }
    }
    connect(&updateMapper, SIGNAL(mapped(int)), this, SLOT(uiUpdated(int)));
    k95Widgets << ui->modeBox << ui->modeColorOn <<
    ui->modeColorOff << ui->macroBox << ui->macroColorOn <<
    ui->macroColorOff << ui->k95Label1 << ui->k95Label2 <<
    ui->k95Label3 << ui->k95Label4 << ui->k95Label5 <<
    ui->k95Label6 << ui->k95Line << ui->k95Spacer;
}
```

Here is the call graph for this function:

12.46.5.2 KPerfWidget::~KPerfWidget ( )

Definition at line 54 of file kperfwidget.cpp.

References ui.

```
54                          {
55     delete ui;
56 }
```

12.46.6 Member Function Documentation

12.46.6.1 void KPerfWidget::mode2Raw (HwMode *mode*, bool & *sw_enable*, i_hw & *hw_enable*) [private]

Definition at line 72 of file kperfwidget.cpp.

References ALWAYS_OFF, ALWAYS_ON, BOTH, NORMAL, KbPerf::NORMAL, KbPerf::OFF, KbPerf::ON, and RGB.

Referenced by uiUpdated().

```
72                                                                  {
73     switch(mode){
74     case NORMAL:
75         sw_enable = false;
76         hw_enable = KbPerf::NORMAL;
77         break;
78     case ALWAYS_ON:
79         sw_enable = false;
80         hw_enable = KbPerf::ON;
81         break;
82     case ALWAYS_OFF:
83         sw_enable = false;
84         hw_enable = KbPerf::OFF;
85         break;
86     case RGB:
87         sw_enable = true;
88         hw_enable = KbPerf::OFF;
89         break;
90     case BOTH:
91         sw_enable = true;
92         hw_enable = KbPerf::NORMAL;
93         break;
94     }
95 }
```

Here is the caller graph for this function:

12.46.6.2 void KPerfWidget::on_copyButton_clicked ( ) [private],[slot]

Definition at line 193 of file kperfwidget.cpp.

References KbProfile::currentMode(), KbProfile::modes(), perf, KbMode::perf(), profile, and ModeSelectDialog::selection().

```
193                                         {
194     ModeSelectDialog dialog(this, profile->currentMode(),
      profile->modes(), "Copy performance settings to:");
195     if(dialog.exec() != QDialog::Accepted)
196         return;
197     QList<KbMode*> selectedModes = dialog.selection();
198     foreach(KbMode* mode, selectedModes){
199         *mode->perf() = *perf;
200     }
201 }
```

Here is the call graph for this function:

12.46.6.3 void KPerfWidget::on_intensityBox_valueChanged (int *arg1*) [private],[slot]

Definition at line 187 of file kperfwidget.cpp.

References KbPerf::iOpacity(), and perf.

```
187                                                     {
188     if(!perf)
189         return;
190     perf->iOpacity(arg1 / 100.f);
191 }
```

Here is the call graph for this function:

12.46.6.4 KPerfWidget::HwMode KPerfWidget::raw2Mode (bool *sw_enable,* i_hw *hw_enable*) [private]

Definition at line 58 of file kperfwidget.cpp.

References ALWAYS_OFF, ALWAYS_ON, BOTH, NORMAL, KbPerf::NORMAL, KbPerf::OFF, KbPerf::ON, and RGB.

Referenced by setPerf().

```
58                                                                  {
59     if(sw_enable){
60         if(hw_enable == KbPerf::NORMAL)
61             return BOTH;
62         return RGB;
63     } else {
64         if(hw_enable == KbPerf::ON)
65             return ALWAYS_ON;
66         else if(hw_enable == KbPerf::OFF)
67             return ALWAYS_OFF;
68         return NORMAL;
69     }
70 }
```

Here is the caller graph for this function:

12.46.6.5 void KPerfWidget::setPerf (KbPerf * *newPerf,* KbProfile * *newProfile*)

Definition at line 97 of file kperfwidget.cpp.

References BOTH, ColorButton::color(), KPerfWidget::IndicatorUi::color1, KPerfWidget::IndicatorUi::color2, KPerfWidget::IndicatorUi::color3, KPerfWidget::IndicatorUi::enable, KbPerf::getIndicator(), HW_I_COUNT, KPerfWidget::IndicatorUi::hwEnable, I_COUNT, indicators, Ui_KPerfWidget::intensityBox, KbPerf::iOpacity(), KeyMap::K95, k95Widgets, KbProfile::keyMap(), Ui_KPerfWidget::label_12, Ui_KPerfWidget::label_14, Ui_KPerfWidget::label_17, KeyMap::model(), Ui_KPerfWidget::muteBox, Ui_KPerfWidget::muteColorNA, Ui_KPerfWidget::muteColorOff, Ui_KPerfWidget::muteColorOn, perf, profile, raw2Mode(), RGB, KeyMap::STRAFE, and ui.

Referenced by KbWidget::modeChanged().

```
97                                                          {
98     perf = newPerf;
```

```
    profile = newProfile;
    // Set intensity
    ui->intensityBox->setValue(round(perf->iOpacity() * 100.f));
    // Set hardware indicator values
    for(int i = 0; i < HW_I_COUNT; i++){
        QColor c1, c2, c3;
        bool software;
        i_hw hardware;
        perf->getIndicator((indicator)i, c1, c2, c3, software, hardware);
        HwMode mode = raw2Mode(software, hardware);
        indicators[i].hwEnable->setCurrentIndex((int)mode);
        indicators[i].color1->color(c1);
        indicators[i].color2->color(c2);
        if(mode == RGB || mode == BOTH){
            indicators[i].color1->setEnabled(true);
            indicators[i].color2->setEnabled(true);
        } else {
            indicators[i].color1->setEnabled(false);
            indicators[i].color2->setEnabled(false);
        }
    }
    // Set software indicators
    for(int i = HW_I_COUNT; i < I_COUNT; i++){
        QColor c1, c2, c3;
        bool software;
        i_hw hardware;
        perf->getIndicator((indicator)i, c1, c2, c3, software, hardware);
        indicators[i].enable->setChecked(software);
        indicators[i].color1->color(c1);
        indicators[i].color2->color(c2);
        if(indicators[i].color3) indicators[i].color3->color(c3);
        if(software){
            indicators[i].color1->setEnabled(true);
            indicators[i].color2->setEnabled(true);
            if(indicators[i].color3) indicators[i].color3->setEnabled(true);
        } else {
            indicators[i].color1->setEnabled(false);
            indicators[i].color2->setEnabled(false);
            if(indicators[i].color3) indicators[i].color3->setEnabled(false);
        }
    }
    // Hide K95 indicators on non-K95s
    if(profile->keyMap().model() == KeyMap::K95){
        foreach(QWidget* w, k95Widgets)
            w->show();
    } else {
        foreach(QWidget* w, k95Widgets)
            w->hide();
        if(profile->keyMap().model() == KeyMap::STRAFE) { // hide indicators unsupported by STRAFE
            ui->muteBox->hide();
            ui->muteColorOn->hide();
            ui->muteColorOff->hide();
            ui->muteColorNA->hide();
            ui->label_12->hide();
            ui->label_14->hide();
            ui->label_17->hide();
        }
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.46.6.6 void KPerfWidget::uiUpdated (int *index*) [private],[slot]

Definition at line 159 of file kperfwidget.cpp.

References ColorButton::color(), KPerfWidget::IndicatorUi::color1, KPerfWidget::IndicatorUi::color2, KPerfWidget::IndicatorUi::color3, KPerfWidget::IndicatorUi::enable, indicators, mode2Raw(), KbPerf::NONE, perf, and KbPerf::setIndicator().

Referenced by KPerfWidget().

```
159                                     {
160     if(!perf)
161         return;
162     // Read HW/SW enable state
163     bool software;
164     i_hw hardware;
165     if(indicators[index].enable){
166         software = indicators[index].enable->isChecked();
167         hardware = KbPerf::NONE;
168     } else {
```

```
        mode2Raw((HwMode)indicators[index].hwEnable->currentIndex(), software, hardware);
    }
    // Enable/disable color buttons based on whether or not the indicator is turned on
    if(software){
        indicators[index].color1->setEnabled(true);
        indicators[index].color2->setEnabled(true);
        if(indicators[index].color3) indicators[index].color3->setEnabled(true);
    } else {
        indicators[index].color1->setEnabled(false);
        indicators[index].color2->setEnabled(false);
        if(indicators[index].color3) indicators[index].color3->setEnabled(false);
    }
    QColor c1 = indicators[index].color1->color();
    QColor c2 = indicators[index].color2->color();
    QColor c3 = indicators[index].color3 ? indicators[index].color3->color() : QColor();
    perf->setIndicator((indicator)index, c1, c2, c3, software, hardware);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.46.7 Field Documentation

12.46.7.1 const int KPerfWidget::HW_I_COUNT = KbPerf::HW_I_COUNT [static]

Definition at line 27 of file kperfwidget.h.

Referenced by setPerf().

12.46.7.2 const int KPerfWidget::I_COUNT = KbPerf::I_COUNT [static]

Definition at line 26 of file kperfwidget.h.

Referenced by KPerfWidget(), and setPerf().

12.46.7.3 IndicatorUi KPerfWidget::indicators[I_COUNT] [private]

Definition at line 53 of file kperfwidget.h.

Referenced by KPerfWidget(), setPerf(), and uiUpdated().

12.46.7.4 QList<QWidget*> KPerfWidget::k95Widgets [private]

Definition at line 54 of file kperfwidget.h.

Referenced by KPerfWidget(), and setPerf().

12.46.7.5 KbPerf* KPerfWidget::perf [private]

Definition at line 34 of file kperfwidget.h.

Referenced by on_copyButton_clicked(), on_intensityBox_valueChanged(), setPerf(), and uiUpdated().

12.46.7.6 KbProfile* KPerfWidget::profile [private]

Definition at line 35 of file kperfwidget.h.

Referenced by on_copyButton_clicked(), and setPerf().

12.46.7.7 Ui::KPerfWidget* KPerfWidget::ui [private]

Definition at line 32 of file kperfwidget.h.

Referenced by KPerfWidget(), setPerf(), and ~KPerfWidget().

12.46.7.8 QSignalMapper KPerfWidget::updateMapper [private]

Definition at line 56 of file kperfwidget.h.

Referenced by KPerfWidget().

The documentation for this class was generated from the following files:

- src/ckb/kperfwidget.h
- src/ckb/kperfwidget.cpp

12.47 Ui::LayoutDialog Class Reference

```
#include <src/ckb/ui_layoutdialog.h>
```

Inheritance diagram for Ui::LayoutDialog:

Collaboration diagram for Ui::LayoutDialog:

Public Member Functions

- void setupUi (QDialog *LayoutDialog)
- void retranslateUi (QDialog *LayoutDialog)

Data Fields

- QGridLayout * gridLayout
- QSpacerItem * verticalSpacer
- QSpacerItem * verticalSpacer_3
- QDialogButtonBox * buttonBox
- QLabel * label
- QSpacerItem * horizontalSpacer_2
- QSpacerItem * verticalSpacer_2
- QSpacerItem * horizontalSpacer
- QComboBox * comboBox
- QLabel * label_2
- QSpacerItem * verticalSpacer_4

12.47.1 Detailed Description

Definition at line 119 of file ui_layoutdialog.h.

12.47.2 Member Function Documentation

12.47.2.1 void Ui_LayoutDialog::retranslateUi (QDialog * *LayoutDialog*) [inline], [inherited]

Definition at line 109 of file ui_layoutdialog.h.

References Ui_LayoutDialog::label, and Ui_LayoutDialog::label_2.

Referenced by Ui_LayoutDialog::setupUi().

```
    {
        LayoutDialog->setWindowTitle(QApplication::translate("LayoutDialog", "Keyboard Layout", Q_NULLPTR));
        label->setText(QApplication::translate("LayoutDialog", "Please select your keyboard layout:", Q_NULLPTR));
        label_2->setText(QApplication::translate("LayoutDialog", "Note: this only controls the layout within the ckb application. If your keys are typing the wrong characters, check your system preferences.", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.47.2.2 void Ui_LayoutDialog::setupUi (QDialog * *LayoutDialog*) [inline],[inherited]

Definition at line 41 of file ui_layoutdialog.h.

References Ui_LayoutDialog::buttonBox, Ui_LayoutDialog::comboBox, Ui_LayoutDialog::gridLayout, Ui_LayoutDialog::horizontalSpacer, Ui_LayoutDialog::horizontalSpacer_2, Ui_LayoutDialog::label, Ui_LayoutDialog::label_2, Ui_LayoutDialog::retranslateUi(), Ui_LayoutDialog::verticalSpacer, Ui_LayoutDialog::verticalSpacer_2, Ui_LayoutDialog::verticalSpacer_3, and Ui_LayoutDialog::verticalSpacer_4.

Referenced by LayoutDialog::LayoutDialog().

```
42     {
43         if (LayoutDialog->objectName().isEmpty())
44             LayoutDialog->setObjectName(QStringLiteral("LayoutDialog"));
45         LayoutDialog->resize(400, 240);
46         gridLayout = new QGridLayout(LayoutDialog);
47         gridLayout->setObjectName(QStringLiteral("gridLayout"));
48         verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding
    );
49
50         gridLayout->addItem(verticalSpacer, 6, 0, 1, 3);
51
52         verticalSpacer_3 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
    QSizePolicy::Expanding);
53
54         gridLayout->addItem(verticalSpacer_3, 0, 1, 1, 1);
55
56         buttonBox = new QDialogButtonBox(LayoutDialog);
57         buttonBox->setObjectName(QStringLiteral("buttonBox"));
58         buttonBox->setOrientation(Qt::Horizontal);
59         buttonBox->setStandardButtons(QDialogButtonBox::Ok);
60
61         gridLayout->addWidget(buttonBox, 7, 0, 1, 3);
62
63         label = new QLabel(LayoutDialog);
64         label->setObjectName(QStringLiteral("label"));
65         label->setAlignment(Qt::AlignCenter);
66
67         gridLayout->addWidget(label, 1, 0, 1, 3);
68
69         horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
70
71         gridLayout->addItem(horizontalSpacer_2, 3, 2, 1, 1);
72
73         verticalSpacer_2 = new QSpacerItem(20, 15, QSizePolicy::Minimum, QSizePolicy::Fixed
    );
74
75         gridLayout->addItem(verticalSpacer_2, 4, 1, 1, 1);
76
77         horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
78
79         gridLayout->addItem(horizontalSpacer, 3, 0, 1, 1);
80
81         comboBox = new QComboBox(LayoutDialog);
82         comboBox->setObjectName(QStringLiteral("comboBox"));
83
84         gridLayout->addWidget(comboBox, 3, 1, 1, 1);
85
86         label_2 = new QLabel(LayoutDialog);
87         label_2->setObjectName(QStringLiteral("label_2"));
88         QFont font;
89         font.setPointSize(8);
90         font.setItalic(true);
91         label_2->setFont(font);
92         label_2->setAlignment(Qt::AlignCenter);
93         label_2->setWordWrap(true);
94
95         gridLayout->addWidget(label_2, 5, 0, 1, 3);
96
97         verticalSpacer_4 = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed)
    ;
98
99         gridLayout->addItem(verticalSpacer_4, 2, 1, 1, 1);
100
101
102         retranslateUi(LayoutDialog);
103         QObject::connect(buttonBox, SIGNAL(accepted()), LayoutDialog, SLOT(accept()));
104         QObject::connect(buttonBox, SIGNAL(rejected()), LayoutDialog, SLOT(reject()));
105
106         QMetaObject::connectSlotsByName(LayoutDialog);
107     } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.47.3 Field Documentation

12.47.3.1 QDialogButtonBox* Ui_LayoutDialog::buttonBox [inherited]

Definition at line 32 of file ui_layoutdialog.h.

Referenced by Ui_LayoutDialog::setupUi().

12.47.3.2 QComboBox* Ui_LayoutDialog::comboBox [inherited]

Definition at line 37 of file ui_layoutdialog.h.

Referenced by LayoutDialog::LayoutDialog(), LayoutDialog::selected(), and Ui_LayoutDialog::setupUi().

12.47.3.3 QGridLayout* Ui_LayoutDialog::gridLayout [inherited]

Definition at line 29 of file ui_layoutdialog.h.

Referenced by Ui_LayoutDialog::setupUi().

12.47.3.4 QSpacerItem* Ui_LayoutDialog::horizontalSpacer [inherited]

Definition at line 36 of file ui_layoutdialog.h.

Referenced by Ui_LayoutDialog::setupUi().

12.47.3.5 QSpacerItem* Ui_LayoutDialog::horizontalSpacer_2 [inherited]

Definition at line 34 of file ui_layoutdialog.h.

Referenced by Ui_LayoutDialog::setupUi().

12.47.3.6 QLabel* Ui_LayoutDialog::label [inherited]

Definition at line 33 of file ui_layoutdialog.h.

Referenced by Ui_LayoutDialog::retranslateUi(), and Ui_LayoutDialog::setupUi().

12.47.3.7 QLabel* Ui_LayoutDialog::label_2 [inherited]

Definition at line 38 of file ui_layoutdialog.h.

Referenced by Ui_LayoutDialog::retranslateUi(), and Ui_LayoutDialog::setupUi().

12.47.3.8 QSpacerItem* Ui_LayoutDialog::verticalSpacer [inherited]

Definition at line 30 of file ui_layoutdialog.h.

Referenced by Ui_LayoutDialog::setupUi().

12.47.3.9 QSpacerItem* Ui_LayoutDialog::verticalSpacer_2 [inherited]

Definition at line 35 of file ui_layoutdialog.h.

Referenced by Ui_LayoutDialog::setupUi().

12.47.3.10 QSpacerItem* Ui_LayoutDialog::verticalSpacer_3 [inherited]

Definition at line 31 of file ui_layoutdialog.h.

Referenced by Ui_LayoutDialog::setupUi().

12.47.3.11 QSpacerItem* Ui_LayoutDialog::verticalSpacer_4 [inherited]

Definition at line 39 of file ui_layoutdialog.h.

Referenced by Ui_LayoutDialog::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_layoutdialog.h

12.48 LayoutDialog Class Reference

```
#include <src/ckb/layoutdialog.h>
```

Inheritance diagram for LayoutDialog:

Collaboration diagram for LayoutDialog:

Public Member Functions

- LayoutDialog (QWidget *parent=0)
- ~LayoutDialog ()
- KeyMap::Layout selected () const

Private Attributes

- Ui::LayoutDialog * ui

12.48.1 Detailed Description

Definition at line 13 of file layoutdialog.h.

12.48.2 Constructor & Destructor Documentation

12.48.2.1 LayoutDialog::LayoutDialog (QWidget * *parent* = 0) [explicit]

Definition at line 5 of file layoutdialog.cpp.

References Ui_LayoutDialog::comboBox, Kb::layout(), KeyMap::layoutNames(), Ui_LayoutDialog::setupUi(), and ui.

```
5                                          :
6     QDialog(parent),
7     ui(new Ui::LayoutDialog) {
8     ui->setupUi(this);
9     // Populate layout list
10     ui->comboBox->addItems(KeyMap::layoutNames());
11     ui->comboBox->setCurrentIndex((int)Kb::layout());
12 }
```

Here is the call graph for this function:

12.48.2.2 LayoutDialog::~LayoutDialog ( )

Definition at line 14 of file layoutdialog.cpp.

References ui.

```
14                                {
15     delete ui;
16 }
```

12.48.3 Member Function Documentation

12.48.3.1 KeyMap::Layout LayoutDialog::selected ( ) const

Definition at line 18 of file layoutdialog.cpp.

References Ui_LayoutDialog::comboBox, and ui.

Referenced by SettingsWidget::showLayoutDialog().

```
18                                          {
19     return (KeyMap::Layout)ui->comboBox->currentIndex();
20 }
```

Here is the caller graph for this function:

12.48.4 Field Documentation

12.48.4.1 Ui::LayoutDialog* LayoutDialog::ui [private]

Definition at line 24 of file layoutdialog.h.

Referenced by LayoutDialog(), selected(), and ~LayoutDialog().

The documentation for this class was generated from the following files:

- src/ckb/layoutdialog.h
- src/ckb/layoutdialog.cpp

12.49 MacroReader Class Reference

The MacroReader class creates a worker thread object. It does a connect do delayed deletion of thread local variables in the case the worker thread terminates.

`#include <src/ckb/macroreader.h>`

Inheritance diagram for MacroReader:

Collaboration diagram for MacroReader:

Public Member Functions

- MacroReader ()

  MacroReader Calling MacroReader without params is not allowed.
- MacroReader (int macroNumber, QString macroPath, QPlainTextEdit ∗macBox, QPlainTextEdit ∗macText)

  MacroReader This is the only allowed constructor. It only calls startWorkInAThread() with the four params.
- ∼MacroReader ()
- void startWorkInAThread (int macroNumber, QString macroPath, QPlainTextEdit ∗macBox, QPlainTextEdit ∗macText)

  startWorkInAThread This member function creates the new thread object and starts it with the four params.

Private Attributes

- MacroReaderThread ∗ macroReaderThread

12.49.1 Detailed Description

Definition at line 87 of file macroreader.h.

12.49.2 Constructor & Destructor Documentation

12.49.2.1 MacroReader::MacroReader ( )

Definition at line 8 of file macroreader.cpp.

```
8                           {
9     qDebug() << "Calling MacroReader without params is not allowed.";
10 }
```

12.49.2.2 MacroReader::MacroReader (int *macroNumber*, QString *macroPath*, QPlainTextEdit * *macBox*, QPlainTextEdit * *macText*)

Parameters

macroNumber	
macroPath	
macBox	
macText	

Definition at line 12 of file macroreader.cpp.

References startWorkInAThread().

```
12
        {
13     startWorkInAThread(macroNumber, macroPath, macBox, macText);
14 }
```

Here is the call graph for this function:

12.49.2.3 MacroReader::~MacroReader ( )

Definition at line 15 of file macroreader.cpp.

```
15 {}
```

12.49.3 Member Function Documentation

12.49.3.1 void MacroReader::startWorkInAThread (int *macroNumber*, QString *macroPath*, QPlainTextEdit * *macBox*, QPlainTextEdit * *macText*)

Parameters

macroNumber	
macroPath	
macBox	
macText	

Definition at line 17 of file macroreader.cpp.

References macroReaderThread.

Referenced by MacroReader().

```
17                                                  {
18     macroReaderThread = new MacroReaderThread(macroNumber, macroPath,
       macBox, macText);
19     connect(macroReaderThread, &MacroReaderThread::finished,
       macroReaderThread, &QObject::deleteLater);
20     macroReaderThread->start();
21 }
```

Here is the caller graph for this function:

12.49.4 Field Documentation

12.49.4.1 MacroReaderThread* MacroReader::macroReaderThread [private]

Definition at line 123 of file macroreader.h.

Referenced by startWorkInAThread().

The documentation for this class was generated from the following files:

- src/ckb/macroreader.h
- src/ckb/macroreader.cpp

12.50 MacroReaderThread Class Reference

The MacroReaderThread class is responsible for reading Macro Key Values. It is created as a separate thread (worker thread) for reading macro commands from an fresh opened notify channel. Standard notify channel for macro definitions is number 2.

`#include <src/ckb/macroreader.h>`

Inheritance diagram for MacroReaderThread:

Collaboration diagram for MacroReaderThread:

Public Member Functions

- MacroReaderThread (int macNum, QString macPath, QPlainTextEdit ∗macBox, QPlainTextEdit ∗macText)

  MacroReaderThread saves the four params to local vars with similar varNames.

- void run () Q_DECL_OVERRIDE

  run is the notification reader main loop.

Private Slots

- void readMacro (QString line)

  readMacro is called for each line received by the worker thread. The method ist called via signal (metaObject) from the worker thread, which reads the keyboard input. Just display the key code in the macroBox Widget without he trailing newline and reposition the cursor in the macro pane.

Private Attributes

- int macroNumber

  macroNumber Filenames of nofity channels have the structure <input-device-path>/ckb1/notify<number> First part is hold in macroPath, the number is hold in macroNumber. macroNumber may range from 0 to 9.
- QString macroPath

  macroPath holds the path for the notify channel
- QPlainTextEdit * macroBox

  macroBox will receive the Macro Key Values sent from the keyboard while defining a new macro.
- QPlainTextEdit * macroText

  macroText is the other textpane used in the UI while typing new macros. That variable is used for setting the focus to that textpane and to set the cursor at EOT.

12.50.1 Detailed Description

While the worker Thread gets input from the keyboard, the lines are sent via signalling (metaobject) to run a member function in the context of the Qt UI manager.

When the notify channel is closed (that's normally done by pressing "Stop"-Button in the UI), the worker thread closes the channelFile and leaves.

See Also

MacroReaderThread(), ~MacroReaderThread(), readMaco(), run()

Definition at line 22 of file macroreader.h.

12.50.2 Constructor & Destructor Documentation

12.50.2.1 MacroReaderThread::MacroReaderThread (int *macNum*, QString *macPath*, QPlainTextEdit * *macBox*, QPlainTextEdit * *macText*) [inline]

Parameters

macNum	
macPath	
macBox	
macText	

Definition at line 55 of file macroreader.h.

References macroBox, macroNumber, macroPath, and macroText.

```
55                                                                                                                    {
56         macroNumber = macNum;
57         macroPath = macPath;
58         macroBox = macBox;
59         macroText = macText;
60     }
```

12.50.3 Member Function Documentation

12.50.3.1 void MacroReaderThread::readMacro (QString *line*) [private],[slot]

This is used, because the worker thread shouldn't get access to the UI elements (and normally has none, because the pointers macroBox and macroText remain on the stack). That mechanism guarantees, that the UI does not freeze if it happens something magic to the reading function.

Parameters

line	holds the line just got from keyboard

We want to see the keys as they appear in the macroText Widget.

Because it is possible to change the Focus via keyboard, we must set the focus on each call.

Definition at line 26 of file macroreader.cpp.

References macroBox, and macroText.

```
26                                                  {
31      macroText->setFocus();
32      QTextCursor c = macroText->textCursor();
33      c.setPosition(macroText->toPlainText().length());
34      macroText->setTextCursor(c);
35      macroBox->appendPlainText(line.left(line.size()-1));
36  }
```

12.50.3.2 void MacroReaderThread::run ( )

MacroReaderThread::run is the standard main function for a thread. Tries to open a file <macroPath><macroNumber> several times (in this case, it should be possible the first time. (The code was recycled from kb.cpp).

While the file is open, read lines an signal them via metaObject() to the main thread. When the file is closed by the sender, close it as reader and terminate.

Definition at line 46 of file macroreader.cpp.

References macroBox, macroNumber, macroPath, and macroText.

```
46                                  {
47      qDebug() << "MacroReader::run() started with" << macroNumber << "and" <<
       macroPath << "and" << macroBox << "and" << macroText;
48
49      QFile macroFile(macroPath);
50      // Wait a small amount of time for the node to open (100ms) (code reused from kb.cpp)
51      QThread::usleep(100000);
52      if(!macroFile.open(QIODevice::ReadOnly)){
53          // If it's still not open, try again before giving up (1s at a time, 10s total)
54          QThread::usleep(900000);
55          for(int i = 1; i < 10; i++){
56              if(macroFile.open(QIODevice::ReadOnly))
57                  break;
58              QThread::sleep(1);
59          }
60          if(!macroFile.isOpen()) {
61              qDebug() << QString("unable to open macroFile (%1)").arg(macroPath);
62              return;
63          }
64      }
65      // Read data from notification node macroPath
66      QByteArray line;
67      while(macroFile.isOpen() && (line = macroFile.readLine()).length() > 0){
68          QString text = QString::fromUtf8(line);
69          metaObject()->invokeMethod(this, "readMacro", Qt::QueuedConnection, Q_ARG(QString, text));
70      }
71      qDebug() << "MacroReader::run() ends.";
72      macroFile.close();
73      QThread::exit ();
74  }
```

12.50.4 Field Documentation

12.50.4.1 QPlainTextEdit* MacroReaderThread::macroBox [private]

Definition at line 40 of file macroreader.h.

Referenced by MacroReaderThread(), readMacro(), and run().

12.50.4.2 int MacroReaderThread::macroNumber [private]

Definition at line 31 of file macroreader.h.

Referenced by MacroReaderThread(), and run().

12.50.4.3 QString MacroReaderThread::macroPath [private]

See Also

macroNumber

Definition at line 36 of file macroreader.h.

Referenced by MacroReaderThread(), and run().

12.50.4.4 QPlainTextEdit* MacroReaderThread::macroText [private]

Definition at line 45 of file macroreader.h.

Referenced by MacroReaderThread(), readMacro(), and run().

The documentation for this class was generated from the following files:

- src/ckb/macroreader.h
- src/ckb/macroreader.cpp

12.51 Ui::MainWindow Class Reference

```
#include <src/ckb/ui_mainwindow.h>
```

Inheritance diagram for Ui::MainWindow:

Collaboration diagram for Ui::MainWindow:

Public Member Functions

- void setupUi (QMainWindow *MainWindow)
- void retranslateUi (QMainWindow *MainWindow)

Data Fields

- QAction * actionExit
- QAction * actionAbout
- QWidget * centralWidget
- QGridLayout * gridLayout
- QTabWidget * tabWidget

12.51.1 Detailed Description

Definition at line 79 of file ui_mainwindow.h.

12.51.2 Member Function Documentation

12.51.2.1 void Ui_MainWindow::retranslateUi (QMainWindow * *MainWindow*) [inline],[inherited]

Definition at line 68 of file ui_mainwindow.h.

References Ui_MainWindow::actionAbout, and Ui_MainWindow::actionExit.

Referenced by Ui_MainWindow::setupUi().

```
{
    MainWindow->setWindowTitle(QApplication::translate("MainWindow", "ckb-next", Q_NULLPTR));
    actionExit->setText(QApplication::translate("MainWindow", "Exit", Q_NULLPTR));
    actionExit->setShortcut(QApplication::translate("MainWindow", "Ctrl+Q", Q_NULLPTR));
    actionAbout->setText(QApplication::translate("MainWindow", "About", Q_NULLPTR));
} // retranslateUi
```

Here is the caller graph for this function:

12.51.2.2 void Ui_MainWindow::setupUi (QMainWindow * *MainWindow*) [inline],[inherited]

Definition at line 33 of file ui_mainwindow.h.

References Ui_MainWindow::actionAbout, Ui_MainWindow::actionExit, Ui_MainWindow::centralWidget, Ui_MainWindow::gridLayout, Ui_MainWindow::retranslateUi(), and Ui_MainWindow::tabWidget.

Referenced by MainWindow::MainWindow().

```
{
    if (MainWindow->objectName().isEmpty())
        MainWindow->setObjectName(QStringLiteral("MainWindow"));
    MainWindow->resize(1000, 750);
    MainWindow->setMinimumSize(QSize(1000, 750));
    QIcon icon;
    icon.addFile(QStringLiteral(":/img/ckb-logo.png"), QSize(), QIcon::Normal, QIcon::Off);
```

```
        MainWindow->setWindowIcon(icon);
        MainWindow->setUnifiedTitleAndToolBarOnMac(true);
        actionExit = new QAction(MainWindow);
        actionExit->setObjectName(QStringLiteral("actionExit"));
        actionAbout = new QAction(MainWindow);
        actionAbout->setObjectName(QStringLiteral("actionAbout"));
        centralWidget = new QWidget(MainWindow);
        centralWidget->setObjectName(QStringLiteral("centralWidget"));
        gridLayout = new QGridLayout(centralWidget);
        gridLayout->setSpacing(6);
        gridLayout->setContentsMargins(11, 11, 11, 11);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        tabWidget = new QTabWidget(centralWidget);
        tabWidget->setObjectName(QStringLiteral("tabWidget"));

        gridLayout->addWidget(tabWidget, 0, 0, 1, 1);

        MainWindow->setCentralWidget(centralWidget);

        retranslateUi(MainWindow);

        tabWidget->setCurrentIndex(-1);


        QMetaObject::connectSlotsByName(MainWindow);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.51.3 Field Documentation

12.51.3.1 QAction* Ui_MainWindow::actionAbout [inherited]

Definition at line 28 of file ui_mainwindow.h.

Referenced by Ui_MainWindow::retranslateUi(), and Ui_MainWindow::setupUi().

12.51.3.2 QAction* Ui_MainWindow::actionExit [inherited]

Definition at line 27 of file ui_mainwindow.h.

Referenced by MainWindow::MainWindow(), Ui_MainWindow::retranslateUi(), and Ui_MainWindow::setupUi().

12.51.3.3 QWidget* Ui_MainWindow::centralWidget [inherited]

Definition at line 29 of file ui_mainwindow.h.

Referenced by Ui_MainWindow::setupUi().

12.51.3.4 QGridLayout* Ui_MainWindow::gridLayout [inherited]

Definition at line 30 of file ui_mainwindow.h.

Referenced by Ui_MainWindow::setupUi().

12.51.3.5 QTabWidget* Ui_MainWindow::tabWidget [inherited]

Definition at line 31 of file ui_mainwindow.h.

Referenced by MainWindow::addDevice(), MainWindow::MainWindow(), MainWindow::removeDevice(), Ui_MainWindow::setupUi(), and MainWindow::showFwUpdateNotification().

The documentation for this class was generated from the following file:

- src/ckb/ui_mainwindow.h

12.52 MainWindow Class Reference

```
#include <src/ckb/mainwindow.h>
```

Inheritance diagram for MainWindow:

Collaboration diagram for MainWindow:

Public Slots

- void showWindow ()
- void stateChange (Qt::ApplicationState state)
- void quitApp ()

Public Member Functions

- MainWindow (QWidget ∗parent=0)
- ∼MainWindow ()
- void toggleTrayIcon (bool visible)

Static Public Attributes

- static MainWindow ∗ mainWindow = 0

Private Slots

- void addDevice (Kb ∗device)
- void removeDevice (Kb ∗device)
- void updateVersion ()
- void checkFwUpdates ()
- void timerTick ()
- void iconClicked (QSystemTrayIcon::ActivationReason reason)
- void cleanup ()
- void showFwUpdateNotification (QWidget ∗widget, float version)

Private Member Functions

- void closeEvent (QCloseEvent ∗event)

Private Attributes

- SettingsWidget * settingsWidget
- QList< KbWidget * > kbWidgets
- QAction * restoreAction
- QAction * closeAction
- QMenu * trayIconMenu
- QSystemTrayIcon * trayIcon
- Ui::MainWindow * ui

12.52.1 Detailed Description

Definition at line 27 of file mainwindow.h.

12.52.2 Constructor & Destructor Documentation

12.52.2.1 MainWindow::MainWindow (QWidget * *parent* = 0) [explicit]

Definition at line 35 of file mainwindow.cpp.

References Ui_MainWindow::actionExit, addDevice(), cleanup(), closeAction, configLabel, CkbSettings::get(), iconClicked(), KbManager::init(), KbManager::kbManager(), mainWindow, quitApp(), removeDevice(), restoreAction, KbManager::scanTimer(), settingsWidget, Ui_MainWindow::setupUi(), SettingsWidget::setVersion(), showWindow(), stateChange(), Ui_MainWindow::tabWidget, timerTick(), toggleTrayIcon(), trayIcon, trayIconMenu, ui, and updateVersion().

```
35                                      :
36     QMainWindow(parent),
37     ui(new Ui::MainWindow)
38 {
39     ui->setupUi(this);
40     mainWindow = this;
41
42     // Start device manager
43     KbManager::init(CKB_VERSION_STR);
44     connect(KbManager::kbManager(), SIGNAL(kbConnected(Kb*)), this, SLOT(
      addDevice(Kb*)));
45     connect(KbManager::kbManager(), SIGNAL(kbDisconnected(Kb*)), this, SLOT(
      removeDevice(Kb*)));
46     connect(KbManager::kbManager(), SIGNAL(versionUpdated()), this, SLOT(
      updateVersion()));
47     connect(KbManager::scanTimer(), SIGNAL(timeout()), this, SLOT(
      timerTick()));
48
49     // Set up tray icon
50     restoreAction = new QAction(tr("Restore"), this);
51     closeAction = new QAction(tr("Quit ckb"), this);
52 #ifdef USE_LIBAPPINDICATOR
53     QString desktop = std::getenv("XDG_CURRENT_DESKTOP");
54     unityDesktop = (desktop.toLower() == "unity");
55
56     if(unityDesktop){
57         trayIcon = 0;
58
59         indicatorMenu = gtk_menu_new();
60         indicatorMenuRestoreItem = gtk_menu_item_new_with_label("Restore");
61         indicatorMenuQuitItem = gtk_menu_item_new_with_label("Quit ckb");
62
63         gtk_menu_shell_append(GTK_MENU_SHELL(indicatorMenu), indicatorMenuRestoreItem);
64         gtk_menu_shell_append(GTK_MENU_SHELL(indicatorMenu), indicatorMenuQuitItem);
65
66         g_signal_connect(indicatorMenuQuitItem, "activate",
67             G_CALLBACK(quitIndicator), this);
68         g_signal_connect(indicatorMenuRestoreItem, "activate",
69             G_CALLBACK(restoreIndicator), this);
70
71         gtk_widget_show(indicatorMenuRestoreItem);
72         gtk_widget_show(indicatorMenuQuitItem);
73
74         indicator = app_indicator_new("ckb", "indicator-messages",
      APP_INDICATOR_CATEGORY_APPLICATION_STATUS);
75
```

```
        app_indicator_set_status(indicator, APP_INDICATOR_STATUS_ACTIVE);
        app_indicator_set_menu(indicator, GTK_MENU(indicatorMenu));
        app_indicator_set_icon(indicator, "ckb");
    } else
#endif // USE_LIBAPPINDICATOR
    {
        trayIconMenu = new QMenu(this);
        trayIconMenu->addAction(restoreAction);
        trayIconMenu->addAction(closeAction);
        trayIcon = new QSystemTrayIcon(QIcon(":/img/ckb-logo.png"), this);
        trayIcon->setContextMenu(trayIconMenu);
        connect(trayIcon, SIGNAL(activated(QSystemTrayIcon::ActivationReason)), this, SLOT(iconClicked(QSystemTrayIcon::ActivationReason)));
    }
    toggleTrayIcon(!CkbSettings::get("Program/SuppressTrayIcon").toBool());

#ifdef Q_OS_MACX
    // Make a custom "Close" menu action for OSX, as the default one brings up the "still running" popup unnecessarily
    QMenuBar* menuBar = new QMenuBar(this);
    setMenuBar(menuBar);
    this->menuBar()->addMenu("ckb")->addAction(closeAction);
#else
    // On linux, add a handler for Ctrl+Q
    new QShortcut(QKeySequence("Ctrl+Q"), this, SLOT(quitApp()));
#endif

    connect(ui->actionExit, SIGNAL(triggered()), this, SLOT(quitApp()));
    connect(closeAction, SIGNAL(triggered()), this, SLOT(quitApp()));
    connect(restoreAction, SIGNAL(triggered()), this, SLOT(showWindow()));
    connect(qApp, SIGNAL(applicationStateChanged(Qt::ApplicationState)), this, SLOT(stateChange(Qt::ApplicationState)));

    connect(qApp, SIGNAL(aboutToQuit()), this, SLOT(cleanup()));

    ui->tabWidget->addTab(settingsWidget = new SettingsWidget(this), configLabel);
    settingsWidget->setVersion("ckb-next " CKB_VERSION_STR);
}
```

Here is the call graph for this function:

12.52.2.2 MainWindow::~MainWindow ( )

Definition at line 303 of file mainwindow.cpp.

References cleanup(), and ui.

```
303                         {
304     cleanup();
305     delete ui;
306 }
```

Here is the call graph for this function:

12.52.3 Member Function Documentation

12.52.3.1 void MainWindow::addDevice (Kb * *device*) [private],[slot]

Definition at line 121 of file mainwindow.cpp.

References KbWidget::device, kbWidgets, KbWidget::name(), Ui_MainWindow::tabWidget, ui, and updateVersion().

Referenced by MainWindow().

```
121                                     {
122     // Connected already?
123     foreach(KbWidget* w, kbWidgets){
124         if(w->device == device)
125             return;
126     }
127     // Add the keyboard
128     KbWidget* widget = new KbWidget(this, device);
129     kbWidgets.append(widget);
130     // Add to tabber; switch to this device if on the settings screen
131     int count = ui->tabWidget->count();
132     ui->tabWidget->insertTab(count - 1, widget, widget->name());
133     if(ui->tabWidget->currentIndex() == count)
134         ui->tabWidget->setCurrentIndex(count - 1);
135     // Update connected device count
136     updateVersion();
137 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.52.3.2 void MainWindow::checkFwUpdates ( ) [private],[slot]

Definition at line 172 of file mainwindow.cpp.

References KbWidget::device, Kb::features, Kb::firmware, KbWidget::hasShownNewFW, kbWidgets, mainWindow, KbWidget::updateFwButton(), and KbFirmware::versionForBoard().

Referenced by timerTick().

```
172                                 {
173     if(!mainWindow->isVisible())
174         return;
175     foreach(KbWidget* w, kbWidgets){
176         // Display firmware upgrade notification if a new version is available
177         float version = KbFirmware::versionForBoard(w->
    device->features);
178         if(version > w->device->firmware.toFloat()){
179             if(w->hasShownNewFW)
180                 continue;
181             w->hasShownNewFW = true;
182             w->updateFwButton();
183             // Don't run this method here because it will lock up the timer and prevent devices from
     working properly
184             // Use a queued invocation instead
185             metaObject()->invokeMethod(this, "showFwUpdateNotification", Qt::QueuedConnection, Q_ARG(
    QWidget*, w), Q_ARG(float, version));
186             // Don't display more than one of these at once
187             return;
188         }
189     }
190 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.52.3.3 void MainWindow::cleanup ( ) [private],[slot]

Definition at line 295 of file mainwindow.cpp.

References CkbSettings::cleanUp(), kbWidgets, and KbManager::stop().

Referenced by MainWindow(), and ~MainWindow().

```
295                         {
296     foreach(KbWidget* w, kbWidgets)
297         delete w;
298     kbWidgets.clear();
299     KbManager::stop();
300     CkbSettings::cleanUp();
301 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.52.3.4 void MainWindow::closeEvent (QCloseEvent * *event*) [private]

Definition at line 209 of file mainwindow.cpp.

References CkbSettings::get(), and CkbSettings::set().

```
209                                                 {
210     // If the window is hidden already or the event is non-spontaneous (can happen on OSX when using the
        Quit menu), accept it and close
211     if(!event->spontaneous() || isHidden()){
212         event->accept();
213         return;
214     }
215     if(!CkbSettings::get("Popups/BGWarning").toBool()){
216         QMessageBox::information(this, "ckb", "ckb will still run in the background.\nTo close it, choose
        Exit from the tray menu\nor click \"Quit ckb\" on the Settings screen.");
217         CkbSettings::set("Popups/BGWarning", true);
218     }
219     hide();
220     event->ignore();
221 }
```

Here is the call graph for this function:

12.52.3.5 void MainWindow::iconClicked (QSystemTrayIcon::ActivationReason *reason*) [private],[slot]

Definition at line 257 of file mainwindow.cpp.

References showWindow().

Referenced by MainWindow().

```
257                                                                 {
258     // On Linux, hide/show the app when the tray icon is clicked
259     // On OSX this just shows the menu
260 #ifndef Q_OS_MACX
261     if(reason == QSystemTrayIcon::DoubleClick || reason == QSystemTrayIcon::Trigger){
262         if(isVisible())
263             hide();
264         else
265             showWindow();
266     }
267 #endif
268 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.52.3.6 void MainWindow::quitApp ( ) [slot]

Definition at line 291 of file mainwindow.cpp.

Referenced by MainWindow().

```
291                         {
292     qApp->quit();
293 }
```

Here is the caller graph for this function:

12.52.3.7 void MainWindow::removeDevice (Kb * *device*) [private],[slot]

Definition at line 139 of file mainwindow.cpp.

References KbWidget::device, kbWidgets, Ui_MainWindow::tabWidget, ui, and updateVersion().

Referenced by MainWindow().

```
139                                     {
140     foreach(KbWidget* w, kbWidgets){
141         // Remove this device from the UI
142         if(w->device == device){
143             int i = kbWidgets.indexOf(w);
144             ui->tabWidget->removeTab(i);
145             kbWidgets.removeAt(i);
146             w->deleteLater();
147         }
148     }
149     // Update connected device count
150     updateVersion();
151 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.52.3.8 void MainWindow::showFwUpdateNotification (QWidget * *widget*, float *version*) [private],[slot]

Definition at line 192 of file mainwindow.cpp.

References KbWidget::device, kbWidgets, KbWidget::showFwUpdate(), KbWidget::showLastTab(), showWindow(), Ui_MainWindow::tabWidget, ui, and Kb::usbModel.

```
                                                                    {
    static bool isShowing = false;
    if(isShowing)
        return;
    isShowing = true;
    showWindow();
    KbWidget* w = (KbWidget*)widget;
    // Ask for update
    if(QMessageBox::information(this, "Firmware update", tr("A new firmware is available for your %1 (v%2)
\nWould you like to install it now?").arg(w->device->usbModel, QString::number(version, 'f', 2)
), QMessageBox::StandardButtons(QMessageBox::Yes | QMessageBox::No), QMessageBox::Yes) == QMessageBox::Yes){
        // If accepted, switch to firmware tab and bring up update window
        w->showLastTab();
        ui->tabWidget->setCurrentIndex(kbWidgets.indexOf(w));
        w->showFwUpdate();
    }
    isShowing = false;
}
```

Here is the call graph for this function:

12.52.3.9 void MainWindow::showWindow ( ) [slot]

Definition at line 270 of file mainwindow.cpp.

Referenced by iconClicked(), MainWindow(), showFwUpdateNotification(), stateChange(), and timerTick().

```
                                {
    showNormal();
    raise();
    activateWindow();
}
```

Here is the caller graph for this function:

12.52.3.10 void MainWindow::stateChange (Qt::ApplicationState *state*) [slot]

Definition at line 276 of file mainwindow.cpp.

References showWindow().

Referenced by MainWindow().

```
276                                                 {
277     // On OSX it's possible for the app to be brought to the foreground without the window actually
        reappearing.
278     // We want to make sure it's shown when this happens.
279 #ifdef Q_OS_MAC
280     static quint64 lastStateChange = 0;
281     quint64 now = QDateTime::currentMSecsSinceEpoch();
282     if(state == Qt::ApplicationActive){
283         // This happens once at startup so ignore it. Also don't allow it to be called more than once every
        2s.
284         if(lastStateChange != 0 && now >= lastStateChange + 2 * 1000)
285             showWindow();
286         lastStateChange = now;
287     }
288 #endif
289 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.52.3.11 void MainWindow::timerTick ( ) [private],[slot]

Definition at line 223 of file mainwindow.cpp.

References appShare, checkFwUpdates(), KbFirmware::checkUpdates(), CkbSettings::get(), SettingsWidget::pollUpdates(), settingsWidget, and showWindow().

Referenced by MainWindow().

```
223                         {
224     // Check shared memory for changes
225     if(appShare.lock()){
226         void* data = appShare.data();
227         QStringList commands = QString((const char*)data).split("\n");
228         // Restore PID, remove all other data
229         snprintf((char*)appShare.data(), appShare.size(), "PID %ld", (long)getpid());
230         appShare.unlock();
231         // Parse commands
232         foreach(const QString& line, commands){
233             // Old ckb option line - bring application to foreground
234             if(line == "Open")
235                 showWindow();
236             if(line.startsWith("Option ")){
237                 // New ckb option line
238                 QString option = line.split(" ")[1];
239                 if(option == "Open")
240                     // Bring to foreground
241                     showWindow();
242                 else if(option == "Close")
243                     // Quit application
244                     qApp->quit();
245             }
246         }
247     }
248     // Check for firmware updates (when appropriate)
249     if(!CkbSettings::get("Program/DisableAutoFWCheck").toBool()){
250         KbFirmware::checkUpdates();
251         checkFwUpdates();
252     }
253     // Poll for setting updates
254     settingsWidget->pollUpdates();
255 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.52.3.12 void MainWindow::toggleTrayIcon (bool *visible*)

Definition at line 112 of file mainwindow.cpp.

References trayIcon.

Referenced by MainWindow(), and ExtraSettingsWidget::on_trayBox_clicked().

```
112                                         {
113 #ifdef USE_LIBAPPINDICATOR
114     if(unityDesktop)
115         app_indicator_set_status(indicator, visible ? APP_INDICATOR_STATUS_ACTIVE :
    APP_INDICATOR_STATUS_PASSIVE);
116     else
117 #endif // USE_LIBAPPINDICATOR
118         trayIcon->setVisible(visible);
119 }
```

Here is the caller graph for this function:

12.52.3.13 void MainWindow::updateVersion ( ) [private],[slot]

Definition at line 153 of file mainwindow.cpp.

References KbManager::ckbDaemonVersion(), KbManager::ckbDaemonVersionF(), KbManager::ckbGuiVersionF(), DAEMON_UNAVAILABLE_STR, kbWidgets, SettingsWidget::setStatus(), and settingsWidget.

Referenced by addDevice(), MainWindow(), and removeDevice().

```
153                             {
154     QString daemonVersion = KbManager::ckbDaemonVersion();
155     if(daemonVersion == DAEMON_UNAVAILABLE_STR){
156         settingsWidget->setStatus("Driver inactive");
157         return;
158     }
159     int count = kbWidgets.count();
160     // Warn if the daemon version doesn't match the GUI
```

```
    QString daemonWarning;
    if(daemonVersion != CKB_VERSION_STR)
        daemonWarning = "<br /><br /><b>Warning:</b> Driver version mismatch (" + daemonVersion + ").
 Please upgrade ckb" + QString(KbManager::ckbDaemonVersionF() >
KbManager::ckbGuiVersionF() ? "" : "-daemon") + ". If the problem persists, try
 rebooting.";
    if(count == 0)
        settingsWidget->setStatus("No devices connected" + daemonWarning);
    else if(count == 1)
        settingsWidget->setStatus("1 device connected" + daemonWarning);
    else
        settingsWidget->setStatus(QString("%1 devices connected").arg(count) +
daemonWarning);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.52.4 Field Documentation

12.52.4.1 QAction* MainWindow::closeAction [private]

Definition at line 44 of file mainwindow.h.

Referenced by MainWindow().

12.52.4.2 QList<KbWidget*> MainWindow::kbWidgets [private]

Definition at line 41 of file mainwindow.h.

Referenced by addDevice(), checkFwUpdates(), cleanup(), removeDevice(), showFwUpdateNotification(), and updateVersion().

12.52.4.3 MainWindow * MainWindow::mainWindow = 0 [static]

Definition at line 35 of file mainwindow.h.

Referenced by checkFwUpdates(), MainWindow(), and ExtraSettingsWidget::on_trayBox_clicked().

12.52.4.4 QAction* MainWindow::restoreAction [private]

Definition at line 43 of file mainwindow.h.

Referenced by MainWindow().

12.52.4.5 SettingsWidget* MainWindow::settingsWidget [private]

Definition at line 40 of file mainwindow.h.

Referenced by MainWindow(), timerTick(), and updateVersion().

12.52.4.6 QSystemTrayIcon* MainWindow::trayIcon [private]

Definition at line 54 of file mainwindow.h.

Referenced by MainWindow(), and toggleTrayIcon().

12.52.4.7 QMenu* MainWindow::trayIconMenu [private]

Definition at line 53 of file mainwindow.h.

Referenced by MainWindow().

12.52.4.8 Ui::MainWindow* MainWindow::ui [private]

Definition at line 75 of file mainwindow.h.

Referenced by addDevice(), MainWindow(), removeDevice(), showFwUpdateNotification(), and ~MainWindow().

The documentation for this class was generated from the following files:

- src/ckb/mainwindow.h
- src/ckb/mainwindow.cpp

12.53 Ui::ModeSelectDialog Class Reference

```
#include <src/ckb/ui_modeselectdialog.h>
```

Inheritance diagram for Ui::ModeSelectDialog:

Collaboration diagram for Ui::ModeSelectDialog:

Public Member Functions

- void setupUi (QDialog *ModeSelectDialog)
- void retranslateUi (QDialog *ModeSelectDialog)

Data Fields

- QGridLayout * gridLayout
- QLabel * label
- QDialogButtonBox * buttonBox
- QListWidget * modeList
- QPushButton * selAllButton
- QPushButton * selNoneButton

12.53.1 Detailed Description

Definition at line 93 of file ui_modeselectdialog.h.

12.53.2 Member Function Documentation

12.53.2.1 void Ui_ModeSelectDialog::retranslateUi (QDialog * *ModeSelectDialog*) [inline],[inherited]

Definition at line 82 of file ui_modeselectdialog.h.

References Ui_ModeSelectDialog::label, Ui_ModeSelectDialog::selAllButton, and Ui_ModeSelectDialog::selNoneButton.

Referenced by Ui_ModeSelectDialog::setupUi().

```
83     {
84         ModeSelectDialog->setWindowTitle(QApplication::translate("ModeSelectDialog", "Select Modes",
    Q_NULLPTR));
85         label->setText(QApplication::translate("ModeSelectDialog", "TextLabel", Q_NULLPTR));
86         selAllButton->setText(QApplication::translate("ModeSelectDialog", "Select All",
    Q_NULLPTR));
87         selNoneButton->setText(QApplication::translate("ModeSelectDialog", "Select None",
    Q_NULLPTR));
88     } // retranslateUi
```

Here is the caller graph for this function:

12.53.2.2 void Ui_ModeSelectDialog::setupUi (QDialog * *ModeSelectDialog*) [inline],[inherited]

Definition at line 36 of file ui_modeselectdialog.h.

References Ui_ModeSelectDialog::buttonBox, Ui_ModeSelectDialog::gridLayout, Ui_ModeSelectDialog::label, Ui_ModeSelectDialog::modeList, Ui_ModeSelectDialog::retranslateUi(), Ui_ModeSelectDialog::selAllButton, and Ui_ModeSelectDialog::selNoneButton.

Referenced by ModeSelectDialog::ModeSelectDialog().

```
37     {
38         if (ModeSelectDialog->objectName().isEmpty())
39             ModeSelectDialog->setObjectName(QStringLiteral("ModeSelectDialog"));
40         ModeSelectDialog->resize(320, 320);
41         gridLayout = new QGridLayout(ModeSelectDialog);
42         gridLayout->setObjectName(QStringLiteral("gridLayout"));
43         label = new QLabel(ModeSelectDialog);
```

```
        label->setObjectName(QStringLiteral("label"));
        label->setAlignment(Qt::AlignLeading|Qt::AlignLeft|Qt::AlignTop);

        gridLayout->addWidget(label, 0, 0, 1, 2);

        buttonBox = new QDialogButtonBox(ModeSelectDialog);
        buttonBox->setObjectName(QStringLiteral("buttonBox"));
        buttonBox->setOrientation(Qt::Vertical);
        buttonBox->setStandardButtons(QDialogButtonBox::Cancel|QDialogButtonBox::Ok);
        buttonBox->setCenterButtons(false);

        gridLayout->addWidget(buttonBox, 0, 2, 3, 1);

        modeList = new QListWidget(ModeSelectDialog);
        modeList->setObjectName(QStringLiteral("modeList"));
        modeList->setFrameShadow(QFrame::Plain);
        modeList->setSelectionMode(QAbstractItemView::ExtendedSelection);

        gridLayout->addWidget(modeList, 1, 0, 1, 2);

        selAllButton = new QPushButton(ModeSelectDialog);
        selAllButton->setObjectName(QStringLiteral("selAllButton"));

        gridLayout->addWidget(selAllButton, 2, 0, 1, 1);

        selNoneButton = new QPushButton(ModeSelectDialog);
        selNoneButton->setObjectName(QStringLiteral("selNoneButton"));

        gridLayout->addWidget(selNoneButton, 2, 1, 1, 1);


        retranslateUi(ModeSelectDialog);
        QObject::connect(buttonBox, SIGNAL(accepted()), ModeSelectDialog, SLOT(accept()));
        QObject::connect(buttonBox, SIGNAL(rejected()), ModeSelectDialog, SLOT(reject()));

        QMetaObject::connectSlotsByName(ModeSelectDialog);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.53.3 Field Documentation

12.53.3.1 QDialogButtonBox* Ui_ModeSelectDialog::buttonBox [inherited]

Definition at line 31 of file ui_modeselectdialog.h.

Referenced by Ui_ModeSelectDialog::setupUi().

12.53.3.2 QGridLayout* Ui_ModeSelectDialog::gridLayout [inherited]

Definition at line 29 of file ui_modeselectdialog.h.

Referenced by Ui_ModeSelectDialog::setupUi().

12.53.3.3 QLabel* Ui_ModeSelectDialog::label [inherited]

Definition at line 30 of file ui_modeselectdialog.h.

Referenced by ModeSelectDialog::ModeSelectDialog(), Ui_ModeSelectDialog::retranslateUi(), and Ui_ModeSelectDialog::setupUi().

12.53.3.4 QListWidget* Ui_ModeSelectDialog::modeList [inherited]

Definition at line 32 of file ui_modeselectdialog.h.

Referenced by ModeSelectDialog::ModeSelectDialog(), ModeSelectDialog::on_selAllButton_clicked(), ModeSelectDialog::on_selNoneButton_clicked(), ModeSelectDialog::selection(), and Ui_ModeSelectDialog::setupUi().

12.53.3.5 QPushButton* Ui_ModeSelectDialog::selAllButton [inherited]

Definition at line 33 of file ui_modeselectdialog.h.

Referenced by Ui_ModeSelectDialog::retranslateUi(), and Ui_ModeSelectDialog::setupUi().

12.53.3.6 QPushButton* Ui_ModeSelectDialog::selNoneButton [inherited]

Definition at line 34 of file ui_modeselectdialog.h.

Referenced by Ui_ModeSelectDialog::retranslateUi(), and Ui_ModeSelectDialog::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_modeselectdialog.h

12.54 ModeSelectDialog Class Reference

```
#include <src/ckb/modeselectdialog.h>
```

Inheritance diagram for ModeSelectDialog:

Collaboration diagram for ModeSelectDialog:

Public Member Functions

- ModeSelectDialog (QWidget *parent, KbMode *currentMode, QList< KbMode * > modeList, const QString &textLabel)
- ~ModeSelectDialog ()
- QList< KbMode * > selection ()

Private Slots

- void on_selAllButton_clicked ()
- void on_selNoneButton_clicked ()

Private Attributes

- Ui::ModeSelectDialog * ui
- QList< KbMode * > _modeList

12.54.1 Detailed Description

Definition at line 13 of file modeselectdialog.h.

12.54.2 Constructor & Destructor Documentation

12.54.2.1 ModeSelectDialog::ModeSelectDialog (QWidget * *parent*, KbMode * *currentMode*, QList< KbMode * > *modeList*, const QString & *textLabel*)

Definition at line 4 of file modeselectdialog.cpp.

References _modeList, Ui_ModeSelectDialog::label, Ui_ModeSelectDialog::modeList, KbMode::name(), Ui_ModeSelectDialog::setupUi(), and ui.

```
4                                                    :
5     QDialog(parent), ui(new Ui::ModeSelectDialog),
6     _modeList(modeList)
7 {
8     ui->setupUi(this);
9     _modeList.removeAll(currentMode);
10     ui->label->setText(textLabel);
11     // Populate list
12     foreach(KbMode* mode, _modeList)
13         ui->modeList->addItem(mode->name());
14 }
```

Here is the call graph for this function:

12.54.2.2 ModeSelectDialog::~ModeSelectDialog ( )

Definition at line 16 of file modeselectdialog.cpp.

References ui.

```
16                                      {
17     delete ui;
18 }
```

12.54.3 Member Function Documentation

12.54.3.1 void ModeSelectDialog::on_selAllButton_clicked ( ) [private],[slot]

Definition at line 30 of file modeselectdialog.cpp.

References Ui_ModeSelectDialog::modeList, and ui.

```
30                                              {
31     int count = ui->modeList->count();
32     for(int i = 0; i < count; i++)
33         ui->modeList->item(i)->setSelected(true);
34 }
```

12.54.3.2 void ModeSelectDialog::on_selNoneButton_clicked ( ) [private],[slot]

Definition at line 36 of file modeselectdialog.cpp.

References Ui_ModeSelectDialog::modeList, and ui.

```
36                                              {
37     int count = ui->modeList->count();
38     for(int i = 0; i < count; i++)
39         ui->modeList->item(i)->setSelected(false);
40 }
```

12.54.3.3 QList< KbMode * > ModeSelectDialog::selection ( )

Definition at line 20 of file modeselectdialog.cpp.

References _modeList, Ui_ModeSelectDialog::modeList, and ui.

Referenced by KbBindWidget::on_copyButton_clicked(), KPerfWidget::on_copyButton_clicked(), and MPerfWidget::on_copyButton_clicked().

```
20                                          {
21     QList<KbMode*> res;
22     int count = ui->modeList->count();
23     for(int i = 0; i < count; i++){
24         if(ui->modeList->item(i)->isSelected())
25             res.append(_modeList[i]);
26     }
27     return res;
28 }
```

Here is the caller graph for this function:

12.54.4 Field Documentation

12.54.4.1 QList<KbMode*> ModeSelectDialog::_modeList [private]

Definition at line 31 of file modeselectdialog.h.

Referenced by ModeSelectDialog(), and selection().

12.54.4.2 Ui::ModeSelectDialog* ModeSelectDialog::ui [private]

Definition at line 30 of file modeselectdialog.h.

Referenced by ModeSelectDialog(), on_selAllButton_clicked(), on_selNoneButton_clicked(), selection(), and ~-ModeSelectDialog().

The documentation for this class was generated from the following files:

- src/ckb/modeselectdialog.h
- src/ckb/modeselectdialog.cpp

12.55 Ui::MPerfWidget Class Reference

```
#include <src/ckb/ui_mperfwidget.h>
```

Inheritance diagram for Ui::MPerfWidget:

Collaboration diagram for Ui::MPerfWidget:

Public Member Functions

- void setupUi (QWidget *MPerfWidget)
- void retranslateUi (QWidget *MPerfWidget)

Data Fields

- QVBoxLayout * verticalLayout
- QLabel * label
- QFrame * line
- QGridLayout * gridLayout
- QLabel * label_25
- QHBoxLayout * horizontalLayout_2
- QComboBox * lHeightBox
- QSpacerItem * horizontalSpacer_2
- QCheckBox * eBox2
- QSlider * ySlider3
- QSlider * xSlider2
- QSpinBox * xBox3
- QSpinBox * yBox0
- QSlider * ySlider0
- ColorButton * iButton4
- ColorButton * iButton5
- QSpacerItem * horizontalSpacer_4
- QSpacerItem * verticalSpacer_3
- QSpacerItem * horizontalSpacer_5
- ColorButton * iButton3
- QLabel * label_12
- QSpinBox * xBox4
- QSpinBox * xBox0
- QSpinBox * yBox5
- QCheckBox * eBox5
- QSlider * xSlider5
- QSpinBox * xBox1
- QSpinBox * yBox2
- QSpinBox * yBox3
- QSlider * xSlider4
- QLabel * label_4
- QSlider * xSlider0
- ColorButton * iButton2
- QFrame * line_3
- ColorButton * iButtonO
- QSpinBox * yBox1
- QSlider * ySlider2
- QSpinBox * xBox2
- QSlider * xSlider1
- QSpacerItem * horizontalSpacer
- QSpinBox * yBox4
- ColorButton * iButton1
- QSlider * ySlider4
- QSlider * ySlider1
- ColorButton * iButton0
- QSlider * xSlider3
- QSpinBox * xBox5

- QLabel * label_3
- QLabel * label_6
- QSlider * ySlider5
- QLabel * label_7
- QLabel * label_8
- QLabel * label_5
- QLabel * label_15
- QLabel * label_13
- QLabel * label_14
- QCheckBox * eBox4
- QLabel * label_11
- QCheckBox * eBox3
- QCheckBox * eBox1
- QLabel * label_2
- QSpacerItem * verticalSpacer
- QCheckBox * aSnapBox
- QFrame * line_2
- QHBoxLayout * horizontalLayout_4
- QCheckBox * indicBox
- QSpacerItem * horizontalSpacer_3
- QSpinBox * spinBox
- QSpacerItem * horizontalSpacer_7
- QCheckBox * xyBox
- QSpacerItem * verticalSpacer_2
- QHBoxLayout * horizontalLayout
- QPushButton * copyButton
- QSpacerItem * horizontalSpacer_6

12.55.1 Detailed Description

Definition at line 727 of file ui_mperfwidget.h.

12.55.2 Member Function Documentation

12.55.2.1 void Ui_MPerfWidget::retranslateUi (QWidget * *MPerfWidget*) [inline],[inherited]

Definition at line 641 of file ui_mperfwidget.h.

References Ui_MPerfWidget::aSnapBox, Ui_MPerfWidget::copyButton, Ui_MPerfWidget::eBox1, Ui_MPerfWidget::eBox2, Ui_MPerfWidget::eBox3, Ui_MPerfWidget::eBox4, Ui_MPerfWidget::eBox5, Ui_MPerfWidget::iButton0, Ui_MPerfWidget::iButton1, Ui_MPerfWidget::iButton2, Ui_MPerfWidget::iButton3, Ui_MPerfWidget::iButton4, Ui_MPerfWidget::iButton5, Ui_MPerfWidget::iButtonO, Ui_MPerfWidget::indicBox, Ui_MPerfWidget::label, Ui_MPerfWidget::label_11, Ui_MPerfWidget::label_12, Ui_MPerfWidget::label_13, Ui_MPerfWidget::label_14, Ui_MPerfWidget::label_15, Ui_MPerfWidget::label_2, Ui_MPerfWidget::label_25, Ui_MPerfWidget::label_3, Ui_MPerfWidget::label_4, Ui_MPerfWidget::label_5, Ui_MPerfWidget::label_6, Ui_MPerfWidget::label_7, Ui_MPerfWidget::label_8, Ui_MPerfWidget::lHeightBox, Ui_MPerfWidget::spinBox, and Ui_MPerfWidget::xyBox.

Referenced by Ui_MPerfWidget::setupUi().

```
    {
        MPerfWidget->setWindowTitle(QApplication::translate("MPerfWidget", "Form", Q_NULLPTR));
        label->setText(QApplication::translate("MPerfWidget", "DPI", Q_NULLPTR));
        label_25->setText(QApplication::translate("MPerfWidget", "Lift height:", Q_NULLPTR));
        lHeightBox->clear();
        lHeightBox->insertItems(0, QStringList()
         << QApplication::translate("MPerfWidget", "Low", Q_NULLPTR)
         << QApplication::translate("MPerfWidget", "Medium-low", Q_NULLPTR)
         << QApplication::translate("MPerfWidget", "Medium", Q_NULLPTR)
         << QApplication::translate("MPerfWidget", "Medium-high", Q_NULLPTR)
```

```
         << QApplication::translate("MPerfWidget", "High", Q_NULLPTR)
        );
#ifndef QT_NO_TOOLTIP
        eBox2->setToolTip(QApplication::translate("MPerfWidget", "Uncheck this box to skip the stage while moving up or down.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        eBox2->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButton4->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton4->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButton5->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton5->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButton3->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton3->setText(QString());
        label_12->setText(QApplication::translate("MPerfWidget", "X Value:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        eBox5->setToolTip(QApplication::translate("MPerfWidget", "Uncheck this box to skip the stage while moving up or down.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        eBox5->setText(QString());
        label_4->setText(QApplication::translate("MPerfWidget", "Y Value:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        iButton2->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton2->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButton0->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton0->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButton1->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton1->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButton0->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton0->setText(QString());
        label_3->setText(QApplication::translate("MPerfWidget", "You can assign other DPIs in the Binding tab.", Q_NULLPTR));
        label_6->setText(QApplication::translate("MPerfWidget", "2:", Q_NULLPTR));
        label_7->setText(QApplication::translate("MPerfWidget", "3:", Q_NULLPTR));
        label_8->setText(QApplication::translate("MPerfWidget", "4:", Q_NULLPTR));
        label_5->setText(QApplication::translate("MPerfWidget", "1:", Q_NULLPTR));
        label_15->setText(QApplication::translate("MPerfWidget", "Other:", Q_NULLPTR));
        label_13->setText(QApplication::translate("MPerfWidget", "5:", Q_NULLPTR));
        label_14->setText(QApplication::translate("MPerfWidget", "Sniper:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        eBox4->setToolTip(QApplication::translate("MPerfWidget", "Uncheck this box to skip the stage while moving up or down.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        eBox4->setText(QString());
        label_11->setText(QApplication::translate("MPerfWidget", "DPI Stage:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        eBox3->setToolTip(QApplication::translate("MPerfWidget", "Uncheck this box to skip the stage while moving up or down.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        eBox3->setText(QString());
#ifndef QT_NO_TOOLTIP
        eBox1->setToolTip(QApplication::translate("MPerfWidget", "Uncheck this box to skip the stage while moving up or down.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        eBox1->setText(QString());
        label_2->setText(QApplication::translate("MPerfWidget", "Movement", Q_NULLPTR));
        aSnapBox->setText(QApplication::translate("MPerfWidget", "Angle snap", Q_NULLPTR));
        indicBox->setText(QApplication::translate("MPerfWidget", "Use DPI indicator:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        spinBox->setToolTip(QApplication::translate("MPerfWidget", "Indicator intensity", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        spinBox->setSuffix(QApplication::translate("MPerfWidget", "%", Q_NULLPTR));
        xyBox->setText(QApplication::translate("MPerfWidget", "Independent X/Y states", Q_NULLPTR));
        copyButton->setText(QApplication::translate("MPerfWidget", "Copy to mode...", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.55.2.2 void Ui_MPerfWidget::setupUi (QWidget * *MPerfWidget*) [inline],[inherited]

Definition at line 111 of file ui_mperfwidget.h.

References Ui_MPerfWidget::aSnapBox, Ui_MPerfWidget::copyButton, Ui_MPerfWidget::eBox1, Ui_MPerfWidget::eBox2, Ui_MPerfWidget::eBox3, Ui_MPerfWidget::eBox4, Ui_MPerfWidget::eBox5, Ui_MPerfWidget::gridLayout, Ui_MPerfWidget::horizontalLayout, Ui_MPerfWidget::horizontalLayout_2, Ui_MPerfWidget::horizontalLayout_4, Ui_MPerfWidget::horizontalSpacer, Ui_MPerfWidget::horizontalSpacer_2, Ui_MPerfWidget::horizontalSpacer_3, Ui_MPerfWidget::horizontalSpacer_4, Ui_MPerfWidget::horizontalSpacer_5, Ui_MPerfWidget::horizontalSpacer_6, Ui_MPerfWidget::horizontalSpacer_7, Ui_MPerfWidget::iButton0, Ui_MPerfWidget::iButton1, Ui_MPerfWidget::iButton2, Ui_MPerfWidget::iButton3, Ui_MPerfWidget::iButton4, Ui_MPerfWidget::iButton5, Ui_MPerfWidget::iButtonO, Ui_MPerfWidget::indicBox, Ui_MPerfWidget::label, Ui_MPerfWidget::label_11, Ui_MPerfWidget::label_12, Ui_MPerfWidget::label_13, Ui_MPerfWidget::label_14, Ui_MPerfWidget::label_15, Ui_MPerfWidget::label_2, Ui_MPerfWidget::label_25, Ui_MPerfWidget::label_3, Ui_MPerfWidget::label_4, Ui_MPerfWidget::label_5, Ui_MPerfWidget::label_6, Ui_MPerfWidget::label_7, Ui_MPerfWidget::label_8, Ui_MPerfWidget::lHeightBox, Ui_MPerfWidget::line, Ui_MPerfWidget::line_2, Ui_MPerfWidget::line_3, Ui_MPerfWidget::retranslateUi(), Ui_MPerfWidget::spinBox, Ui_MPerfWidget::verticalLayout, Ui_MPerfWidget::verticalSpacer, Ui_MPerfWidget::verticalSpacer_2, Ui_MPerfWidget::verticalSpacer_3, Ui_MPerfWidget::xBox0, Ui_MPerfWidget::xBox1, Ui_MPerfWidget::xBox2, Ui_MPerfWidget::xBox3, Ui_MPerfWidget::xBox4, Ui_MPerfWidget::xBox5, Ui_MPerfWidget::xSlider0, Ui_MPerfWidget::xSlider1, Ui_MPerfWidget::xSlider2, Ui_MPerfWidget::xSlider3, Ui_MPerfWidget::xSlider4, Ui_MPerfWidget::xSlider5, Ui_MPerfWidget::xyBox, Ui_MPerfWidget::yBox0, Ui_MPerfWidget::yBox1, Ui_MPerfWidget::yBox2, Ui_MPerfWidget::yBox3, Ui_MPerfWidget::yBox4, Ui_MPerfWidget::yBox5, Ui_MPerfWidget::ySlider0, Ui_MPerfWidget::ySlider1, Ui_MPerfWidget::ySlider2, Ui_MPerfWidget::ySlider3, Ui_MPerfWidget::ySlider4, and Ui_MPerfWidget::ySlider5.

Referenced by MPerfWidget::MPerfWidget().

```
112     {
113         if (MPerfWidget->objectName().isEmpty())
114             MPerfWidget->setObjectName(QStringLiteral("MPerfWidget"));
115         MPerfWidget->resize(932, 637);
116         verticalLayout = new QVBoxLayout(MPerfWidget);
117         verticalLayout->setObjectName(QStringLiteral("verticalLayout"));
118         label = new QLabel(MPerfWidget);
119         label->setObjectName(QStringLiteral("label"));
120         QFont font;
121         font.setBold(true);
122         font.setWeight(75);
123         label->setFont(font);
124
125         verticalLayout->addWidget(label);
126
127         line = new QFrame(MPerfWidget);
128         line->setObjectName(QStringLiteral("line"));
129         line->setFrameShape(QFrame::HLine);
130         line->setFrameShadow(QFrame::Sunken);
131
132         verticalLayout->addWidget(line);
133
134         gridLayout = new QGridLayout();
135         gridLayout->setObjectName(QStringLiteral("gridLayout"));
136         label_25 = new QLabel(MPerfWidget);
137         label_25->setObjectName(QStringLiteral("label_25"));
138         label_25->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);
139
140         gridLayout->addWidget(label_25, 16, 5, 1, 2);
141
142         horizontalLayout_2 = new QHBoxLayout();
143         horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
```

```
        lHeightBox = new QComboBox(MPerfWidget);
        lHeightBox->setObjectName(QStringLiteral("lHeightBox"));

        horizontalLayout_2->addWidget(lHeightBox);

        horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer_2);


        gridLayout->addLayout(horizontalLayout_2, 16, 8, 1, 3);

        eBox2 = new QCheckBox(MPerfWidget);
        eBox2->setObjectName(QStringLiteral("eBox2"));

        gridLayout->addWidget(eBox2, 7, 1, 1, 1);

        ySlider3 = new QSlider(MPerfWidget);
        ySlider3->setObjectName(QStringLiteral("ySlider3"));
        ySlider3->setMinimum(0);
        ySlider3->setMaximum(1000);
        ySlider3->setSingleStep(10);
        ySlider3->setPageStep(50);
        ySlider3->setValue(0);
        ySlider3->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider3, 8, 8, 1, 1);

        xSlider2 = new QSlider(MPerfWidget);
        xSlider2->setObjectName(QStringLiteral("xSlider2"));
        xSlider2->setMinimum(0);
        xSlider2->setMaximum(1000);
        xSlider2->setSingleStep(10);
        xSlider2->setPageStep(50);
        xSlider2->setValue(0);
        xSlider2->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider2, 7, 5, 1, 1);

        xBox3 = new QSpinBox(MPerfWidget);
        xBox3->setObjectName(QStringLiteral("xBox3"));
        xBox3->setMinimum(100);
        xBox3->setMaximum(12000);
        xBox3->setSingleStep(50);

        gridLayout->addWidget(xBox3, 8, 6, 1, 1);

        yBox0 = new QSpinBox(MPerfWidget);
        yBox0->setObjectName(QStringLiteral("yBox0"));
        yBox0->setMinimum(100);
        yBox0->setMaximum(12000);
        yBox0->setSingleStep(50);

        gridLayout->addWidget(yBox0, 11, 9, 1, 1);

        ySlider0 = new QSlider(MPerfWidget);
        ySlider0->setObjectName(QStringLiteral("ySlider0"));
        ySlider0->setMinimum(0);
        ySlider0->setMaximum(1000);
        ySlider0->setSingleStep(10);
        ySlider0->setPageStep(50);
        ySlider0->setValue(0);
        ySlider0->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider0, 11, 8, 1, 1);

        iButton4 = new ColorButton(MPerfWidget);
        iButton4->setObjectName(QStringLiteral("iButton4"));
        QSizePolicy sizePolicy(QSizePolicy::Fixed, QSizePolicy::Fixed);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(iButton4->sizePolicy().hasHeightForWidth());
        iButton4->setSizePolicy(sizePolicy);
        iButton4->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton4, 9, 2, 1, 1);

        iButton5 = new ColorButton(MPerfWidget);
        iButton5->setObjectName(QStringLiteral("iButton5"));
        sizePolicy.setHeightForWidth(iButton5->sizePolicy().hasHeightForWidth());
        iButton5->setSizePolicy(sizePolicy);
        iButton5->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton5, 10, 2, 1, 1);

        horizontalSpacer_4 = new QSpacerItem(5, 20, QSizePolicy::Fixed,
```

```
QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_4, 4, 4, 1, 1);

        verticalSpacer_3 = new QSpacerItem(20, 15, QSizePolicy::Minimum, QSizePolicy::Fixed
);

        gridLayout->addItem(verticalSpacer_3, 3, 2, 1, 1);

        horizontalSpacer_5 = new QSpacerItem(5, 20, QSizePolicy::Fixed,
QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_5, 4, 7, 1, 1);

        iButton3 = new ColorButton(MPerfWidget);
        iButton3->setObjectName(QStringLiteral("iButton3"));
        sizePolicy.setHeightForWidth(iButton3->sizePolicy().hasHeightForWidth());
        iButton3->setSizePolicy(sizePolicy);
        iButton3->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton3, 8, 2, 1, 1);

        label_12 = new QLabel(MPerfWidget);
        label_12->setObjectName(QStringLiteral("label_12"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Preferred);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(label_12->sizePolicy().hasHeightForWidth());
        label_12->setSizePolicy(sizePolicy1);

        gridLayout->addWidget(label_12, 4, 5, 1, 1);

        xBox4 = new QSpinBox(MPerfWidget);
        xBox4->setObjectName(QStringLiteral("xBox4"));
        xBox4->setMinimum(100);
        xBox4->setMaximum(12000);
        xBox4->setSingleStep(50);

        gridLayout->addWidget(xBox4, 9, 6, 1, 1);

        xBox0 = new QSpinBox(MPerfWidget);
        xBox0->setObjectName(QStringLiteral("xBox0"));
        xBox0->setMinimum(100);
        xBox0->setMaximum(12000);
        xBox0->setSingleStep(50);

        gridLayout->addWidget(xBox0, 11, 6, 1, 1);

        yBox5 = new QSpinBox(MPerfWidget);
        yBox5->setObjectName(QStringLiteral("yBox5"));
        yBox5->setMinimum(100);
        yBox5->setMaximum(12000);
        yBox5->setSingleStep(50);

        gridLayout->addWidget(yBox5, 10, 9, 1, 1);

        eBox5 = new QCheckBox(MPerfWidget);
        eBox5->setObjectName(QStringLiteral("eBox5"));

        gridLayout->addWidget(eBox5, 10, 1, 1, 1);

        xSlider5 = new QSlider(MPerfWidget);
        xSlider5->setObjectName(QStringLiteral("xSlider5"));
        xSlider5->setMinimum(0);
        xSlider5->setMaximum(1000);
        xSlider5->setSingleStep(10);
        xSlider5->setPageStep(50);
        xSlider5->setValue(0);
        xSlider5->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider5, 10, 5, 1, 1);

        xBox1 = new QSpinBox(MPerfWidget);
        xBox1->setObjectName(QStringLiteral("xBox1"));
        sizePolicy.setHeightForWidth(xBox1->sizePolicy().hasHeightForWidth());
        xBox1->setSizePolicy(sizePolicy);
        xBox1->setMinimum(100);
        xBox1->setMaximum(12000);
        xBox1->setSingleStep(50);

        gridLayout->addWidget(xBox1, 6, 6, 1, 1);

        yBox2 = new QSpinBox(MPerfWidget);
        yBox2->setObjectName(QStringLiteral("yBox2"));
        yBox2->setMinimum(100);
        yBox2->setMaximum(12000);
        yBox2->setSingleStep(50);
```

```

        gridLayout->addWidget(yBox2, 7, 9, 1, 1);

        yBox3 = new QSpinBox(MPerfWidget);
        yBox3->setObjectName(QStringLiteral("yBox3"));
        yBox3->setMinimum(100);
        yBox3->setMaximum(12000);
        yBox3->setSingleStep(50);

        gridLayout->addWidget(yBox3, 8, 9, 1, 1);

        xSlider4 = new QSlider(MPerfWidget);
        xSlider4->setObjectName(QStringLiteral("xSlider4"));
        xSlider4->setMinimum(0);
        xSlider4->setMaximum(1000);
        xSlider4->setSingleStep(10);
        xSlider4->setPageStep(50);
        xSlider4->setValue(0);
        xSlider4->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider4, 9, 5, 1, 1);

        label_4 = new QLabel(MPerfWidget);
        label_4->setObjectName(QStringLiteral("label_4"));
        sizePolicy1.setHeightForWidth(label_4->sizePolicy().hasHeightForWidth());
        label_4->setSizePolicy(sizePolicy1);

        gridLayout->addWidget(label_4, 4, 8, 1, 1);

        xSlider0 = new QSlider(MPerfWidget);
        xSlider0->setObjectName(QStringLiteral("xSlider0"));
        xSlider0->setMinimum(0);
        xSlider0->setMaximum(1000);
        xSlider0->setSingleStep(10);
        xSlider0->setPageStep(50);
        xSlider0->setValue(0);
        xSlider0->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider0, 11, 5, 1, 1);

        iButton2 = new ColorButton(MPerfWidget);
        iButton2->setObjectName(QStringLiteral("iButton2"));
        sizePolicy.setHeightForWidth(iButton2->sizePolicy().hasHeightForWidth());
        iButton2->setSizePolicy(sizePolicy);
        iButton2->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton2, 7, 2, 1, 1);

        line_3 = new QFrame(MPerfWidget);
        line_3->setObjectName(QStringLiteral("line_3"));
        line_3->setFrameShape(QFrame::HLine);
        line_3->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_3, 5, 0, 1, 11);

        iButton0 = new ColorButton(MPerfWidget);
        iButton0->setObjectName(QStringLiteral("iButton0"));
        sizePolicy.setHeightForWidth(iButton0->sizePolicy().hasHeightForWidth());
        iButton0->setSizePolicy(sizePolicy);
        iButton0->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton0, 12, 2, 1, 1);

        yBox1 = new QSpinBox(MPerfWidget);
        yBox1->setObjectName(QStringLiteral("yBox1"));
        sizePolicy.setHeightForWidth(yBox1->sizePolicy().hasHeightForWidth());
        yBox1->setSizePolicy(sizePolicy);
        yBox1->setMinimum(100);
        yBox1->setMaximum(12000);
        yBox1->setSingleStep(50);

        gridLayout->addWidget(yBox1, 6, 9, 1, 1);

        ySlider2 = new QSlider(MPerfWidget);
        ySlider2->setObjectName(QStringLiteral("ySlider2"));
        ySlider2->setMinimum(0);
        ySlider2->setMaximum(1000);
        ySlider2->setSingleStep(10);
        ySlider2->setPageStep(50);
        ySlider2->setValue(0);
        ySlider2->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider2, 7, 8, 1, 1);

        xBox2 = new QSpinBox(MPerfWidget);
        xBox2->setObjectName(QStringLiteral("xBox2"));
        xBox2->setMinimum(100);
```

```
        xBox2->setMaximum(12000);
        xBox2->setSingleStep(50);

        gridLayout->addWidget(xBox2, 7, 6, 1, 1);

        xSlider1 = new QSlider(MPerfWidget);
        xSlider1->setObjectName(QStringLiteral("xSlider1"));
        QSizePolicy sizePolicy2(QSizePolicy::Expanding, QSizePolicy::Fixed);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(0);
        sizePolicy2.setHeightForWidth(xSlider1->sizePolicy().hasHeightForWidth());
        xSlider1->setSizePolicy(sizePolicy2);
        xSlider1->setMinimum(0);
        xSlider1->setMaximum(1000);
        xSlider1->setSingleStep(10);
        xSlider1->setPageStep(50);
        xSlider1->setValue(0);
        xSlider1->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider1, 6, 5, 1, 1);

        horizontalSpacer = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer, 0, 0, 1, 1);

        yBox4 = new QSpinBox(MPerfWidget);
        yBox4->setObjectName(QStringLiteral("yBox4"));
        yBox4->setMinimum(100);
        yBox4->setMaximum(12000);
        yBox4->setSingleStep(50);

        gridLayout->addWidget(yBox4, 9, 9, 1, 1);

        iButton1 = new ColorButton(MPerfWidget);
        iButton1->setObjectName(QStringLiteral("iButton1"));
        sizePolicy.setHeightForWidth(iButton1->sizePolicy().hasHeightForWidth());
        iButton1->setSizePolicy(sizePolicy);
        iButton1->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton1, 6, 2, 1, 1);

        ySlider4 = new QSlider(MPerfWidget);
        ySlider4->setObjectName(QStringLiteral("ySlider4"));
        ySlider4->setMinimum(0);
        ySlider4->setMaximum(1000);
        ySlider4->setSingleStep(10);
        ySlider4->setPageStep(50);
        ySlider4->setValue(0);
        ySlider4->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider4, 9, 8, 1, 1);

        ySlider1 = new QSlider(MPerfWidget);
        ySlider1->setObjectName(QStringLiteral("ySlider1"));
        ySlider1->setMinimum(0);
        ySlider1->setMaximum(1000);
        ySlider1->setSingleStep(10);
        ySlider1->setPageStep(50);
        ySlider1->setValue(0);
        ySlider1->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider1, 6, 8, 1, 1);

        iButton0 = new ColorButton(MPerfWidget);
        iButton0->setObjectName(QStringLiteral("iButton0"));
        sizePolicy.setHeightForWidth(iButton0->sizePolicy().hasHeightForWidth());
        iButton0->setSizePolicy(sizePolicy);
        iButton0->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton0, 11, 2, 1, 1);

        xSlider3 = new QSlider(MPerfWidget);
        xSlider3->setObjectName(QStringLiteral("xSlider3"));
        xSlider3->setMinimum(0);
        xSlider3->setMaximum(1000);
        xSlider3->setSingleStep(10);
        xSlider3->setPageStep(50);
        xSlider3->setValue(0);
        xSlider3->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider3, 8, 5, 1, 1);

        xBox5 = new QSpinBox(MPerfWidget);
        xBox5->setObjectName(QStringLiteral("xBox5"));
        xBox5->setMinimum(100);
        xBox5->setMaximum(12000);
```

```
        xBox5->setSingleStep(50);

        gridLayout->addWidget(xBox5, 10, 6, 1, 1);

        label_3 = new QLabel(MPerfWidget);
        label_3->setObjectName(QStringLiteral("label_3"));

        gridLayout->addWidget(label_3, 12, 5, 1, 5);

        label_6 = new QLabel(MPerfWidget);
        label_6->setObjectName(QStringLiteral("label_6"));

        gridLayout->addWidget(label_6, 7, 3, 1, 1);

        ySlider5 = new QSlider(MPerfWidget);
        ySlider5->setObjectName(QStringLiteral("ySlider5"));
        ySlider5->setMinimum(0);
        ySlider5->setMaximum(1000);
        ySlider5->setSingleStep(10);
        ySlider5->setPageStep(50);
        ySlider5->setValue(0);
        ySlider5->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider5, 10, 8, 1, 1);

        label_7 = new QLabel(MPerfWidget);
        label_7->setObjectName(QStringLiteral("label_7"));

        gridLayout->addWidget(label_7, 8, 3, 1, 1);

        label_8 = new QLabel(MPerfWidget);
        label_8->setObjectName(QStringLiteral("label_8"));

        gridLayout->addWidget(label_8, 9, 3, 1, 1);

        label_5 = new QLabel(MPerfWidget);
        label_5->setObjectName(QStringLiteral("label_5"));

        gridLayout->addWidget(label_5, 6, 3, 1, 1);

        label_15 = new QLabel(MPerfWidget);
        label_15->setObjectName(QStringLiteral("label_15"));

        gridLayout->addWidget(label_15, 12, 3, 1, 1);

        label_13 = new QLabel(MPerfWidget);
        label_13->setObjectName(QStringLiteral("label_13"));

        gridLayout->addWidget(label_13, 10, 3, 1, 1);

        label_14 = new QLabel(MPerfWidget);
        label_14->setObjectName(QStringLiteral("label_14"));

        gridLayout->addWidget(label_14, 11, 3, 1, 1);

        eBox4 = new QCheckBox(MPerfWidget);
        eBox4->setObjectName(QStringLiteral("eBox4"));

        gridLayout->addWidget(eBox4, 9, 1, 1, 1);

        label_11 = new QLabel(MPerfWidget);
        label_11->setObjectName(QStringLiteral("label_11"));

        gridLayout->addWidget(label_11, 4, 2, 1, 2);

        eBox3 = new QCheckBox(MPerfWidget);
        eBox3->setObjectName(QStringLiteral("eBox3"));

        gridLayout->addWidget(eBox3, 8, 1, 1, 1);

        eBox1 = new QCheckBox(MPerfWidget);
        eBox1->setObjectName(QStringLiteral("eBox1"));

        gridLayout->addWidget(eBox1, 6, 1, 1, 1);

        label_2 = new QLabel(MPerfWidget);
        label_2->setObjectName(QStringLiteral("label_2"));
        label_2->setFont(font);

        gridLayout->addWidget(label_2, 14, 0, 1, 10);

        verticalSpacer = new QSpacerItem(20, 30, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer, 13, 2, 1, 1);

        aSnapBox = new QCheckBox(MPerfWidget);
        aSnapBox->setObjectName(QStringLiteral("aSnapBox"));
```

```
        gridLayout->addWidget(aSnapBox, 16, 1, 1, 4);

        line_2 = new QFrame(MPerfWidget);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
        line_2->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_2, 15, 0, 1, 10);

        horizontalLayout_4 = new QHBoxLayout();
        horizontalLayout_4->setObjectName(QStringLiteral("horizontalLayout_4"));
        indicBox = new QCheckBox(MPerfWidget);
        indicBox->setObjectName(QStringLiteral("indicBox"));

        horizontalLayout_4->addWidget(indicBox);

        horizontalSpacer_3 = new QSpacerItem(5, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        horizontalLayout_4->addItem(horizontalSpacer_3);

        spinBox = new QSpinBox(MPerfWidget);
        spinBox->setObjectName(QStringLiteral("spinBox"));
        spinBox->setMaximum(100);
        spinBox->setValue(100);

        horizontalLayout_4->addWidget(spinBox);

        horizontalSpacer_7 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        horizontalLayout_4->addItem(horizontalSpacer_7);


        gridLayout->addLayout(horizontalLayout_4, 0, 1, 1, 9);

        xyBox = new QCheckBox(MPerfWidget);
        xyBox->setObjectName(QStringLiteral("xyBox"));

        gridLayout->addWidget(xyBox, 2, 1, 1, 9);


        verticalLayout->addLayout(gridLayout);

        verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
    QSizePolicy::Expanding);

        verticalLayout->addItem(verticalSpacer_2);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        copyButton = new QPushButton(MPerfWidget);
        copyButton->setObjectName(QStringLiteral("copyButton"));

        horizontalLayout->addWidget(copyButton);

        horizontalSpacer_6 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        horizontalLayout->addItem(horizontalSpacer_6);


        verticalLayout->addLayout(horizontalLayout);


        retranslateUi(MPerfWidget);

        QMetaObject::connectSlotsByName(MPerfWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.55.3 Field Documentation

12.55.3.1 QCheckBox* Ui_MPerfWidget::aSnapBox [inherited]

Definition at line 98 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), MPerfWidget::setPerf(), and Ui_MPerfWidget::setupUi().

12.55.3.2 QPushButton* Ui_MPerfWidget::copyButton [inherited]

Definition at line 108 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.3 QCheckBox* Ui_MPerfWidget::eBox1 [inherited]

Definition at line 95 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.4 QCheckBox* Ui_MPerfWidget::eBox2 [inherited]

Definition at line 44 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.5 QCheckBox* Ui_MPerfWidget::eBox3 [inherited]

Definition at line 94 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.6 QCheckBox* Ui_MPerfWidget::eBox4 [inherited]

Definition at line 92 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.7 QCheckBox* Ui_MPerfWidget::eBox5 [inherited]

Definition at line 60 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.8 QGridLayout* Ui_MPerfWidget::gridLayout [inherited]

Definition at line 39 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.9 QHBoxLayout* Ui_MPerfWidget::horizontalLayout [inherited]

Definition at line 107 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.10 QHBoxLayout* Ui_MPerfWidget::horizontalLayout_2 [inherited]

Definition at line 41 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.11 QHBoxLayout* Ui_MPerfWidget::horizontalLayout_4 [inherited]

Definition at line 100 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.12 QSpacerItem* Ui_MPerfWidget::horizontalSpacer [inherited]

Definition at line 75 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.13 QSpacerItem* Ui_MPerfWidget::horizontalSpacer_2 [inherited]

Definition at line 43 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.14 QSpacerItem* Ui_MPerfWidget::horizontalSpacer_3 [inherited]

Definition at line 102 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.15 QSpacerItem* Ui_MPerfWidget::horizontalSpacer_4 [inherited]

Definition at line 52 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.16 QSpacerItem* Ui_MPerfWidget::horizontalSpacer_5 [inherited]

Definition at line 54 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.17 QSpacerItem* Ui_MPerfWidget::horizontalSpacer_6 [inherited]

Definition at line 109 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.18 QSpacerItem* Ui_MPerfWidget::horizontalSpacer_7 [inherited]

Definition at line 104 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.19 ColorButton* Ui_MPerfWidget::iButton0 [inherited]

Definition at line 80 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.20 ColorButton* Ui_MPerfWidget::iButton1 [inherited]

Definition at line 77 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.21 ColorButton* Ui_MPerfWidget::iButton2 [inherited]

Definition at line 68 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.22 ColorButton* Ui_MPerfWidget::iButton3 [inherited]

Definition at line 55 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.23 ColorButton* Ui_MPerfWidget::iButton4 [inherited]

Definition at line 50 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.24 ColorButton* Ui_MPerfWidget::iButton5 [inherited]

Definition at line 51 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.25 ColorButton* Ui_MPerfWidget::iButtonO [inherited]

Definition at line 70 of file ui_mperfwidget.h.

Referenced by MPerfWidget::colorChanged(), MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), MPerfWidget::setPerf(), and Ui_MPerfWidget::setupUi().

12.55.3.26 QCheckBox* Ui_MPerfWidget::indicBox [inherited]

Definition at line 101 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), MPerfWidget::setPerf(), and Ui_MPerfWidget::setupUi().

12.55.3.27 QLabel* Ui_MPerfWidget::label [inherited]

Definition at line 37 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.28 QLabel* Ui_MPerfWidget::label_11 [inherited]

Definition at line 93 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.29 QLabel* Ui_MPerfWidget::label_12 [inherited]

Definition at line 56 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.30 QLabel* Ui_MPerfWidget::label_13 [inherited]

Definition at line 90 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.31 QLabel* Ui_MPerfWidget::label_14 [inherited]

Definition at line 91 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.32 QLabel* Ui_MPerfWidget::label_15 [inherited]

Definition at line 89 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.33 QLabel* Ui_MPerfWidget::label_2 [inherited]

Definition at line 96 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.34 QLabel* Ui_MPerfWidget::label_25 [inherited]

Definition at line 40 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.35 QLabel* Ui_MPerfWidget::label_3 [inherited]

Definition at line 83 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.36 QLabel* Ui_MPerfWidget::label_4 [inherited]

Definition at line 66 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.37 QLabel* Ui_MPerfWidget::label_5 [inherited]

Definition at line 88 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.38 QLabel* Ui_MPerfWidget::label_6 [inherited]

Definition at line 84 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.39 QLabel* Ui_MPerfWidget::label_7 [inherited]

Definition at line 86 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.40 QLabel* Ui_MPerfWidget::label_8 [inherited]

Definition at line 87 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), and Ui_MPerfWidget::setupUi().

12.55.3.41 QComboBox* Ui_MPerfWidget::lHeightBox [inherited]

Definition at line 42 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), MPerfWidget::setPerf(), and Ui_MPerfWidget::setupUi().

12.55.3.42 QFrame* Ui_MPerfWidget::line [inherited]

Definition at line 38 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.43 QFrame* Ui_MPerfWidget::line_2 [inherited]

Definition at line 99 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.44 QFrame* Ui_MPerfWidget::line_3 [inherited]

Definition at line 69 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.45 QSpinBox* Ui_MPerfWidget::spinBox [inherited]

Definition at line 103 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::retranslateUi(), MPerfWidget::setPerf(), and Ui_MPerfWidget::setupUi().

12.55.3.46 QVBoxLayout* Ui_MPerfWidget::verticalLayout [inherited]

Definition at line 36 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.47 QSpacerItem* Ui_MPerfWidget::verticalSpacer [inherited]

Definition at line 97 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.48 QSpacerItem* Ui_MPerfWidget::verticalSpacer_2 [inherited]

Definition at line 106 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.49 QSpacerItem* Ui_MPerfWidget::verticalSpacer_3 [inherited]

Definition at line 53 of file ui_mperfwidget.h.

Referenced by Ui_MPerfWidget::setupUi().

12.55.3.50 QSpinBox* Ui_MPerfWidget::xBox0 [inherited]

Definition at line 58 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.51 QSpinBox* Ui_MPerfWidget::xBox1 [inherited]

Definition at line 62 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.52 QSpinBox* Ui_MPerfWidget::xBox2 [inherited]

Definition at line 73 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.53 QSpinBox* Ui_MPerfWidget::xBox3 [inherited]

Definition at line 47 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.54 QSpinBox* Ui_MPerfWidget::xBox4 [inherited]

Definition at line 57 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.55 QSpinBox* Ui_MPerfWidget::xBox5 [inherited]

Definition at line 82 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.56 QSlider* Ui_MPerfWidget::xSlider0 [inherited]

Definition at line 67 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.57 QSlider* Ui_MPerfWidget::xSlider1 [inherited]

Definition at line 74 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.58 QSlider* Ui_MPerfWidget::xSlider2 [inherited]

Definition at line 46 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.59 QSlider* Ui_MPerfWidget::xSlider3 [inherited]

Definition at line 81 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.60 QSlider* Ui_MPerfWidget::xSlider4 [inherited]

Definition at line 65 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.61 QSlider* Ui_MPerfWidget::xSlider5 [inherited]

Definition at line 61 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.62 QCheckBox* Ui_MPerfWidget::xyBox [inherited]

Definition at line 105 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), Ui_MPerfWidget::retranslateUi(), Ui_MPerfWidget::setupUi(), and MPerfWidget::sliderYMoved().

12.55.3.63 QSpinBox* Ui_MPerfWidget::yBox0 [inherited]

Definition at line 48 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.64 QSpinBox* Ui_MPerfWidget::yBox1 [inherited]

Definition at line 71 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.65 QSpinBox* Ui_MPerfWidget::yBox2 [inherited]

Definition at line 63 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.66 QSpinBox* Ui_MPerfWidget::yBox3 [inherited]

Definition at line 64 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.67 QSpinBox* Ui_MPerfWidget::yBox4 [inherited]

Definition at line 76 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.68 QSpinBox* Ui_MPerfWidget::yBox5 [inherited]

Definition at line 59 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.69 QSlider* Ui_MPerfWidget::ySlider0 [inherited]

Definition at line 49 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.70 QSlider* Ui_MPerfWidget::ySlider1 [inherited]

Definition at line 79 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.71 QSlider* Ui_MPerfWidget::ySlider2 [inherited]

Definition at line 72 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.72 QSlider* Ui_MPerfWidget::ySlider3 [inherited]

Definition at line 45 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.73 QSlider* Ui_MPerfWidget::ySlider4 [inherited]

Definition at line 78 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

12.55.3.74 QSlider* Ui_MPerfWidget::ySlider5 [inherited]

Definition at line 85 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and Ui_MPerfWidget::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_mperfwidget.h

12.56 MPerfWidget Class Reference

```
#include <src/ckb/mperfwidget.h>
```

Inheritance diagram for MPerfWidget:

Collaboration diagram for MPerfWidget:

Data Structures

- struct DpiUi

Public Member Functions

- MPerfWidget (QWidget ∗parent=0)
- ∼MPerfWidget ()
- void setPerf (KbPerf ∗newPerf, KbProfile ∗newProfile)

Static Public Attributes

- static const int DPI_COUNT = KbPerf::DPI_COUNT
- static const int DPI_MIN = KbPerf::DPI_MIN
- static const int DPI_MAX = KbPerf::DPI_MAX

Private Slots

- void colorClicked (int index)
- void colorChanged (int index)
- void sliderXMoved (int index)
- void sliderYMoved (int index)
- void boxXChanged (int index)
- void boxYChanged (int index)
- void enableChanged (int index)
- void on_xyBox_clicked (bool checked)
- void on_indicBox_clicked (bool checked)
- void on_aSnapBox_clicked (bool checked)
- void on_lHeightBox_activated (int index)
- void on_copyButton_clicked ()
- void on_spinBox_valueChanged (int arg1)

Private Attributes

- Ui::MPerfWidget * ui
- KbPerf * perf
- KbProfile * profile
- DpiUi stages [DPI_COUNT]
- bool _xyLink
- bool colorLink
- QSignalMapper buttonMapper1
- QSignalMapper buttonMapper2
- QSignalMapper sliderXMapper
- QSignalMapper sliderYMapper
- QSignalMapper boxXMapper
- QSignalMapper boxYMapper
- QSignalMapper enableMapper
- bool isSetting

12.56.1 Detailed Description

Definition at line 18 of file mperfwidget.h.

12.56.2 Data Structure Documentation

12.56.2.1 struct MPerfWidget::DpiUi

Definition at line 37 of file mperfwidget.h.

Collaboration diagram for MPerfWidget::DpiUi:

Data Fields

QCheckBox *	enableCheck	
ColorButton *	indicator	
QSpinBox *	xBox	
QSlider *	xSlider	
QSpinBox *	yBox	
QSlider *	ySlider	

12.56.3 Constructor & Destructor Documentation

12.56.3.1 MPerfWidget::MPerfWidget (QWidget * *parent* = 0) [explicit]

Definition at line 8 of file mperfwidget.cpp.

References _xyLink, ColorButton::allowAlpha(), ColorButton::bigIcons(), boxXChanged(), boxXMapper, boxYChanged(), boxYMapper, buttonMapper1, buttonMapper2, colorChanged(), colorClicked(), DPI_COUNT, Ui_MPerfWidget::eBox1, Ui_MPerfWidget::eBox2, Ui_MPerfWidget::eBox3, Ui_MPerfWidget::eBox4, Ui_MPerfWidget::eBox5, enableChanged(), MPerfWidget::DpiUi::enableCheck, enableMapper, Ui_MPerfWidget::iButton0,

Ui_MPerfWidget::iButton1, Ui_MPerfWidget::iButton2, Ui_MPerfWidget::iButton3, Ui_MPerfWidget::iButton4, Ui_MPerfWidget::iButton5, Ui_MPerfWidget::iButtonO, MPerfWidget::DpiUi::indicator, ColorButton::setLabel(), Ui_MPerfWidget::setupUi(), sliderXMapper, sliderXMoved(), sliderYMapper, sliderYMoved(), stages, ui, MPerfWidget::DpiUi::xBox, Ui_MPerfWidget::xBox0, Ui_MPerfWidget::xBox1, Ui_MPerfWidget::xBox2, Ui_MPerfWidget::xBox3, Ui_MPerfWidget::xBox4, Ui_MPerfWidget::xBox5, MPerfWidget::DpiUi::xSlider, Ui_MPerfWidget::xSlider0, Ui_MPerfWidget::xSlider1, Ui_MPerfWidget::xSlider2, Ui_MPerfWidget::xSlider3, Ui_MPerfWidget::xSlider4, Ui_MPerfWidget::xSlider5, Ui_MPerfWidget::xyBox, MPerfWidget::DpiUi::yBox, Ui_MPerfWidget::yBox0, Ui_MPerfWidget::yBox1, Ui_MPerfWidget::yBox2, Ui_MPerfWidget::yBox3, Ui_MPerfWidget::yBox4, Ui_MPerfWidget::yBox5, MPerfWidget::DpiUi::ySlider, Ui_MPerfWidget::ySlider0, Ui_MPerfWidget::ySlider1, Ui_MPerfWidget::ySlider2, Ui_MPerfWidget::ySlider3, Ui_MPerfWidget::ySlider4, and Ui_MPerfWidget::ySlider5.

```
                                        :
    QWidget(parent), ui(new Ui::MPerfWidget), perf(0), profile(0), _xyLink(!CkbSettings::get(xyLinkPath).toBool()), colorLink(false), isSetting(false) {
     ui->setupUi(this);
     ui->xyBox->setChecked(!_xyLink);
     // Set up DPI stages
     stages[0].indicator = ui->iButton0; stages[0].xSlider = ui->xSlider0; stages[0].ySlider = ui->ySlider0; stages[0].xBox = ui->xBox0; stages[0].yBox = ui->yBox0; stages[0].enableCheck = 0;
     stages[1].indicator = ui->iButton1; stages[1].xSlider = ui->xSlider1; stages[1].ySlider = ui->ySlider1; stages[1].xBox = ui->xBox1; stages[1].yBox = ui->yBox1; stages[1].enableCheck = ui->eBox1;
     stages[2].indicator = ui->iButton2; stages[2].xSlider = ui->xSlider2; stages[2].ySlider = ui->ySlider2; stages[2].xBox = ui->xBox2; stages[2].yBox = ui->yBox2; stages[2].enableCheck = ui->eBox2;
     stages[3].indicator = ui->iButton3; stages[3].xSlider = ui->xSlider3; stages[3].ySlider = ui->ySlider3; stages[3].xBox = ui->xBox3; stages[3].yBox = ui->yBox3; stages[3].enableCheck = ui->eBox3;
     stages[4].indicator = ui->iButton4; stages[4].xSlider = ui->xSlider4; stages[4].ySlider = ui->ySlider4; stages[4].xBox = ui->xBox4; stages[4].yBox = ui->yBox4; stages[4].enableCheck = ui->eBox4;
     stages[5].indicator = ui->iButton5; stages[5].xSlider = ui->xSlider5; stages[5].ySlider = ui->ySlider5; stages[5].xBox = ui->xBox5; stages[5].yBox = ui->yBox5; stages[5].enableCheck = ui->eBox5;
     ui->iButtonO->setLabel(false);
     ui->iButtonO->bigIcons(true);
     ui->iButtonO->allowAlpha(true);
     for(int i = 0; i < DPI_COUNT; i++){
         stages[i].indicator->setLabel(false);
         stages[i].indicator->bigIcons(true);
         stages[i].indicator->allowAlpha(true);
         // Map signals
         connect(stages[i].indicator, SIGNAL(clicked(bool)), &buttonMapper1, SLOT(map()));
         connect(stages[i].indicator, SIGNAL(colorChanged(QColor)), &buttonMapper2, SLOT(map()));
         connect(stages[i].xSlider, SIGNAL(valueChanged(int)), &sliderXMapper, SLOT(map()));
         connect(stages[i].ySlider, SIGNAL(valueChanged(int)), &sliderYMapper, SLOT(map()));
         connect(stages[i].xBox, SIGNAL(valueChanged(int)), &boxXMapper, SLOT(map()));
         connect(stages[i].yBox, SIGNAL(valueChanged(int)), &boxYMapper, SLOT(map()));
         if(stages[i].enableCheck)
             // Sniper has no enable
             connect(stages[i].enableCheck, SIGNAL(stateChanged(int)), &enableMapper, SLOT(map()));
         // Set names
         buttonMapper1.setMapping(stages[i].indicator, i);
         buttonMapper2.setMapping(stages[i].indicator, i);
         sliderXMapper.setMapping(stages[i].xSlider, i);
         sliderYMapper.setMapping(stages[i].ySlider, i);
         boxXMapper.setMapping(stages[i].xBox, i);
         boxYMapper.setMapping(stages[i].yBox, i);
         if(stages[i].enableCheck)
             enableMapper.setMapping(stages[i].enableCheck, i);
     }
     // Connect to slots
     connect(&buttonMapper1, SIGNAL(mapped(int)), this, SLOT(colorClicked(int)));
```

```
48     connect(&buttonMapper2, SIGNAL(mapped(int)), this, SLOT(
      colorChanged(int)));
49     connect(&sliderXMapper, SIGNAL(mapped(int)), this, SLOT(
      sliderXMoved(int)));
50     connect(&sliderYMapper, SIGNAL(mapped(int)), this, SLOT(
      sliderYMoved(int)));
51     connect(&boxXMapper, SIGNAL(mapped(int)), this, SLOT(boxXChanged(int)));
52     connect(&boxYMapper, SIGNAL(mapped(int)), this, SLOT(boxYChanged(int)));
53     connect(&enableMapper, SIGNAL(mapped(int)), this, SLOT(
      enableChanged(int)));
54 }
```

Here is the call graph for this function:

12.56.3.2 MPerfWidget::~MPerfWidget ( )

Definition at line 56 of file mperfwidget.cpp.

References ui.

```
56                          {
57     delete ui;
58 }
```

12.56.4 Member Function Documentation

12.56.4.1 void MPerfWidget::boxXChanged (int *index*) [private],[slot]

Definition at line 157 of file mperfwidget.cpp.

References _xyLink, KbPerf::dpi(), dpiLog(), perf, SET_END, SET_START, stages, MPerfWidget::DpiUi::xBox, MPerfWidget::DpiUi::xSlider, and MPerfWidget::DpiUi::yBox.

Referenced by MPerfWidget().

```
157                                     {
158     SET_START;
159     QSpinBox* box = stages[index].xBox;
160     QSlider* slider = stages[index].xSlider;
```

```
    int value = box->value();
    slider->setValue(dpiLog(value, slider->minimum(), slider->maximum()));
    if(_xyLink)
        perf->dpi(index, value);
    else
        perf->dpi(index, QPoint(value, perf->dpi(index).y()));
    SET_END;
    if(_xyLink)
        stages[index].yBox->setValue(value);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.56.4.2 void MPerfWidget::boxYChanged (int *index*) [private],[slot]

Definition at line 172 of file mperfwidget.cpp.

References _xyLink, KbPerf::dpi(), dpiLog(), perf, SET_END, SET_START, stages, MPerfWidget::DpiUi::xBox, MPerfWidget::DpiUi::yBox, and MPerfWidget::DpiUi::ySlider.

Referenced by MPerfWidget().

```
172                                     {
173     SET_START;
174     QSpinBox* box = stages[index].yBox;
175     QSlider* slider = stages[index].ySlider;
176     int value = box->value();
177     slider->setValue(dpiLog(value, slider->minimum(), slider->maximum()));
178     if(_xyLink)
179         perf->dpi(index, value);
180     else
181         perf->dpi(index, QPoint(perf->dpi(index).x(), value));
182     SET_END;
183     if(_xyLink)
184         stages[index].xBox->setValue(value);
185 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.56.4.3 void MPerfWidget::colorChanged (int *index*) [private],[slot]

Definition at line 86 of file mperfwidget.cpp.

References ColorButton::color(), colorLink, DPI_COUNT, KbPerf::dpiColor(), Ui_MPerfWidget::iButtonO, MPerfWidget::DpiUi::indicator, KbPerf::OTHER, perf, stages, and ui.

Referenced by MPerfWidget().

```
86                                          {
87     QColor color = stages[index].indicator->color();
88     if(colorLink){
89         // Alt was held down - set all
90         for(int i = 0; i < DPI_COUNT; i++){
91             stages[i].indicator->color(color);
92             perf->dpiColor(i, color);
93         }
94         ui->iButtonO->color(color);
95         perf->dpiColor(KbPerf::OTHER, color);
96     } else {
97         // Set one
98         perf->dpiColor(index, color);
99     }
100     colorLink = false;
101 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.56.4.4 void MPerfWidget::colorClicked (int *index*) [private],[slot]

Definition at line 81 of file mperfwidget.cpp.

References colorLink.

Referenced by MPerfWidget().

```
81                                      {
82     // Set all colors at once if Alt is held down
83     colorLink = !!(qApp->keyboardModifiers() & Qt::AltModifier);
84 }
```

Here is the caller graph for this function:

12.56.4.5 void MPerfWidget::enableChanged (int *index*) [private],[slot]

Definition at line 187 of file mperfwidget.cpp.

References KbPerf::dpiEnabled(), perf, and stages.

Referenced by MPerfWidget().

```
187                                         {
188     perf->dpiEnabled(index, stages[index].enableCheck->isChecked());
189 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.56.4.6 void MPerfWidget::on_aSnapBox_clicked (bool *checked*) [private],[slot]

Definition at line 201 of file mperfwidget.cpp.

References KbPerf::angleSnap(), and perf.

```
201                                                 {
202     perf->angleSnap(checked);
203 }
```

Here is the call graph for this function:

12.56.4.7 void MPerfWidget::on_copyButton_clicked ( ) [private],[slot]

Definition at line 209 of file mperfwidget.cpp.

References KbProfile::currentMode(), KbProfile::modes(), perf, KbMode::perf(), profile, and ModeSelectDialog::selection().

```
                                        {
    ModeSelectDialog dialog(this, profile->currentMode(),
  profile->modes(), "Copy performance settings to:");
    if(dialog.exec() != QDialog::Accepted)
        return;
    QList<KbMode*> selectedModes = dialog.selection();
    foreach(KbMode* mode, selectedModes){
        *mode->perf() = *perf;
    }
}
```

Here is the call graph for this function:

12.56.4.8 void MPerfWidget::on_indicBox_clicked (bool *checked*) [private],[slot]

Definition at line 197 of file mperfwidget.cpp.

References KbPerf::dpiIndicator(), and perf.

```
                                        {
    perf->dpiIndicator(checked);
}
```

Here is the call graph for this function:

12.56.4.9 void MPerfWidget::on_lHeightBox_activated (int *index*) [private],[slot]

Definition at line 205 of file mperfwidget.cpp.

References KbPerf::liftHeight(), and perf.

```
205                                                 {
206     perf->liftHeight((KbPerf::height)(index + 1));
207 }
```

Here is the call graph for this function:

12.56.4.10 void MPerfWidget::on_spinBox_valueChanged (int *arg1*) [private],[slot]

Definition at line 219 of file mperfwidget.cpp.

References KbPerf::iOpacity(), and perf.

```
219                                                 {
220     if(!perf)
221         return;
222     perf->iOpacity(arg1 / 100.f);
223 }
```

Here is the call graph for this function:

12.56.4.11 void MPerfWidget::on_xyBox_clicked (bool *checked*) [private],[slot]

Definition at line 191 of file mperfwidget.cpp.

References _xyLink, CkbSettings::set(), and xyLinkPath.

```
191                                                 {
192     _xyLink = !checked;
193     CkbSettings::set(xyLinkPath, checked);
194     // FIXME: update other MPerfWidgets, since this is a global setting
195 }
```

Here is the call graph for this function:

12.56.4.12 void MPerfWidget::setPerf (KbPerf * *newPerf,* KbProfile * *newProfile*)

Definition at line 60 of file mperfwidget.cpp.

References _xyLink, KbPerf::angleSnap(), Ui_MPerfWidget::aSnapBox, ColorButton::color(), KbPerf::dpi(), DPI_COUNT, KbPerf::dpiColor(), KbPerf::dpiEnabled(), KbPerf::dpiIndicator(), MPerfWidget::DpiUi::enableCheck, Ui_MPerfWidget::iButtonO, MPerfWidget::DpiUi::indicator, Ui_MPerfWidget::indicBox, KbPerf::iOpacity(), Ui_MPerfWidget::lHeightBox, KbPerf::liftHeight(), KbPerf::OTHER, perf, profile, Ui_MPerfWidget::spinBox, stages, ui, MPerfWidget::DpiUi::xBox, and MPerfWidget::DpiUi::yBox.

Referenced by KbWidget::modeChanged().

```
60                                                                  {
61     perf = newPerf;
62     profile = newProfile;
63     ui->spinBox->setValue(round(perf->iOpacity() * 100.f));
64     for(int i = 0; i < DPI_COUNT; i++){
65         stages[i].indicator->color(perf->dpiColor(i));
66         bool oldLink = _xyLink;
67         // Don't force X/Y to the same value if they were set differently in the past
68         _xyLink = false;
69         stages[i].xBox->setValue(perf->dpi(i).x());
70         stages[i].yBox->setValue(perf->dpi(i).y());
71         _xyLink = oldLink;
72         if(stages[i].enableCheck)
73             stages[i].enableCheck->setChecked(perf->
      dpiEnabled(i));
74     }
75     ui->iButtonO->color(perf->dpiColor(KbPerf::OTHER));
76     ui->aSnapBox->setChecked(perf->angleSnap());
77     ui->lHeightBox->setCurrentIndex(perf->liftHeight() - 1);
78     ui->indicBox->setChecked(perf->dpiIndicator());
79 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.56.4.13 void MPerfWidget::sliderXMoved (int *index*) [private],[slot]

Definition at line 128 of file mperfwidget.cpp.

References _xyLink, KbPerf::dpi(), dpiExp(), dpiRound(), perf, SET_END, SET_START, stages, MPerfWidget::DpiUi::xBox, MPerfWidget::DpiUi::xSlider, and MPerfWidget::DpiUi::ySlider.

Referenced by MPerfWidget().

```
128                                     {
129     SET_START;
```

```
    QSlider* slider = stages[index].xSlider;
    int value = dpiRound(dpiExp(slider->value(), slider->minimum(), slider->maximum()));
    stages[index].xBox->setValue(value);
    if(_xyLink)
        perf->dpi(index, value);
    else
        perf->dpi(index, QPoint(value, perf->dpi(index).y()));
    SET_END;
    if(_xyLink)
        stages[index].ySlider->setValue(slider->value());
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.56.4.14 void MPerfWidget::sliderYMoved (int *index*) [private],[slot]

Definition at line 142 of file mperfwidget.cpp.

References _xyLink, KbPerf::dpi(), dpiExp(), dpiRound(), perf, SET_END, SET_START, stages, ui, Ui_MPerfWidget::xyBox, MPerfWidget::DpiUi::yBox, and MPerfWidget::DpiUi::ySlider.

Referenced by MPerfWidget().

```
142                                         {
143     SET_START;
144     QSlider* slider = stages[index].ySlider;
145     int value = dpiRound(dpiExp(slider->value(), slider->minimum(), slider->maximum()));
146     stages[index].yBox->setValue(value);
147     if(_xyLink)
148         perf->dpi(index, value);
149     else
150         perf->dpi(index, QPoint(perf->dpi(index).x(), value));
151     SET_END;
152     if(!ui->xyBox->isChecked())
153         // X/Y linked?
154         stages[index].xSlider->setValue(slider->value());
155 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.56.5 Field Documentation

12.56.5.1 bool MPerfWidget::_xyLink [private]

Definition at line 44 of file mperfwidget.h.

Referenced by boxXChanged(), boxYChanged(), MPerfWidget(), on_xyBox_clicked(), setPerf(), sliderXMoved(), and sliderYMoved().

12.56.5.2 QSignalMapper MPerfWidget::boxXMapper [private]

Definition at line 49 of file mperfwidget.h.

Referenced by MPerfWidget().

12.56.5.3 QSignalMapper MPerfWidget::boxYMapper [private]

Definition at line 49 of file mperfwidget.h.

Referenced by MPerfWidget().

12.56.5.4 QSignalMapper MPerfWidget::buttonMapper1 [private]

Definition at line 47 of file mperfwidget.h.

Referenced by MPerfWidget().

12.56.5.5 QSignalMapper MPerfWidget::buttonMapper2 [private]

Definition at line 47 of file mperfwidget.h.

Referenced by MPerfWidget().

12.56.5.6 bool MPerfWidget::colorLink [private]

Definition at line 45 of file mperfwidget.h.

Referenced by colorChanged(), and colorClicked().

12.56.5.7 const int MPerfWidget::DPI_COUNT = KbPerf::DPI_COUNT [static]

Definition at line 28 of file mperfwidget.h.

Referenced by colorChanged(), MPerfWidget(), and setPerf().

12.56.5.8 const int MPerfWidget::DPI_MAX = KbPerf::DPI_MAX [static]

Definition at line 29 of file mperfwidget.h.

12.56.5.9 const int MPerfWidget::DPI_MIN = KbPerf::DPI_MIN [static]

Definition at line 29 of file mperfwidget.h.

12.56.5.10 QSignalMapper MPerfWidget::enableMapper [private]

Definition at line 50 of file mperfwidget.h.

Referenced by MPerfWidget().

12.56.5.11 bool MPerfWidget::isSetting [private]

Definition at line 53 of file mperfwidget.h.

12.56.5.12 KbPerf* MPerfWidget::perf [private]

Definition at line 34 of file mperfwidget.h.

Referenced by boxXChanged(), boxYChanged(), colorChanged(), enableChanged(), on_aSnapBox_clicked(), on_copyButton_clicked(), on_indicBox_clicked(), on_lHeightBox_activated(), on_spinBox_valueChanged(), setPerf(), sliderXMoved(), and sliderYMoved().

12.56.5.13 KbProfile* MPerfWidget::profile [private]

Definition at line 35 of file mperfwidget.h.

Referenced by on_copyButton_clicked(), and setPerf().

12.56.5.14 QSignalMapper MPerfWidget::sliderXMapper [private]

Definition at line 48 of file mperfwidget.h.

Referenced by MPerfWidget().

12.56.5.15 QSignalMapper MPerfWidget::sliderYMapper [private]

Definition at line 48 of file mperfwidget.h.

Referenced by MPerfWidget().

12.56.5.16 DpiUi MPerfWidget::stages[DPI_COUNT] [private]

Definition at line 43 of file mperfwidget.h.

Referenced by boxXChanged(), boxYChanged(), colorChanged(), enableChanged(), MPerfWidget(), setPerf(), sliderXMoved(), and sliderYMoved().

12.56.5.17 Ui::MPerfWidget* MPerfWidget::ui [private]

Definition at line 32 of file mperfwidget.h.

Referenced by colorChanged(), MPerfWidget(), setPerf(), sliderYMoved(), and ~MPerfWidget().

The documentation for this class was generated from the following files:

- src/ckb/mperfwidget.h
- src/ckb/mperfwidget.cpp

12.57 GradientDialog::Preset Struct Reference

Collaboration diagram for GradientDialog::Preset:

Public Member Functions

- Preset (QString _name, bool _builtIn=false)
- Preset (QString _name, const QGradientStops &_gradient)

- Preset ()

Data Fields

- QString name
- QGradientStops gradient
- bool builtIn

12.57.1 Detailed Description

Definition at line 23 of file gradientdialog.h.

12.57.2 Constructor & Destructor Documentation

12.57.2.1 GradientDialog::Preset::Preset (QString *_name*, bool *_builtIn* = `false`) [inline]

Definition at line 27 of file gradientdialog.h.

```
27 : name(_name), builtIn(_builtIn) {}
```

12.57.2.2 GradientDialog::Preset::Preset (QString *_name*, const QGradientStops & *_gradient*) [inline]

Definition at line 28 of file gradientdialog.h.

```
28 : name(_name), gradient(_gradient), builtIn(false) {}
```

12.57.2.3 GradientDialog::Preset::Preset ( ) [inline]

Definition at line 29 of file gradientdialog.h.

```
29 : builtIn(false) {}
```

12.57.3 Field Documentation

12.57.3.1 bool GradientDialog::Preset::builtIn

Definition at line 26 of file gradientdialog.h.

Referenced by GradientDialog::on_presetDelete_clicked(), GradientDialog::on_presetSave_clicked(), GradientDialog::setPreset(), and GradientDialog::~GradientDialog().

12.57.3.2 QGradientStops GradientDialog::Preset::gradient

Definition at line 25 of file gradientdialog.h.

Referenced by GradientDialog::GradientDialog(), GradientDialog::makeIcon(), GradientDialog::setPreset(), and GradientDialog::~GradientDialog().

12.57.3.3 QString GradientDialog::Preset::name

Definition at line 24 of file gradientdialog.h.

Referenced by GradientDialog::addPreset(), GradientDialog::on_presetDelete_clicked(), GradientDialog::on_presetSave_clicked(), GradientDialog::setPreset(), GradientDialog::updatePresets(), and GradientDialog::~GradientDialog().

The documentation for this struct was generated from the following file:

- src/ckb/gradientdialog.h

12.58 QDialog Class Reference

Inheritance diagram for QDialog:

Collaboration diagram for QDialog:

The documentation for this class was generated from the following file:

- src/ckb/extrasettingswidget.h

12.59 QIODevice Class Reference

Inheritance diagram for QIODevice:

Collaboration diagram for QIODevice:

The documentation for this class was generated from the following file:

- src/ckb/quazip/quazipfile.h

12.60 QIODevice_descriptor Struct Reference

Collaboration diagram for QIODevice_descriptor:

Public Member Functions

- QIODevice_descriptor ()

Data Fields

- qint64 pos

12.60.1 Detailed Description

Definition at line 78 of file qioapi.cpp.

12.60.2 Constructor & Destructor Documentation

12.60.2.1 QIODevice_descriptor::QIODevice_descriptor ( ) [inline]

Definition at line 81 of file qioapi.cpp.

```
81                                  :
82          pos(0)
83      {}
```

12.60.3 Field Documentation

12.60.3.1 qint64 QIODevice_descriptor::pos

Definition at line 80 of file qioapi.cpp.

Referenced by qiodevice64_tell_file_func(), qiodevice_open_file_func(), qiodevice_read_file_func(), qiodevice_tell-_file_func(), and qiodevice_write_file_func().

The documentation for this struct was generated from the following file:

- src/ckb/quazip/qioapi.cpp

12.61 QListWidget Class Reference

Inheritance diagram for QListWidget:

Collaboration diagram for QListWidget:

The documentation for this class was generated from the following file:

- src/ckb/rlistwidget.h

12.62 QMainWindow Class Reference

Inheritance diagram for QMainWindow:

Collaboration diagram for QMainWindow:

The documentation for this class was generated from the following file:

- src/ckb/mainwindow.h

12.63 QObject Class Reference

Inheritance diagram for QObject:

Collaboration diagram for QObject:

The documentation for this class was generated from the following file:

- src/ckb/kbprofile.h

12.64 QPushButton Class Reference

Inheritance diagram for QPushButton:

Collaboration diagram for QPushButton:

The documentation for this class was generated from the following file:

- src/ckb/colorbutton.h

12.65 QThread Class Reference

Inheritance diagram for QThread:

Collaboration diagram for QThread:

The documentation for this class was generated from the following file:

- src/ckb/macroreader.h

12.66 QuaAdler32 Class Reference

Adler32 checksum.

```
#include <quazip/quaadler32.h>
```

Inheritance diagram for QuaAdler32:

Collaboration diagram for QuaAdler32:

Public Member Functions

- QuaAdler32 ()
- quint32 calculate (const QByteArray &data)

  Calculates the checksum for data.
- void reset ()

  Resets the calculation on a checksun for a stream.
- void update (const QByteArray &buf)

  Updates the calculated checksum for the stream.
- quint32 value ()

  Value of the checksum calculated for the stream passed throw update().

Private Attributes

- quint32 checksum

12.66.1 Detailed Description

This class wrappers the adler32 function with the QuaChecksum32 interface. See QuaChecksum32 for more info.

Definition at line 38 of file quaadler32.h.

12.66.2 Constructor & Destructor Documentation

12.66.2.1 QuaAdler32::QuaAdler32 ( )

Definition at line 30 of file quaadler32.cpp.

References reset().

```
31 {
32     reset();
33 }
```

Here is the call graph for this function:

12.66.3 Member Function Documentation

12.66.3.1 quint32 QuaAdler32::calculate (const QByteArray & *data*) [virtual]

data source data

Returns

data checksum

This function has no efect on the value returned by value().

Implements QuaChecksum32.

Definition at line 35 of file quaadler32.cpp.

```
36 {
37     return adler32( adler32(0L, Z_NULL, 0), (const Bytef*)data.data(), data.size() );
38 }
```

12.66.3.2 void QuaAdler32::reset ( ) [virtual]

Implements QuaChecksum32.

Definition at line 40 of file quaadler32.cpp.

References checksum.

Referenced by QuaAdler32().

```
41 {
42     checksum = adler32(0L, Z_NULL, 0);
43 }
```

Here is the caller graph for this function:

12.66.3.3 void QuaAdler32::update (const QByteArray & *buf*) [virtual]

buf next portion of data from the stream

Implements QuaChecksum32.

Definition at line 45 of file quaadler32.cpp.

References checksum.

```
46 {
47     checksum = adler32( checksum, (const Bytef*)buf.data(), buf.size() );
48 }
```

12.66.3.4 quint32 QuaAdler32::value ( ) [virtual]

Returns

checksum

Implements QuaChecksum32.

Definition at line 50 of file quaadler32.cpp.

References checksum.

```
51 {
52     return checksum;
53 }
```

12.66.4 Field Documentation

12.66.4.1 quint32 QuaAdler32::checksum [private]

Definition at line 51 of file quaadler32.h.

Referenced by reset(), update(), and value().

The documentation for this class was generated from the following files:

- src/ckb/quazip/quaadler32.h
- src/ckb/quazip/quaadler32.cpp

12.67 QuaChecksum32 Class Reference

Checksum interface.

```
#include <quazip/quachecksum32.h>
```

Inheritance diagram for QuaChecksum32:

Collaboration diagram for QuaChecksum32:

Public Member Functions

- virtual quint32 calculate (const QByteArray &data)=0

  Calculates the checksum for data.
- virtual void reset ()=0

  Resets the calculation on a checksun for a stream.
- virtual void update (const QByteArray &buf)=0

Updates the calculated checksum for the stream.

- virtual quint32 value ()=0

  Value of the checksum calculated for the stream passed throw update().

12.67.1 Detailed Description

This is an interface for 32 bit checksums. Classes implementing this interface can calcunate a certin checksum in a single step:

```
QChecksum32 *crc32 = new QuaCrc32();
rasoult = crc32->calculate(data);
```

or by streaming the data:

```
QChecksum32 *crc32 = new QuaCrc32();
while(!fileA.atEnd())
    crc32->update(fileA.read(bufSize));
resoultA = crc32->value();
crc32->reset();
while(!fileB.atEnd())
    crc32->update(fileB.read(bufSize));
resoultB = crc32->value();
```

Definition at line 52 of file quachecksum32.h.

12.67.2 Member Function Documentation

12.67.2.1 virtual quint32 QuaChecksum32::calculate (const QByteArray & *data*) [pure virtual]

data source data

Returns

data checksum

This function has no efect on the value returned by value().

Implemented in QuaAdler32, and QuaCrc32.

12.67.2.2 virtual void QuaChecksum32::reset ( ) [pure virtual]

Implemented in QuaAdler32, and QuaCrc32.

12.67.2.3 virtual void QuaChecksum32::update (const QByteArray & *buf*) [pure virtual]

buf next portion of data from the stream

Implemented in QuaAdler32, and QuaCrc32.

12.67.2.4 virtual quint32 QuaChecksum32::value ( ) [pure virtual]

Returns

checksum

Implemented in QuaAdler32, and QuaCrc32.

The documentation for this class was generated from the following file:

- src/ckb/quazip/quachecksum32.h

12.68 QuaCrc32 Class Reference

CRC32 checksum.

```
#include <quazip/quacrc32.h>
```

Inheritance diagram for QuaCrc32:

Collaboration diagram for QuaCrc32:

Public Member Functions

- QuaCrc32 ()
- quint32 calculate (const QByteArray &data)

  Calculates the checksum for data.
- void reset ()

  Resets the calculation on a checksun for a stream.
- void update (const QByteArray &buf)

  Updates the calculated checksum for the stream.
- quint32 value ()

  Value of the checksum calculated for the stream passed throw update().

Private Attributes

- quint32 checksum

12.68.1 Detailed Description

This class wrappers the crc32 function with the QuaChecksum32 interface. See QuaChecksum32 for more info.

Definition at line 35 of file quacrc32.h.

12.68.2 Constructor & Destructor Documentation

12.68.2.1 QuaCrc32::QuaCrc32 ( )

Definition at line 29 of file quacrc32.cpp.

References reset().

```
30 {
31     reset();
32 }
```

Here is the call graph for this function:

12.68.3 Member Function Documentation

12.68.3.1 quint32 QuaCrc32::calculate (const QByteArray & *data*) [virtual]

data source data

Returns

data checksum

This function has no efect on the value returned by value().

Implements QuaChecksum32.

Definition at line 34 of file quacrc32.cpp.

```
35 {
36     return crc32( crc32(0L, Z_NULL, 0), (const Bytef*)data.data(), data.size() );
37 }
```

12.68.3.2 void QuaCrc32::reset ( ) [virtual]

Implements QuaChecksum32.

Definition at line 39 of file quacrc32.cpp.

References checksum.

Referenced by QuaCrc32().

```
40 {
41     checksum = crc32(0L, Z_NULL, 0);
42 }
```

Here is the caller graph for this function:

12.68.3.3 void QuaCrc32::update (const QByteArray & *buf*) [virtual]

buf next portion of data from the stream

Implements QuaChecksum32.

Definition at line 44 of file quacrc32.cpp.

References checksum.

```
45 {
46     checksum = crc32( checksum, (const Bytef*)buf.data(), buf.size() );
47 }
```

12.68.3.4 quint32 QuaCrc32::value ( ) [virtual]

Returns

checksum

Implements QuaChecksum32.

Definition at line 49 of file quacrc32.cpp.

References checksum.

```
50 {
51     return checksum;
52 }
```

12.68.4 Field Documentation

12.68.4.1 quint32 QuaCrc32::checksum [private]

Definition at line 47 of file quacrc32.h.

Referenced by reset(), update(), and value().

The documentation for this class was generated from the following files:

- src/ckb/quazip/quacrc32.h
- src/ckb/quazip/quacrc32.cpp

12.69 QuaGzipFile Class Reference

GZIP file.

```
#include <src/ckb/quazip/quagzipfile.h>
```

Inheritance diagram for QuaGzipFile:

Collaboration diagram for QuaGzipFile:

Public Member Functions

- QuaGzipFile ()

  Empty constructor.
- QuaGzipFile (QObject *parent)

  Empty constructor with a parent.
- QuaGzipFile (const QString &fileName, QObject *parent=NULL)

  Constructor.
- virtual ~QuaGzipFile ()

  Destructor.
- void setFileName (const QString &fileName)

  Sets the name of the GZIP file to be opened.
- QString getFileName () const

  Returns the name of the GZIP file.
- virtual bool isSequential () const

  Returns true.
- virtual bool open (QIODevice::OpenMode mode)

  Opens the file.

- virtual bool open (int fd, QIODevice::OpenMode mode)

  Opens the file.
- virtual bool flush ()

  Flushes data to file.
- virtual void close ()

  Closes the file.

Protected Member Functions

- virtual qint64 readData (char *data, qint64 maxSize)

  Implementation of QIODevice::readData().
- virtual qint64 writeData (const char *data, qint64 maxSize)

  Implementation of QIODevice::writeData().

Private Member Functions

- QuaGzipFile (const QuaGzipFile &that)
- QuaGzipFile & operator= (const QuaGzipFile &that)

Private Attributes

- QuaGzipFilePrivate * d

12.69.1 Detailed Description

This class is a wrapper around GZIP file access functions in zlib. Unlike QuaZip classes, it doesn't allow reading from a GZIP file opened as QIODevice, for example, if your GZIP file is in QBuffer. It only provides QIODevice access to a GZIP file contents, but the GZIP file itself must be identified by its name on disk or by descriptor id.

Definition at line 39 of file quagzipfile.h.

12.69.2 Constructor & Destructor Documentation

12.69.2.1 QuaGzipFile::QuaGzipFile ( )

Must call setFileName() before trying to open.

Definition at line 87 of file quagzipfile.cpp.

```
87                          :
88 d(new QuaGzipFilePrivate())
89 {
90 }
```

12.69.2.2 QuaGzipFile::QuaGzipFile (QObject * *parent*)

Must call setFileName() before trying to open.

Parameters

parent	The parent object, as per QObject logic.

Definition at line 92 of file quagzipfile.cpp.

```
92                                        :
93 QIODevice(parent),
94 d(new QuaGzipFilePrivate())
95 {
96 }
```

12.69.2.3 QuaGzipFile::QuaGzipFile (const QString & *fileName*, QObject * *parent* = NULL)

Parameters

fileName	The name of the GZIP file.
parent	The parent object, as per QObject logic.

Definition at line 98 of file quagzipfile.cpp.

```
98                                                                  :
99   QIODevice(parent),
100 d(new QuaGzipFilePrivate(fileName))
101 {
102 }
```

12.69.2.4 QuaGzipFile::~QuaGzipFile ( ) [virtual]

Definition at line 104 of file quagzipfile.cpp.

References close(), and d.

```
105 {
106   if (isOpen()) {
107     close();
108   }
109   delete d;
110 }
```

Here is the call graph for this function:

12.69.2.5 QuaGzipFile::QuaGzipFile (const QuaGzipFile & *that*) [private]

12.69.3 Member Function Documentation

12.69.3.1 void QuaGzipFile::close ( ) [virtual]

Definition at line 152 of file quagzipfile.cpp.

References d.

Referenced by ~QuaGzipFile().

```
{
  QIODevice::close();
  gzclose(d->gzd);
}
```

Here is the caller graph for this function:

12.69.3.2 bool QuaGzipFile::flush ( ) [virtual]

The data is written using Z_SYNC_FLUSH mode. Doesn't make any sense when reading.

Definition at line 147 of file quagzipfile.cpp.

References d.

```
{
    return gzflush(d->gzd, Z_SYNC_FLUSH) == Z_OK;
}
```

12.69.3.3 QString QuaGzipFile::getFileName ( ) const

Definition at line 117 of file quagzipfile.cpp.

References d.

```
{
    return d->fileName;
}
```

12.69.3.4 bool QuaGzipFile::isSequential ( ) const [virtual]

Strictly speaking, zlib supports seeking for GZIP files, but it is poorly implemented, because there is no way to implement it properly. For reading, seeking backwards is very slow, and for writing, it is downright impossible. Therefore, QuaGzipFile does not support seeking at all.

Definition at line 122 of file quagzipfile.cpp.

```
{
  return true;
}
```

12.69.3.5 bool QuaGzipFile::open (QIODevice::OpenMode *mode*) [virtual]

Parameters

mode	Can be either QIODevice::Write or QIODevice::Read. ReadWrite and Append aren't supported.

Definition at line 127 of file quagzipfile.cpp.

References d.

```
128 {
129     QString error;
130     if (!d->open(d->fileName, mode, error)) {
131         setErrorString(error);
132         return false;
133     }
134     return QIODevice::open(mode);
135 }
```

12.69.3.6 bool QuaGzipFile::open (int *fd*, QIODevice::OpenMode *mode*) [virtual]

This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts.

Parameters

fd	The file descriptor to read/write the GZIP file from/to.
mode	Can be either QIODevice::Write or QIODevice::Read. ReadWrite and Append aren't supported.

Definition at line 137 of file quagzipfile.cpp.

References d.

```
138 {
139     QString error;
140     if (!d->open(fd, mode, error)) {
141         setErrorString(error);
142         return false;
143     }
144     return QIODevice::open(mode);
145 }
```

12.69.3.7 QuaGzipFile& QuaGzipFile::operator= (const QuaGzipFile & *that*) [private]

12.69.3.8 qint64 QuaGzipFile::readData (char * *data*, qint64 *maxSize*) [protected], [virtual]

Definition at line 158 of file quagzipfile.cpp.

References d.

```
159 {
160     return gzread(d->gzd, (voidp)data, (unsigned)maxSize);
161 }
```

12.69.3.9 void QuaGzipFile::setFileName (const QString & *fileName*)

Definition at line 112 of file quagzipfile.cpp.

References d.

```
113 {
114     d->fileName = fileName;
115 }
```

12.69.3.10 qint64 QuaGzipFile::writeData (const char * *data*, qint64 *maxSize*) [protected], [virtual]

Definition at line 163 of file quagzipfile.cpp.

References d.

```
{
    if (maxSize == 0)
        return 0;
    int written = gzwrite(d->gzd, (voidp)data, (unsigned)maxSize);
    if (written == 0)
        return -1;
    else
        return written;
}
```

12.69.4 Field Documentation

12.69.4.1 QuaGzipFilePrivate* QuaGzipFile::d [private]

Definition at line 105 of file quagzipfile.h.

Referenced by close(), flush(), getFileName(), open(), readData(), setFileName(), writeData(), and ~QuaGzipFile().

The documentation for this class was generated from the following files:

- src/ckb/quazip/quagzipfile.h
- src/ckb/quazip/quagzipfile.cpp

12.70 QuaZIODevice Class Reference

A class to compress/decompress QIODevice.

`#include <src/ckb/quazip/quaziodevice.h>`

Inheritance diagram for QuaZIODevice:

Collaboration diagram for QuaZIODevice:

Public Member Functions

- QuaZIODevice (QIODevice *io, QObject *parent=NULL)

  Constructor.
- ~QuaZIODevice ()

  Destructor.
- virtual bool flush ()

  Flushes data waiting to be written.
- virtual bool open (QIODevice::OpenMode mode)

  Opens the device.
- virtual void close ()

  Closes this device, but not the underlying one.
- QIODevice * getIoDevice () const

  Returns the underlying device.
- virtual bool isSequential () const

  Returns true.

Protected Member Functions

- virtual qint64 readData (char *data, qint64 maxSize)

  Implementation of QIODevice::readData().
- virtual qint64 writeData (const char *data, qint64 maxSize)

  Implementation of QIODevice::writeData().

Private Attributes

- QuaZIODevicePrivate * d

12.70.1 Detailed Description

This class can be used to compress any data written to QIODevice or decompress it back. Compressing data sent over a QTcpSocket is a good example.

Definition at line 41 of file quaziodevice.h.

12.70.2 Constructor & Destructor Documentation

12.70.2.1 QuaZIODevice::QuaZIODevice (QIODevice * io, QObject * parent = NULL)

Parameters

io	The QIODevice to read/write.
parent	The parent object, as per QObject logic.

Definition at line 123 of file quaziodevice.cpp.

```
123                                                     :
124     QIODevice(parent),
125     d(new QuaZIODevicePrivate(io))
126 {
127   connect(io, SIGNAL(readyRead()), SIGNAL(readyRead()));
128 }
```

12.70.2.2 QuaZIODevice::~QuaZIODevice ( )

Definition at line 130 of file quaziodevice.cpp.

References close(), and d.

```
131 {
132     if (isOpen())
133         close();
134     delete d;
135 }
```

Here is the call graph for this function:

12.70.3 Member Function Documentation

12.70.3.1 void QuaZIODevice::close ( ) [virtual]

The underlying QIODevice is not closed in case you want to write something else to it.

Definition at line 169 of file quaziodevice.cpp.

References d, and flush().

Referenced by ~QuaZIODevice().

```
{
    if ((openMode() & QIODevice::ReadOnly) != 0) {
        if (inflateEnd(&d->zins) != Z_OK) {
            setErrorString(d->zins.msg);
        }
    }
    if ((openMode() & QIODevice::WriteOnly) != 0) {
        flush();
        if (deflateEnd(&d->zouts) != Z_OK) {
            setErrorString(d->zouts.msg);
        }
    }
    QIODevice::close();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.70.3.2 bool QuaZIODevice::flush ( ) [virtual]

Unfortunately, as QIODevice doesn't support flush() by itself, the only thing this method does is write the compressed data into the device using Z_SYNC_FLUSH mode. If you need the compressed data to actually be flushed from the buffer of the underlying QIODevice, you need to call its flush() method as well, providing it supports it (like QTcpSocket does). Example:

```
QuaZIODevice dev(&sock);
dev.open(QIODevice::Write);
dev.write(yourDataGoesHere);
dev.flush();
sock->flush(); // this actually sends data to network
```

This may change in the future versions of QuaZIP by implementing an ugly hack: trying to cast the QIODevice using qobject_cast to known flush()-supporting subclasses, and calling flush if the resulting pointer is not zero.

Definition at line 281 of file quaziodevice.cpp.

References d, and QUAZIO_OUTBUFSIZE.

Referenced by close().

```
{
    QString error;
    if (d->doFlush(error) < 0) {
```

```
        setErrorString(error);
        return false;
    }
    // can't flush buffer, some data is still waiting
    if (d->outBufPos < d->outBufSize)
        return true;
    Bytef c = 0;
    d->zouts.next_in = &c; // fake input buffer
    d->zouts.avail_in = 0; // of zero size
    do {
        d->zouts.next_out = (Bytef *) d->outBuf;
        d->zouts.avail_out = QUAZIO_OUTBUFSIZE;
        switch (deflate(&d->zouts, Z_SYNC_FLUSH)) {
        case Z_OK:
          d->outBufSize = (char *) d->zouts.next_out - d->outBuf;
          if (d->doFlush(error) < 0) {
              setErrorString(error);
              return false;
          }
          if (d->outBufPos < d->outBufSize)
              return true;
          break;
        case Z_BUF_ERROR: // nothing to write?
          return true;
        default:
          setErrorString(QString::fromLocal8Bit(d->zouts.msg));
          return false;
        }
    } while (d->zouts.avail_out == 0);
    return true;
}
```

Here is the caller graph for this function:

12.70.3.3 QIODevice * QuaZIODevice::getIoDevice ( ) const

Definition at line 137 of file quaziodevice.cpp.

References d.

```
{
    return d->io;
}
```

12.70.3.4 bool QuaZIODevice::isSequential ( ) const [virtual]

Definition at line 317 of file quaziodevice.cpp.

```
{
  return true;
}
```

12.70.3.5 bool QuaZIODevice::open (QIODevice::OpenMode *mode*) [virtual]

Parameters

mode	Neither QIODevice::ReadWrite nor QIODevice::Append are not supported.

Definition at line 142 of file quaziodevice.cpp.

References d.

```
{
    if ((mode & QIODevice::Append) != 0) {
        setErrorString(trUtf8("QIODevice::Append is not supported for"
                    " QuaZIODevice"));
        return false;
    }
    if ((mode & QIODevice::ReadWrite) == QIODevice::ReadWrite) {
        setErrorString(trUtf8("QIODevice::ReadWrite is not supported for"
                    " QuaZIODevice"));
        return false;
    }
    if ((mode & QIODevice::ReadOnly) != 0) {
        if (inflateInit(&d->zins) != Z_OK) {
            setErrorString(d->zins.msg);
            return false;
        }
    }
    if ((mode & QIODevice::WriteOnly) != 0) {
        if (deflateInit(&d->zouts, Z_DEFAULT_COMPRESSION) != Z_OK) {
            setErrorString(d->zouts.msg);
            return false;
        }
    }
    return QIODevice::open(mode);
}
```

12.70.3.6 qint64 QuaZIODevice::readData (char * *data*, qint64 *maxSize*) [protected],[virtual]

Definition at line 185 of file quaziodevice.cpp.

References d, and QUAZIO_INBUFSIZE.

```
{
  int read = 0;
  while (read < maxSize) {
    if (d->inBufPos == d->inBufSize) {
      d->inBufPos = 0;
      d->inBufSize = d->io->read(d->inBuf, QUAZIO_INBUFSIZE);
      if (d->inBufSize == -1) {
        d->inBufSize = 0;
        setErrorString(d->io->errorString());
        return -1;
      }
      if (d->inBufSize == 0)
        break;
    }
    while (read < maxSize && d->inBufPos < d->inBufSize) {
      d->zins.next_in = (Bytef *) (d->inBuf + d->inBufPos);
      d->zins.avail_in = d->inBufSize - d->inBufPos;
      d->zins.next_out = (Bytef *) (data + read);
      d->zins.avail_out = (uInt) (maxSize - read); // hope it's less than 2GB
      int more = 0;
      switch (inflate(&d->zins, Z_SYNC_FLUSH)) {
      case Z_OK:
        read = (char *) d->zins.next_out - data;
        d->inBufPos = (char *) d->zins.next_in - d->inBuf;
        break;
      case Z_STREAM_END:
        read = (char *) d->zins.next_out - data;
        d->inBufPos = (char *) d->zins.next_in - d->inBuf;
        return read;
      case Z_BUF_ERROR: // this should never happen, but just in case
        if (!d->zBufError) {
          qWarning("Z_BUF_ERROR detected with %d/%d in/out, weird",
              d->zins.avail_in, d->zins.avail_out);
          d->zBufError = true;
        }
        memmove(d->inBuf, d->inBuf + d->inBufPos, d->inBufSize - d->inBufPos);
        d->inBufSize -= d->inBufPos;
        d->inBufPos = 0;
        more = d->io->read(d->inBuf + d->inBufSize, QUAZIO_INBUFSIZE -
  d->inBufSize);
```

```
        if (more == -1) {
          setErrorString(d->io->errorString());
          return -1;
        }
        if (more == 0)
          return read;
        d->inBufSize += more;
        break;
      default:
        setErrorString(QString::fromLocal8Bit(d->zins.msg));
        return -1;
      }
    }
  }
#ifdef QUAZIP_ZIODEVICE_DEBUG_INPUT
  indebug.write(data, read);
#endif
  return read;
}
```

12.70.3.7 qint64 QuaZIODevice::writeData (const char * *data*, qint64 *maxSize*) [protected],[virtual]

Definition at line 245 of file quaziodevice.cpp.

References d, and QUAZIO_OUTBUFSIZE.

```
{
  int written = 0;
  QString error;
  if (d->doFlush(error) == -1) {
    setErrorString(error);
    return -1;
  }
  while (written < maxSize) {
      // there is some data waiting in the output buffer
    if (d->outBufPos < d->outBufSize)
      return written;
    d->zouts.next_in = (Bytef *) (data + written);
    d->zouts.avail_in = (uInt) (maxSize - written); // hope it's less than 2GB
    d->zouts.next_out = (Bytef *) d->outBuf;
    d->zouts.avail_out = QUAZIO_OUTBUFSIZE;
    switch (deflate(&d->zouts, Z_NO_FLUSH)) {
    case Z_OK:
      written = (char *) d->zouts.next_in - data;
      d->outBufSize = (char *) d->zouts.next_out - d->outBuf;
      break;
    default:
      setErrorString(QString::fromLocal8Bit(d->zouts.msg));
      return -1;
    }
    if (d->doFlush(error) == -1) {
      setErrorString(error);
      return -1;
    }
  }
#ifdef QUAZIP_ZIODEVICE_DEBUG_OUTPUT
  debug.write(data, written);
#endif
  return written;
}
```

12.70.4 Field Documentation

12.70.4.1 QuaZIODevicePrivate* QuaZIODevice::d [private]

Definition at line 96 of file quaziodevice.h.

Referenced by close(), flush(), getIoDevice(), open(), readData(), writeData(), and ~QuaZIODevice().

The documentation for this class was generated from the following files:

- src/ckb/quazip/quaziodevice.h
- src/ckb/quazip/quaziodevice.cpp

12.71 QuaZip Class Reference

ZIP archive.

`#include <quazip/quazip.h>`

Collaboration diagram for QuaZip:

Public Types

- enum Constants { MAX_FILE_NAME_LENGTH =256 }

  Useful constants.
- enum Mode {
  mdNotOpen, mdUnzip, mdCreate, mdAppend,
  mdAdd }

  Open mode of the ZIP file.
- enum CaseSensitivity { csDefault =0, csSensitive =1, csInsensitive =2 }

  Case sensitivity for the file names.

Public Member Functions

- QuaZip ()

  Constructs QuaZip object.
- QuaZip (const QString &zipName)

  Constructs QuaZip object associated with ZIP file zipName.
- QuaZip (QIODevice ∗ioDevice)

  Constructs QuaZip object associated with ZIP file represented by ioDevice.
- ∼QuaZip ()

  Destroys QuaZip object.
- bool open (Mode mode, zlib_filefunc_def ∗ioApi=NULL)

  Opens ZIP file.
- void close ()

  Closes ZIP file.
- void setFileNameCodec (QTextCodec ∗fileNameCodec)

  Sets the codec used to encode/decode file names inside archive.
- void setFileNameCodec (const char ∗fileNameCodecName)

Sets the codec used to encode/decode file names inside archive.

- QTextCodec * getFileNameCodec () const

  Returns the codec used to encode/decode comments inside archive.
- void setCommentCodec (QTextCodec *commentCodec)

  Sets the codec used to encode/decode comments inside archive.
- void setCommentCodec (const char *commentCodecName)

  Sets the codec used to encode/decode comments inside archive.
- QTextCodec * getCommentCodec () const

  Returns the codec used to encode/decode comments inside archive.
- QString getZipName () const

  Returns the name of the ZIP file.
- void setZipName (const QString &zipName)

  Sets the name of the ZIP file.
- QIODevice * getIoDevice () const

  Returns the device representing this ZIP file.
- void setIoDevice (QIODevice *ioDevice)

  Sets the device representing the ZIP file.
- Mode getMode () const

  Returns the mode in which ZIP file was opened.
- bool isOpen () const

  Returns `true` if ZIP file is open, `false` otherwise.
- int getZipError () const

  Returns the error code of the last operation.
- int getEntriesCount () const

  Returns number of the entries in the ZIP central directory.
- QString getComment () const

  Returns global comment in the ZIP file.
- void setComment (const QString &comment)

  Sets the global comment in the ZIP file.
- bool goToFirstFile ()

  Sets the current file to the first file in the archive.
- bool goToNextFile ()

  Sets the current file to the next file in the archive.
- bool setCurrentFile (const QString &fileName, CaseSensitivity cs=csDefault)

  Sets current file by its name.
- bool hasCurrentFile () const

  Returns `true` if the current file has been set.
- bool getCurrentFileInfo (QuaZipFileInfo *info) const

  Retrieves information about the current file.
- bool getCurrentFileInfo (QuaZipFileInfo64 *info) const

  Retrieves information about the current file.
- QString getCurrentFileName () const

  Returns the current file name.
- unzFile getUnzFile ()

  Returns `unzFile` handle.
- zipFile getZipFile ()

  Returns `zipFile` handle.
- void setDataDescriptorWritingEnabled (bool enabled)

  Changes the data descriptor writing mode.
- bool isDataDescriptorWritingEnabled () const

  Returns the data descriptor default writing mode.

- QStringList getFileNameList () const

  Returns a list of files inside the archive.
- QList< QuaZipFileInfo > getFileInfoList () const

  Returns information list about all files inside the archive.
- QList< QuaZipFileInfo64 > getFileInfoList64 () const

  Returns information list about all files inside the archive.
- void setZip64Enabled (bool zip64)

  Enables the zip64 mode.
- bool isZip64Enabled () const

  Returns whether the zip64 mode is enabled.
- bool isAutoClose () const

  Returns the auto-close flag.
- void setAutoClose (bool autoClose) const

  Sets or unsets the auto-close flag.

Static Public Member Functions

- static Qt::CaseSensitivity convertCaseSensitivity (CaseSensitivity cs)

  Returns the actual case sensitivity for the specified QuaZIP one.
- static void setDefaultFileNameCodec (QTextCodec *codec)

  Sets the default file name codec to use.
- static void setDefaultFileNameCodec (const char *codecName)

  This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts. Equivalent to calling setDefltFileNameCodec(QTextCodec::codecForName(codecName)).

Private Member Functions

- QuaZip (const QuaZip &that)
- QuaZip & operator= (const QuaZip &that)

Private Attributes

- QuaZipPrivate * p

Friends

- class QuaZipPrivate

12.71.1 Detailed Description

This class implements basic interface to the ZIP archive. It can be used to read table contents of the ZIP archive and retreiving information about the files inside it.

You can also use this class to open files inside archive by passing pointer to the instance of this class to the constructor of the QuaZipFile class. But see QuaZipFile::QuaZipFile(QuaZip*, QObject*) for the possible pitfalls.

This class is indended to provide interface to the ZIP subpackage of the ZIP/UNZIP package as well as to the UNZIP subpackage. But currently it supports only UNZIP.

The use of this class is simple - just create instance using constructor, then set ZIP archive file name using setFile() function (if you did not passed the name to the constructor), then open() and then use different functions to work with it! Well, if you are paranoid, you may also wish to call close before destructing the instance, to check for errors on close.

You may also use getUnzFile() and getZipFile() functions to get the ZIP archive handle and use it with ZIP/UNZIP package API directly.

This class supports localized file names inside ZIP archive, but you have to set up proper codec with setCodec() function. By default, locale codec will be used, which is probably ok for UNIX systems, but will almost certainly fail with ZIP archives created in Windows. This is because Windows ZIP programs have strange habit of using DOS encoding for file names in ZIP archives. For example, ZIP archive with cyrillic names created in Windows will have file names in `IBM866` encoding instead of `WINDOWS-1251`. I think that calling one function is not much trouble, but for true platform independency it would be nice to have some mechanism for file name encoding auto detection using locale information. Does anyone know a good way to do it?

Definition at line 84 of file quazip.h.

12.71.2 Member Enumeration Documentation

12.71.2.1 enum QuaZip::CaseSensitivity

This is what you specify when accessing files in the archive. Works perfectly fine with any characters thanks to Qt's great unicode support. This is different from ZIP/UNZIP API, where only US-ASCII characters was supported.

Enumerator

csDefault Default for platform. Case sensitive for UNIX, not for Windows.

csSensitive Case sensitive.

csInsensitive Case insensitive.

Definition at line 114 of file quazip.h.

```
114                         {
115       csDefault=0,
116       csSensitive=1,
117       csInsensitive=2
118     };
```

12.71.2.2 enum QuaZip::Constants

Enumerator

MAX_FILE_NAME_LENGTH Maximum file name length. Taken from `UNZ_MAXFILENAMEINZIP` constant in unzip.c.

Definition at line 88 of file quazip.h.

```
88                    {
89       MAX_FILE_NAME_LENGTH=256
92     };
```

12.71.2.3 enum QuaZip::Mode

Enumerator

mdNotOpen ZIP file is not open. This is the initial mode.

mdUnzip ZIP file is open for reading files inside it.

mdCreate ZIP file was created with open() call.

mdAppend ZIP file was opened in append mode. This refers to `APPEND_STATUS_CREATEAFTER` mode in ZIP/UNZIP package and means that zip is appended to some existing file what is useful when that file contains self-extractor code. This is obviously *not* what you whant to use to add files to the existing ZIP archive.

mdAdd ZIP file was opened for adding files in the archive.

Definition at line 94 of file quazip.h.

```
94              {
95       mdNotOpen,
96       mdUnzip,
97       mdCreate,
98       mdAppend,
106       mdAdd
107     };
```

12.71.3 Constructor & Destructor Documentation

12.71.3.1 QuaZip::QuaZip (const QuaZip & *that*) [private]

12.71.3.2 QuaZip::QuaZip ( )

Call setName() before opening constructed object.

Definition at line 193 of file quazip.cpp.

```
193              :
194   p(new QuaZipPrivate(this))
195 {
196 }
```

12.71.3.3 QuaZip::QuaZip (const QString & *zipName*)

Definition at line 198 of file quazip.cpp.

```
198                                  :
199   p(new QuaZipPrivate(this, zipName))
200 {
201 }
```

12.71.3.4 QuaZip::QuaZip (QIODevice * *ioDevice*)

The IO device must be seekable, otherwise an error will occur when opening.

Definition at line 203 of file quazip.cpp.

```
203                                 :
204   p(new QuaZipPrivate(this, ioDevice))
205 {
206 }
```

12.71.3.5 QuaZip::~QuaZip ( )

Calls close() if necessary.

Definition at line 208 of file quazip.cpp.

References close(), isOpen(), and p.

```
209 {
210   if(isOpen())
211     close();
212   delete p;
213 }
```

Here is the call graph for this function:

12.71.4 Member Function Documentation

12.71.4.1 void QuaZip::close ( )

Call getZipError() to determine if the close was successful.

If the file was opened by name, then the underlying QIODevice is closed and deleted.

If the underlying QIODevice was set explicitly using setIoDevice() or the appropriate constructor, then it is closed if the auto-close flag is set (which it is by default). Call setAutoClose() to clear the auto-close flag if this behavior is undesirable.

Since Qt 5.1, the QSaveFile was introduced. It breaks the QIODevice API by making close() private and crashing the application if it is called from the base class where it is public. It is an excellent example of poor design that illustrates why you should never ever break an is-a relationship between the base class and a subclass. QuaZIP works around this bug by checking if the QIODevice is an instance of QSaveFile, using qobject_cast<>, and if it is, calls QSaveFile::commit() instead of close(). It is a really ugly hack, but at least it makes your programs work instead of crashing. Note that if the auto-close flag is cleared, then this is a non-issue, and commit() isn't called.

Definition at line 324 of file quazip.cpp.

References QuaZipPrivate::clearDirectoryMap(), QuaZipPrivate::comment, QuaZipPrivate::commentCodec, QuaZipPrivate::ioDevice, mdAdd, mdAppend, mdCreate, mdNotOpen, mdUnzip, QuaZipPrivate::mode, p, UNZ_OK, unzClose(), zipClose(), QuaZipPrivate::zipError, and QuaZipPrivate::zipName.

Referenced by QuaZipFile::close(), JlCompress::compressDir(), JlCompress::compressFile(), JlCompress::compressFiles(), JlCompress::extractDir(), JlCompress::extractFile(), JlCompress::extractFiles(), JlCompress::getFileList(), QuaZipFile::open(), and ~QuaZip().

```
{
  p->zipError=UNZ_OK;
  switch(p->mode) {
    case mdNotOpen:
      qWarning("QuaZip::close(): ZIP is not open");
      return;
    case mdUnzip:
      p->zipError=unzClose(p->unzFile_f);
      break;
    case mdCreate:
    case mdAppend:
    case mdAdd:
      p->zipError=zipClose(p->zipFile_f,
          p->comment.isNull() ? NULL
          : p->commentCodec->fromUnicode(p->comment).constData());
      break;
    default:
      qWarning("QuaZip::close(): unknown mode: %d", (int)p->mode);
      return;
  }
  // opened by name, need to delete the internal IO device
  if (!p->zipName.isEmpty()) {
      delete p->ioDevice;
      p->ioDevice = NULL;
  }
  p->clearDirectoryMap();
  if(p->zipError==UNZ_OK)
    p->mode=mdNotOpen;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.71.4.2 Qt::CaseSensitivity QuaZip::convertCaseSensitivity (QuaZip::CaseSensitivity *cs*) [static]

Parameters

cs	The value to convert.

Returns

If CaseSensitivity::csDefault, then returns the default file name case sensitivity for the platform. Otherwise, just returns the appropriate value from the Qt::CaseSensitivity enum.

Definition at line 747 of file quazip.cpp.

References csDefault, and csSensitive.

Referenced by QuaZipDir::exists(), and setCurrentFile().

```
{
  if (cs == csDefault) {
#ifdef Q_WS_WIN
      return Qt::CaseInsensitive;
#else
```

```
        return Qt::CaseSensitive;
#endif
    } else {
        return cs == csSensitive ? Qt::CaseSensitive : Qt::CaseInsensitive;
    }
}
```

Here is the caller graph for this function:

12.71.4.3 QString QuaZip::getComment ( ) const

Definition at line 389 of file quazip.cpp.

References QuaZipPrivate::commentCodec, mdUnzip, QuaZipPrivate::mode, p, unz_global_info64_s::size_comment, UNZ_OK, unzGetGlobalComment(), unzGetGlobalInfo64(), and QuaZipPrivate::zipError.

```
{
  QuaZip *fakeThis=(QuaZip*)this; // non-const
  fakeThis->p->zipError=UNZ_OK;
  if(p->mode!=mdUnzip) {
    qWarning("QuaZip::getComment(): ZIP is not open in mdUnzip mode");
    return QString();
  }
  unz_global_info64 globalInfo;
  QByteArray comment;
  if((fakeThis->p->zipError=unzGetGlobalInfo64(p->unzFile_f, &globalInfo))!=
  UNZ_OK)
    return QString();
  comment.resize(globalInfo.size_comment);
  if((fakeThis->p->zipError=unzGetGlobalComment(p->unzFile_f, comment.data(),
  comment.size())) < 0)
    return QString();
  fakeThis->p->zipError = UNZ_OK;
  return p->commentCodec->toUnicode(comment);
}
```

Here is the call graph for this function:

12.71.4.4 QTextCodec * QuaZip::getCommentCodec ( ) const

Definition at line 597 of file quazip.cpp.

References QuaZipPrivate::commentCodec, and p.

Referenced by QuaZipFile::open().

```
{
  return p->commentCodec;
}
```

Here is the caller graph for this function:

12.71.4.5 bool QuaZip::getCurrentFileInfo (QuaZipFileInfo * *info*) const

Fills the structure pointed by *info*. Returns `true` on success, `false` otherwise. In the latter case structure pointed by *info* remains untouched. If there was an error, getZipError() returns error code.

Should be used only in QuaZip::mdUnzip mode.

Does nothing and returns `false` in any of the following cases.

- ZIP is not open;
- ZIP does not have current file.

In both cases getZipError() returns `UNZ_OK` since there is no ZIP/UNZIP API call.

This overload doesn't support zip64, but will work OK on zip64 archives except that if one of the sizes (compressed or uncompressed) is greater than 0xFFFFFFFFu, it will be set to exactly 0xFFFFFFFFu.

See Also

getCurrentFileInfo(QuaZipFileInfo64* info)const
QuaZipFileInfo64::toQuaZipFileInfo(QuaZipFileInfo&)const

Definition at line 492 of file quazip.cpp.

References QuaZipFileInfo64::toQuaZipFileInfo().

Referenced by JlCompress::extractFile(), QuaZipFile::getFileInfo(), JlCompress::getFileList(), QuaZip_getFileInfo(), and QuaZipDir_getFileInfo().

```
{
    QuaZipFileInfo64 info64;
    if (info == NULL) { // Very unlikely because of the overloads
        return false;
    }
    if (getCurrentFileInfo(&info64)) {
        info64.toQuaZipFileInfo(*info);
        return true;
    } else {
        return false;
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.71.4.6 bool QuaZip::getCurrentFileInfo (QuaZipFileInfo64 * *info*) const

This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts.

This function supports zip64. If the archive doesn't use zip64, it is completely equivalent to getCurrentFileInfo(QuaZipFileInfo* info) except for the argument type.

See Also

Definition at line 506 of file quazip.cpp.

References QuaZipPrivate::addCurrentFileToDirectoryMap(), QuaZipFileInfo64::comment, QuaZipPrivate::commentCodec, unz_file_info64_s::compressed_size, QuaZipFileInfo64::compressedSize, unz_file_info64_s::compression_method, QuaZipFileInfo64::crc, unz_file_info64_s::crc, QuaZipFileInfo64::dateTime, unz_file_info64_s::disk_num_start, QuaZipFileInfo64::diskNumberStart, unz_file_info64_s::external_fa, QuaZipFileInfo64::externalAttr, QuaZipFileInfo64::extra, QuaZipPrivate::fileNameCodec, unz_file_info64_s::flag, QuaZipFileInfo64::flags, hasCurrentFile(), unz_file_info64_s::internal_fa, QuaZipFileInfo64::internalAttr, isOpen(), mdUnzip, QuaZipFileInfo64::method, QuaZipPrivate::mode, QuaZipFileInfo64::name, p, unz_file_info64_s::size_file_comment, unz_file_info64_s::size_file_extra, unz_file_info64_s::size_filename, tm_unz_s::tm_hour, tm_unz_s::tm_mday, tm_unz_s::tm_min, tm_unz_s::tm_mon, tm_unz_s::tm_sec, tm_unz_s::tm_year, unz_file_info64_s::tmu_date, unz_file_info64_s::uncompressed_size, QuaZipFileInfo64::uncompressedSize, UNZ_OK, unzGetCurrentFileInfo64(), unz_file_info64_s::version, unz_file_info64_s::version_needed, QuaZipFileInfo64::versionCreated, QuaZipFileInfo64::versionNeeded, and QuaZipPrivate::zipError.

```
{
  QuaZip *fakeThis=(QuaZip*)this; // non-const
  fakeThis->p->zipError=UNZ_OK;
  if(p->mode!=mdUnzip) {
    qWarning("QuaZip::getCurrentFileInfo(): ZIP is not open in mdUnzip mode");
    return false;
  }
  unz_file_info64 info_z;
  QByteArray fileName;
  QByteArray extra;
  QByteArray comment;
  if(info==NULL) return false;
  if(!isOpen()||!hasCurrentFile()) return false;
  if((fakeThis->p->zipError=unzGetCurrentFileInfo64(
  p->unzFile_f, &info_z, NULL, 0, NULL, 0, NULL, 0))!=UNZ_OK)
    return false;
  fileName.resize(info_z.size_filename);
  extra.resize(info_z.size_file_extra);
  comment.resize(info_z.size_file_comment);
  if((fakeThis->p->zipError=unzGetCurrentFileInfo64(
  p->unzFile_f, NULL,
      fileName.data(), fileName.size(),
      extra.data(), extra.size(),
      comment.data(), comment.size()))!=UNZ_OK)
    return false;
  info->versionCreated=info_z.version;
  info->versionNeeded=info_z.version_needed;
  info->flags=info_z.flag;
  info->method=info_z.compression_method;
  info->crc=info_z.crc;
  info->compressedSize=info_z.compressed_size;
  info->uncompressedSize=info_z.uncompressed_size;
  info->diskNumberStart=info_z.disk_num_start;
  info->internalAttr=info_z.internal_fa;
  info->externalAttr=info_z.external_fa;
  info->name=p->fileNameCodec->toUnicode(fileName);
  info->comment=p->commentCodec->toUnicode(comment);
  info->extra=extra;
  info->dateTime=QDateTime(
      QDate(info_z.tmu_date.tm_year, info_z.tmu_date.
  tm_mon+1, info_z.tmu_date.tm_mday),
      QTime(info_z.tmu_date.tm_hour, info_z.tmu_date.
  tm_min, info_z.tmu_date.tm_sec));
  // Add to directory map
  p->addCurrentFileToDirectoryMap(info->name);
  return true;
}
```

Here is the call graph for this function:

12.71.4.7 QString QuaZip::getCurrentFileName ( ) const

Equivalent to calling getCurrentFileInfo() and then getting `name` field of the QuaZipFileInfo structure, but faster and more convenient.

Should be used only in QuaZip::mdUnzip mode.

Definition at line 551 of file quazip.cpp.

References QuaZipPrivate::addCurrentFileToDirectoryMap(), QuaZipPrivate::fileNameCodec, hasCurrentFile(), isOpen(), MAX_FILE_NAME_LENGTH, mdUnzip, QuaZipPrivate::mode, p, UNZ_OK, unzGetCurrentFileInfo64(), and QuaZipPrivate::zipError.

Referenced by JlCompress::extractDir(), QuaZipFile::getActualFileName(), QuaZipPrivate::getFileInfoList(), QuaZip_getFileInfo(), and setCurrentFile().

```
552 {
553   QuaZip *fakeThis=(QuaZip*)this; // non-const
554   fakeThis->p->zipError=UNZ_OK;
555   if(p->mode!=mdUnzip) {
556     qWarning("QuaZip::getCurrentFileName(): ZIP is not open in mdUnzip mode");
557     return QString();
558   }
559   if(!isOpen()||!hasCurrentFile()) return QString();
560   QByteArray fileName(MAX_FILE_NAME_LENGTH, 0);
561   if((fakeThis->p->zipError=unzGetCurrentFileInfo64(
      p->unzFile_f, NULL, fileName.data(), fileName.size(),
562       NULL, 0, NULL, 0))!=UNZ_OK)
563     return QString();
564   QString result = p->fileNameCodec->toUnicode(fileName.constData());
565   if (result.isEmpty())
566       return result;
567   // Add to directory map
568   p->addCurrentFileToDirectoryMap(result);
569   return result;
570 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.71.4.8 int QuaZip::getEntriesCount ( ) const

Returns negative error code in the case of error. The same error code will be returned by subsequent getZipError() call.

Definition at line 375 of file quazip.cpp.

References mdUnzip, QuaZipPrivate::mode, unz_global_info64_s::number_entry, p, UNZ_OK, unzGetGlobalInfo64(), and QuaZipPrivate::zipError.

```
376 {
377   QuaZip *fakeThis=(QuaZip*)this; // non-const
378   fakeThis->p->zipError=UNZ_OK;
379   if(p->mode!=mdUnzip) {
380     qWarning("QuaZip::getEntriesCount(): ZIP is not open in mdUnzip mode");
381     return -1;
```

```
  }
  unz_global_info64 globalInfo;
  if((fakeThis->p->zipError=unzGetGlobalInfo64(p->unzFile_f, &globalInfo))!=
  UNZ_OK)
    return p->zipError;
  return (int)globalInfo.number_entry;
}
```

Here is the call graph for this function:

12.71.4.9 QList< QuaZipFileInfo > QuaZip::getFileInfoList ( ) const

Returns

A list of QuaZipFileInfo objects or an empty list if there was an error or if the archive is empty (call getZipError() to figure out which).

This function doesn't support zip64, but will still work with zip64 archives, converting results using QuaZipFileInfo64::toQuaZipFileInfo(). If all file sizes are below 4 GB, it will work just fine.

See Also

getFileNameList()
getFileInfoList64()

Definition at line 729 of file quazip.cpp.

References QuaZipPrivate::getFileInfoList(), and p.

```
{
    QList<QuaZipFileInfo> list;
    if (p->getFileInfoList(&list))
        return list;
    else
        return QList<QuaZipFileInfo>();
}
```

Here is the call graph for this function:

12.71.4.10 QList< QuaZipFileInfo64 > QuaZip::getFileInfoList64 ( ) const

This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts.

This function supports zip64.

See Also

getFileNameList()
getFileInfoList()

Definition at line 738 of file quazip.cpp.

References QuaZipPrivate::getFileInfoList(), and p.

```
{
    QList<QuaZipFileInfo64> list;
    if (p->getFileInfoList(&list))
        return list;
    else
        return QList<QuaZipFileInfo64>();
}
```

Here is the call graph for this function:

12.71.4.11 QTextCodec * QuaZip::getFileNameCodec ( ) const

Definition at line 582 of file quazip.cpp.

References QuaZipPrivate::fileNameCodec, and p.

Referenced by QuaZipFile::open().

```
{
  return p->fileNameCodec;
}
```

Here is the caller graph for this function:

12.71.4.12 QStringList QuaZip::getFileNameList ( ) const

Returns

A list of file names or an empty list if there was an error or if the archive is empty (call getZipError() to figure out which).

See Also

getFileInfoList()

Definition at line 720 of file quazip.cpp.

References QuaZipPrivate::getFileInfoList(), and p.

```
721 {
722     QStringList list;
723     if (p->getFileInfoList(&list))
724         return list;
725     else
726         return QStringList();
727 }
```

Here is the call graph for this function:

12.71.4.13 QIODevice * QuaZip::getIoDevice ( ) const

Returns null string if no device has been set explicitly, for example when opening a ZIP file by name.

See Also

setIoDevice(), getZipName(), setZipName()

Definition at line 607 of file quazip.cpp.

References QuaZipPrivate::ioDevice, p, and QuaZipPrivate::zipName.

```
608 {
609   if (!p->zipName.isEmpty()) // opened by name, using an internal QIODevice
610     return NULL;
611   return p->ioDevice;
612 }
```

12.71.4.14 QuaZip::Mode QuaZip::getMode ( ) const

Definition at line 614 of file quazip.cpp.

References QuaZipPrivate::mode, and p.

Referenced by JlCompress::compressFile(), JlCompress::compressSubDir(), QuaZipFile::csize(), JlCompress::extractFile(), QuaZipFile::getFileInfo(), QuaZipFile::open(), and QuaZipFile::usize().

```
{
  return p->mode;
}
```

Here is the caller graph for this function:

12.71.4.15 unzFile QuaZip::getUnzFile ( )

You can use this handle to directly call UNZIP part of the ZIP/UNZIP package functions (see unzip.h).

Warning

> When using the handle returned by this function, please keep in mind that QuaZip class is unable to detect any changes you make in the ZIP file state (e. g. changing current file, or closing the handle). So please do not do anything with this handle that is possible to do with the functions of this class. Or at least return the handle in the original state before calling some another function of this class (including implicit destructor calls and calls from the QuaZipFile objects that refer to this QuaZip instance!). So if you have changed the current file in the ZIP archive - then change it back or you may experience some strange behavior or even crashes.

Definition at line 639 of file quazip.cpp.

References p.

Referenced by QuaZipFile::atEnd(), QuaZipFile::close(), QuaZipFile::csize(), QuaZipFile::open(), QuaZipFile::pos(), QuaZipFile::readData(), and QuaZipFile::usize().

```
{
  return p->unzFile_f;
}
```

Here is the caller graph for this function:

12.71.4.16 int QuaZip::getZipError ( ) const

Returns `UNZ_OK` if the last operation was successful.

Error code resets to `UNZ_OK` every time you call any function that accesses something inside ZIP archive, even if it is `const` (like getEntriesCount()). open() and close() calls reset error code too. See documentation for the specific functions for details on error detection.

Definition at line 624 of file quazip.cpp.

References p, and QuaZipPrivate::zipError.

Referenced by QuaZipFile::close(), JlCompress::compressDir(), JlCompress::compressFile(), JlCompress::compressFiles(), JlCompress::extractDir(), JlCompress::extractFile(), JlCompress::extractFiles(), QuaZipFile::getActualFileName(), QuaZipFile::getFileInfo(), JlCompress::getFileList(), and QuaZipFile::open().

```
{
  return p->zipError;
}
```

Here is the caller graph for this function:

12.71.4.17 zipFile QuaZip::getZipFile ( )

You can use this handle to directly call ZIP part of the ZIP/UNZIP package functions (see zip.h). Warnings about the getUnzFile() function also apply to this function.

Definition at line 644 of file quazip.cpp.

References p.

Referenced by QuaZipFile::close(), QuaZipFile::open(), and QuaZipFile::writeData().

```
{
  return p->zipFile_f;
}
```

Here is the caller graph for this function:

12.71.4.18 QString QuaZip::getZipName ( ) const

Returns null string if no ZIP file name has been set, for example when the QuaZip instance is set up to use a QIODevice instead.

See Also

setZipName(), setIoDevice(), getIoDevice()

Definition at line 602 of file quazip.cpp.

References p, and QuaZipPrivate::zipName.

Referenced by JlCompress::compressSubDir(), and QuaZipFile::getZipName().

```
603 {
604   return p->zipName;
605 }
```

Here is the caller graph for this function:

12.71.4.19 bool QuaZip::goToFirstFile ( )

Returns `true` on success, `false` otherwise. Call getZipError() to get the error code.

Definition at line 466 of file quazip.cpp.

References QuaZipPrivate::hasCurrentFile_f, mdUnzip, QuaZipPrivate::mode, p, UNZ_OK, unzGoToFirstFile(), and QuaZipPrivate::zipError.

Referenced by JlCompress::extractDir(), QuaZipPrivate::getFileInfoList(), and JlCompress::getFileList().

```
467 {
468   p->zipError=UNZ_OK;
469   if(p->mode!=mdUnzip) {
470     qWarning("QuaZip::goToFirstFile(): ZIP is not open in mdUnzip mode");
471     return false;
472   }
473   p->zipError=unzGoToFirstFile(p->unzFile_f);
474   p->hasCurrentFile_f=p->zipError==UNZ_OK;
475   return p->hasCurrentFile_f;
476 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.71.4.20 bool QuaZip::goToNextFile ( )

Returns `true` on success, `false` otherwise. Call getZipError() to determine if there was an error.

Should be used only in QuaZip::mdUnzip mode.

Note

If the end of file was reached, getZipError() will return `UNZ_OK` instead of `UNZ_END_OF_LIST_OF_FILE`. This is to make things like this easier:

```
for(bool more=zip.goToFirstFile(); more; more=zip.goToNextFile()) {
  // do something
}
if(zip.getZipError()==UNZ_OK) {
  // ok, there was no error
}
```

Definition at line 478 of file quazip.cpp.

References QuaZipPrivate::hasCurrentFile_f, mdUnzip, QuaZipPrivate::mode, p, UNZ_END_OF_LIST_OF_FILE, UNZ_OK, unzGoToNextFile(), and QuaZipPrivate::zipError.

Referenced by JlCompress::extractDir(), QuaZipPrivate::getFileInfoList(), JlCompress::getFileList(), and setCurrentFile().

```
{
  p->zipError=UNZ_OK;
  if(p->mode!=mdUnzip) {
    qWarning("QuaZip::goToFirstFile(): ZIP is not open in mdUnzip mode");
    return false;
  }
  p->zipError=unzGoToNextFile(p->unzFile_f);
  p->hasCurrentFile_f=p->zipError==UNZ_OK;
  if(p->zipError==UNZ_END_OF_LIST_OF_FILE)
    p->zipError=UNZ_OK;
  return p->hasCurrentFile_f;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.71.4.21 bool QuaZip::hasCurrentFile ( ) const

Definition at line 634 of file quazip.cpp.

References QuaZipPrivate::hasCurrentFile_f, and p.

Referenced by getCurrentFileInfo(), getCurrentFileName(), QuaZipPrivate::getFileInfoList(), and QuaZipFile::open().

```
635 {
636   return p->hasCurrentFile_f;
637 }
```

Here is the caller graph for this function:

12.71.4.22 bool QuaZip::isAutoClose ( ) const

See Also

setAutoClose()

Definition at line 780 of file quazip.cpp.

References QuaZipPrivate::autoClose, and p.

```
781 {
782     return p->autoClose;
783 }
```

12.71.4.23 bool QuaZip::isDataDescriptorWritingEnabled ( ) const

See Also

setDataDescriptorWritingEnabled()

Definition at line 654 of file quazip.cpp.

References QuaZipPrivate::dataDescriptorWritingEnabled, and p.

Referenced by QuaZipFile::open().

```
{
    return p->dataDescriptorWritingEnabled;
}
```

Here is the caller graph for this function:

12.71.4.24 bool QuaZip::isOpen ( ) const

Definition at line 619 of file quazip.cpp.

References mdNotOpen, QuaZipPrivate::mode, and p.

Referenced by QuaZipFile::close(), getCurrentFileInfo(), getCurrentFileName(), open(), setIoDevice(), setZipName(), and ~QuaZip().

```
{
  return p->mode!=mdNotOpen;
}
```

Here is the caller graph for this function:

12.71.4.25 bool QuaZip::isZip64Enabled ( ) const

Returns

`true` if and only if the zip64 mode is enabled.

See Also

setZip64Enabled()

Definition at line 775 of file quazip.cpp.

References p, and QuaZipPrivate::zip64.

Referenced by QuaZipFile::open().

```
776 {
777     return p->zip64;
778 }
```

Here is the caller graph for this function:

12.71.4.26 bool QuaZip::open (Mode *mode*, zlib_filefunc_def * *ioApi* = `NULL`)

Argument *mode* specifies open mode of the ZIP archive. See Mode for details. Note that there is zipOpen2() function in the ZIP/UNZIP API which accepts *globalcomment* argument, but it does not use it anywhere, so this open() function does not have this argument. See setComment() if you need to set global comment.

If the ZIP file is accessed via explicitly set QIODevice, then this device is opened in the necessary mode. If the device was already opened by some other means, then QuaZIP checks if the open mode is compatible to the mode needed for the requested operation. If necessary, seeking is performed to position the device properly.

Returns

`true` if successful, `false` otherwise.

Note

ZIP/UNZIP API open calls do not return error code - they just return `NULL` indicating an error. But to make things easier, quazip.h header defines additional error code `UNZ_ERROROPEN` and getZipError() will return it if the open call of the ZIP/UNZIP API returns `NULL`.

Argument *ioApi* specifies IO function set for ZIP/UNZIP package to use. See unzip.h, zip.h and ioapi.h for details. Note that IO API for QuaZip is different from the original package. The file path argument was changed to be of type `voidpf`, and QuaZip passes a QIODevice pointer there. This QIODevice is either set explicitly via setIoDevice() or the QuaZip(QIODevice*) constructor, or it is created internally when opening the archive by its file name. The default API (qioapi.cpp) just delegates everything to the QIODevice API. Not only this allows to use a QIODevice instead of file name, but also has a nice side effect of raising the file size limit from 2G to 4G (in non-zip64 archives).

Note

If the zip64 support is needed, the ioApi argument *must* be NULL because due to the backwards compatibility issues it can be used to provide a 32-bit API only.
If the no-auto-close feature is used, then the *ioApi* argument *should* be NULL because the old API doesn't support the 'fake close' operation, causing slight memory leaks and other possible troubles (like closing the output device in case when an error occurs during opening).

In short: just forget about the *ioApi* argument and you'll be fine.

Definition at line 215 of file quazip.cpp.

References APPEND_STATUS_ADDINZIP, APPEND_STATUS_CREATE, APPEND_STATUS_CREATEAFTER, QuaZipPrivate::autoClose, QuaZipPrivate::dataDescriptorWritingEnabled, QuaZipPrivate::ioDevice, isOpen(), mdAdd, mdAppend, mdCreate, mdUnzip, QuaZipPrivate::mode, p, UNZ_AUTO_CLOSE, UNZ_OK, UNZ_OPENERROR, unzClearFlags(), unzClose(), unzOpen2(), unzOpenInternal(), unzSetFlags(), ZIP_AUTO_CLOSE, ZIP_SEQUENTIAL, ZIP_WRITE_DATA_DESCRIPTOR, zipClose(), QuaZipPrivate::zipError, QuaZipPrivate::zipName, zipOpen2(), zipOpen3(), and zipSetFlags().

Referenced by KbFirmware::_fileForBoard(), JlCompress::compressDir(), JlCompress::compressFile(), JlCompress::compressFiles(), JlCompress::extractDir(), JlCompress::extractFile(), JlCompress::extractFiles(), JlCompress::getFileList(), and QuaZipFile::open().

```
{
  p->zipError=UNZ_OK;
  if(isOpen()) {
    qWarning("QuaZip::open(): ZIP already opened");
    return false;
  }
  QIODevice *ioDevice = p->ioDevice;
  if (ioDevice == NULL) {
    if (p->zipName.isEmpty()) {
      qWarning("QuaZip::open(): set either ZIP file name or IO device first");
      return false;
    } else {
      ioDevice = new QFile(p->zipName);
    }
  }
  unsigned flags = 0;
  switch(mode) {
    case mdUnzip:
      if (ioApi == NULL) {
          if (p->autoClose)
              flags |= UNZ_AUTO_CLOSE;
          p->unzFile_f=unzOpenInternal(ioDevice, NULL, 1, flags);
      } else {
          // QuaZIP pre-zip64 compatibility mode
          p->unzFile_f=unzOpen2(ioDevice, ioApi);
          if (p->unzFile_f != NULL) {
              if (p->autoClose) {
                  unzSetFlags(p->unzFile_f, UNZ_AUTO_CLOSE);
              } else {
                  unzClearFlags(p->unzFile_f, UNZ_AUTO_CLOSE);
              }
          }
      }
      if(p->unzFile_f!=NULL) {
        if (ioDevice->isSequential()) {
            unzClose(p->unzFile_f);
            if (!p->zipName.isEmpty())
                delete ioDevice;
            qWarning("QuaZip::open(): "
                     "only mdCreate can be used with "
                     "sequential devices");
            return false;
        }
        p->mode=mode;
        p->ioDevice = ioDevice;
        return true;
      } else {
        p->zipError=UNZ_OPENERROR;
        if (!p->zipName.isEmpty())
          delete ioDevice;
        return false;
      }
    case mdCreate:
    case mdAppend:
    case mdAdd:
      if (ioApi == NULL) {
```

```
            if (p->autoClose)
                flags |= ZIP_AUTO_CLOSE;
            if (p->dataDescriptorWritingEnabled)
                flags |= ZIP_WRITE_DATA_DESCRIPTOR;
            p->zipFile_f=zipOpen3(ioDevice,
                mode==mdCreate?APPEND_STATUS_CREATE:
                mode==mdAppend?APPEND_STATUS_CREATEAFTER:
                APPEND_STATUS_ADDINZIP,
                NULL, NULL, flags);
        } else {
            // QuaZIP pre-zip64 compatibility mode
            p->zipFile_f=zipOpen2(ioDevice,
                mode==mdCreate?APPEND_STATUS_CREATE:
                mode==mdAppend?APPEND_STATUS_CREATEAFTER:
                APPEND_STATUS_ADDINZIP,
                NULL,
                ioApi);
            if (p->zipFile_f != NULL) {
                zipSetFlags(p->zipFile_f, flags);
            }
        }
        if(p->zipFile_f!=NULL) {
          if (ioDevice->isSequential()) {
              if (mode != mdCreate) {
                  zipClose(p->zipFile_f, NULL);
                  qWarning("QuaZip::open(): "
                           "only mdCreate can be used with "
                            "sequential devices");
                  if (!p->zipName.isEmpty())
                      delete ioDevice;
                  return false;
              }
              zipSetFlags(p->zipFile_f, ZIP_SEQUENTIAL);
          }
          p->mode=mode;
          p->ioDevice = ioDevice;
          return true;
        } else {
          p->zipError=UNZ_OPENERROR;
          if (!p->zipName.isEmpty())
            delete ioDevice;
          return false;
        }
      default:
        qWarning("QuaZip::open(): unknown mode: %d", (int)mode);
        if (!p->zipName.isEmpty())
          delete ioDevice;
        return false;
        break;
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.71.4.27 QuaZip& QuaZip::operator= (const QuaZip & *that*) [private]

12.71.4.28 void QuaZip::setAutoClose (bool *autoClose*) const

By default, QuaZIP opens the underlying QIODevice when open() is called, and closes it when close() is called. In some cases, when the device is set explicitly using setIoDevice(), it may be desirable to leave the device open. If the auto-close flag is unset using this method, then the device isn't closed automatically if it was set explicitly.

If it is needed to clear this flag, it is recommended to do so before opening the archive because otherwise QuaZIP may close the device during the open() call if an error is encountered after the device is opened.

If the device was not set explicitly, but rather the setZipName() or the appropriate constructor was used to set the

ZIP file name instead, then the auto-close flag has no effect, and the internal device is closed nevertheless because there is no other way to close it.

See Also

isAutoClose()
setIoDevice()

Definition at line 785 of file quazip.cpp.

References QuaZipPrivate::autoClose, and p.

```
786 {
787     p->autoClose = autoClose;
788 }
```

12.71.4.29 void QuaZip::setComment (const QString & *comment*)

The comment will be written to the archive on close operation. QuaZip makes a distinction between a null QByteArray() comment and an empty "" comment in the QuaZip::mdAdd mode. A null comment is the default and it means "don't change the comment". An empty comment removes the original comment.

See Also

open()

Definition at line 629 of file quazip.cpp.

References QuaZipPrivate::comment, and p.

```
630 {
631   p->comment=comment;
632 }
```

12.71.4.30 void QuaZip::setCommentCodec (QTextCodec * *commentCodec*)

This codec defaults to locale codec, which is probably ok.

Definition at line 587 of file quazip.cpp.

References QuaZipPrivate::commentCodec, and p.

```
588 {
589   p->commentCodec=commentCodec;
590 }
```

12.71.4.31 void QuaZip::setCommentCodec (const char * *commentCodecName*)

This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts. Equivalent to calling setCommentCodec(QTextCodec::codecForName(codecName));

Definition at line 592 of file quazip.cpp.

References QuaZipPrivate::commentCodec, and p.

```
593 {
594   p->commentCodec=QTextCodec::codecForName(commentCodecName);
595 }
```

12.71.4.32 bool QuaZip::setCurrentFile (const QString & *fileName*, CaseSensitivity *cs* = csDefault)

Returns `true` if successful, `false` otherwise. Argument *cs* specifies case sensitivity of the file name. Call getZipError() in the case of a failure to get error code.

This is not a wrapper to unzLocateFile() function. That is because I had to implement locale-specific case-insensitive comparison.

Here are the differences from the original implementation:

- If the file was not found, error code is `UNZ_OK`, not `UNZ_END_OF_LIST_OF_FILE` (see also goToNextFile()).
- If this function fails, it unsets the current file rather than resetting it back to what it was before the call.

If *fileName* is null string then this function unsets the current file and return `true`. Note that you should close the file first if it is open! See QuaZipFile::QuaZipFile(QuaZip∗,QObject∗) for the details.

Should be used only in QuaZip::mdUnzip mode.

See Also

setFileNameCodec(), CaseSensitivity

Definition at line 408 of file quazip.cpp.

References convertCaseSensitivity(), current, QuaZipPrivate::directoryCaseInsensitive, QuaZipPrivate::directoryCaseSensitive, getCurrentFileName(), QuaZipPrivate::goToFirstUnmappedFile(), goToNextFile(), QuaZipPrivate::hasCurrentFile_f, MAX_FILE_NAME_LENGTH, mdUnzip, QuaZipPrivate::mode, p, unz64_file_pos_s::pos_in_zip_directory, UNZ_OK, UNZ_PARAMERROR, unzGoToFilePos64(), and QuaZipPrivate::zipError.

Referenced by KbFirmware::_fileForBoard(), JlCompress::extractFile(), QuaZipPrivate::getFileInfoList(), and QuaZipFile::open().

```
{
  p->zipError=UNZ_OK;
  if(p->mode!=mdUnzip) {
    qWarning("QuaZip::setCurrentFile(): ZIP is not open in mdUnzip mode");
    return false;
  }
  if(fileName.isEmpty()) {
    p->hasCurrentFile_f=false;
    return true;
  }
  // Unicode-aware reimplementation of the unzLocateFile function
  if(p->unzFile_f==NULL) {
    p->zipError=UNZ_PARAMERROR;
    return false;
  }
  if(fileName.length()>MAX_FILE_NAME_LENGTH) {
    p->zipError=UNZ_PARAMERROR;
    return false;
  }
  // Find the file by name
  bool sens = convertCaseSensitivity(cs) == Qt::CaseSensitive;
  QString lower, current;
  if(!sens) lower=fileName.toLower();
  p->hasCurrentFile_f=false;

  // Check the appropriate Map
  unz64_file_pos fileDirPos;
  fileDirPos.pos_in_zip_directory = 0;
  if (sens) {
      if (p->directoryCaseSensitive.contains(fileName))
          fileDirPos = p->directoryCaseSensitive.value(fileName);
  } else {
      if (p->directoryCaseInsensitive.contains(lower))
          fileDirPos = p->directoryCaseInsensitive.value(lower);
  }

  if (fileDirPos.pos_in_zip_directory != 0) {
      p->zipError = unzGoToFilePos64(p->unzFile_f, &fileDirPos);
      p->hasCurrentFile_f = p->zipError == UNZ_OK;
  }
```

```
449
450   if (p->hasCurrentFile_f)
451       return p->hasCurrentFile_f;
452
453   // Not mapped yet, start from where we have got to so far
454   for(bool more=p->goToFirstUnmappedFile(); more; more=
      goToNextFile()) {
455     current=getCurrentFileName();
456     if(current.isEmpty()) return false;
457     if(sens) {
458       if(current==fileName) break;
459     } else {
460       if(current.toLower()==lower) break;
461     }
462   }
463   return p->hasCurrentFile_f;
464 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.71.4.33 void QuaZip::setDataDescriptorWritingEnabled (bool *enabled*)

According to the ZIP format specification, a file inside archive may have a data descriptor immediately following the file data. This is reflected by a special flag in the local file header and in the central directory. By default, QuaZIP sets this flag and writes the data descriptor unless both method and level were set to 0, in which case it operates in 1.0-compatible mode and never writes data descriptors.

By setting this flag to false, it is possible to disable data descriptor writing, thus increasing compatibility with archive readers that don't understand this feature of the ZIP file format.

Setting this flag affects all the QuaZipFile instances that are opened after this flag is set.

The data descriptor writing mode is enabled by default.

Note that if the ZIP archive is written into a QIODevice for which QIODevice::isSequential() returns `true`, then the data descriptor is mandatory and will be written even if this flag is set to false.

Parameters

enabled	If `true`, enable local descriptor writing, disable it otherwise.

See Also

QuaZipFile::isDataDescriptorWritingEnabled()

Definition at line 649 of file quazip.cpp.

References QuaZipPrivate::dataDescriptorWritingEnabled, and p.

```
{
    p->dataDescriptorWritingEnabled = enabled;
}
```

12.71.4.34 void QuaZip::setDefaultFileNameCodec (QTextCodec * *codec*) [static]

The default codec is used by the constructors, so calling this function won't affect the QuaZip instances already created at that moment.

The codec specified here can be overriden by calling setFileNameCodec(). If neither function is called, QTextCodec::codecForLocale() will be used to decode or encode file names. Use this function with caution if the application uses other libraries that depend on QuaZIP. Those libraries can either call this function by themselves, thus overriding your setting or can rely on the default encoding, thus failing mysteriously if you change it. For these reasons, it isn't recommended to use this function if you are developing a library, not an application. Instead, ask your library users to call it in case they need specific encoding.

In most cases, using setFileNameCodec() instead is the right choice. However, if you depend on third-party code that uses QuaZIP, then the reasons stated above can actually become a reason to use this function in case the third-party code in question fails because it doesn't understand the encoding you need and doesn't provide a way to specify it. This applies to the JlCompress class as well, as it was contributed and doesn't support explicit encoding parameters.

In short: use setFileNameCodec() when you can, resort to setDefaultFileNameCodec() when you don't have access to the QuaZip instance.

Parameters

codec	The codec to use by default. If NULL, resets to default.

Definition at line 760 of file quazip.cpp.

References QuaZipPrivate::defaultFileNameCodec.

Referenced by setDefaultFileNameCodec().

```
{
    QuaZipPrivate::defaultFileNameCodec = codec;
}
```

Here is the caller graph for this function:

12.71.4.35 void QuaZip::setDefaultFileNameCodec (const char * *codecName*) [static]

Definition at line 765 of file quazip.cpp.

References setDefaultFileNameCodec().

```
766 {
767     setDefaultFileNameCodec(QTextCodec::codecForName(codecName));
768 }
```

Here is the call graph for this function:

12.71.4.36 void QuaZip::setFileNameCodec (QTextCodec * *fileNameCodec*)

This is necessary to access files in the ZIP archive created under Windows with non-latin characters in file names. For example, file names with cyrillic letters will be in `IBM866` encoding.

Definition at line 572 of file quazip.cpp.

References QuaZipPrivate::fileNameCodec, and p.

```
573 {
574   p->fileNameCodec=fileNameCodec;
575 }
```

12.71.4.37 void QuaZip::setFileNameCodec (const char * *fileNameCodecName*)

This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts. Equivalent to calling setFileNameCodec(QTextCodec::codecForName(codecName));

Definition at line 577 of file quazip.cpp.

References QuaZipPrivate::fileNameCodec, and p.

```
578 {
579   p->fileNameCodec=QTextCodec::codecForName(fileNameCodecName);
580 }
```

12.71.4.38 void QuaZip::setIoDevice (QIODevice * *ioDevice*)

Does nothing if the ZIP file is open.

Does not reset error code returned by getZipError().

See Also

getIoDevice(), getZipName(), setZipName()

Definition at line 365 of file quazip.cpp.

References QuaZipPrivate::ioDevice, isOpen(), p, and QuaZipPrivate::zipName.

```
366 {
367   if(isOpen()) {
368     qWarning("QuaZip::setIoDevice(): ZIP is already open!");
369     return;
370   }
371   p->ioDevice = ioDevice;
372   p->zipName = QString();
373 }
```

Here is the call graph for this function:

12.71.4.39 void QuaZip::setZip64Enabled (bool *zip64*)

Parameters

zip64	If `true`, the zip64 mode is enabled, disabled otherwise.

Once this is enabled, all new files (until the mode is disabled again) will be created in the zip64 mode, thus enabling the ability to write files larger than 4 GB. By default, the zip64 mode is off due to compatibility reasons.

Note that this does not affect the ability to read zip64 archives in any way.

See Also

isZip64Enabled()

Definition at line 770 of file quazip.cpp.

References p, and QuaZipPrivate::zip64.

```
771 {
772     p->zip64 = zip64;
773 }
```

12.71.4.40 void QuaZip::setZipName (const QString & *zipName*)

Does nothing if the ZIP file is open.

Does not reset error code returned by getZipError().

See Also

setIoDevice(), getIoDevice(), getZipName()

Definition at line 355 of file quazip.cpp.

References QuaZipPrivate::ioDevice, isOpen(), p, and QuaZipPrivate::zipName.

```
{
  if(isOpen()) {
    qWarning("QuaZip::setZipName(): ZIP is already open!");
    return;
  }
  p->zipName=zipName;
  p->ioDevice = NULL;
}
```

Here is the call graph for this function:

12.71.5 Friends And Related Function Documentation

12.71.5.1 friend class QuaZipPrivate [friend]

Definition at line 85 of file quazip.h.

12.71.6 Field Documentation

12.71.6.1 QuaZipPrivate* QuaZip::p [private]

Definition at line 129 of file quazip.h.

Referenced by close(), getComment(), getCommentCodec(), getCurrentFileInfo(), getCurrentFileName(), getEntriesCount(), getFileInfoList(), getFileInfoList64(), getFileNameCodec(), getFileNameList(), getIoDevice(), getMode(), getUnzFile(), getZipError(), getZipFile(), getZipName(), goToFirstFile(), goToNextFile(), hasCurrentFile(), isAutoClose(), isDataDescriptorWritingEnabled(), isOpen(), isZip64Enabled(), open(), setAutoClose(), setComment(), setCommentCodec(), setCurrentFile(), setDataDescriptorWritingEnabled(), setFileNameCodec(), setIoDevice(), setZip64Enabled(), setZipName(), and ~QuaZip().

The documentation for this class was generated from the following files:

- src/ckb/quazip/quazip.h
- src/ckb/quazip/quazip.cpp

12.72 QuaZipDir Class Reference

Provides ZIP archive navigation.

`#include <src/ckb/quazip/quazipdir.h>`

Collaboration diagram for QuaZipDir:

Public Member Functions

- QuaZipDir (const QuaZipDir &that)

  The copy constructor.
- QuaZipDir (QuaZip *zip, const QString &dir=QString())

  Constructs a QuaZipDir instance pointing to the specified directory.
- ~QuaZipDir ()

  Destructor.
- bool operator== (const QuaZipDir &that)

  The assignment operator.
- bool operator!= (const QuaZipDir &that)

  operator!=
- QuaZipDir & operator= (const QuaZipDir &that)

  operator==
- QString operator[] (int pos) const

  Returns the name of the entry at the specified position.
- QuaZip::CaseSensitivity caseSensitivity () const

  Returns the current case sensitivity mode.
- bool cd (const QString &dirName)

  Changes the 'current' directory.

- bool cdUp ()

  Goes up.
- uint count () const

  Returns the number of entries in the directory.
- QString dirName () const

  Returns the current directory name.
- QList< QuaZipFileInfo > entryInfoList (const QStringList &nameFilters, QDir::Filters filters=QDir::NoFilter, QDir::SortFlags sort=QDir::NoSort) const

  Returns the list of the entries in the directory.
- QList< QuaZipFileInfo > entryInfoList (QDir::Filters filters=QDir::NoFilter, QDir::SortFlags sort=QDir::NoSort) const

  Returns the list of the entries in the directory.
- QList< QuaZipFileInfo64 > entryInfoList64 (const QStringList &nameFilters, QDir::Filters filters=QDir::NoFilter, QDir::SortFlags sort=QDir::NoSort) const

  Returns the list of the entries in the directory with zip64 support.
- QList< QuaZipFileInfo64 > entryInfoList64 (QDir::Filters filters=QDir::NoFilter, QDir::SortFlags sort=QDir::NoSort) const

  Returns the list of the entries in the directory with zip64 support.
- QStringList entryList (const QStringList &nameFilters, QDir::Filters filters=QDir::NoFilter, QDir::SortFlags sort=QDir::NoSort) const

  Returns the list of the entry names in the directory.
- QStringList entryList (QDir::Filters filters=QDir::NoFilter, QDir::SortFlags sort=QDir::NoSort) const

  Returns the list of the entry names in the directory.
- bool exists (const QString &fileName) const

  Returns `true` if the entry with the specified name exists.
- bool exists () const

  Return `true` if the directory pointed by this QuaZipDir exists.
- QString filePath (const QString &fileName) const

  Returns the full path to the specified file.
- QDir::Filters filter ()

  Returns the default filter.
- bool isRoot () const

  Returns if the QuaZipDir points to the root of the archive.
- QStringList nameFilters () const

  Return the default name filter.
- QString path () const

  Returns the path to the current dir.
- QString relativeFilePath (const QString &fileName) const

  Returns the path to the specified file relative to the current dir.
- void setCaseSensitivity (QuaZip::CaseSensitivity caseSensitivity)

  Sets the default case sensitivity mode.
- void setFilter (QDir::Filters filters)

  Sets the default filter.
- void setNameFilters (const QStringList &nameFilters)

  Sets the default name filter.
- void setPath (const QString &path)

  Goes to the specified path.
- void setSorting (QDir::SortFlags sort)

  Sets the default sorting mode.
- QDir::SortFlags sorting () const

  Returns the default sorting mode.

Private Attributes

- QSharedDataPointer
  < QuaZipDirPrivate > d

12.72.1 Detailed Description

This class is modelled after QDir, and is designed to provide similar features for ZIP archives.

The only significant difference from QDir is that the root path is not '/', but an empty string since that's how the file paths are stored in the archive. However, QuaZipDir understands the paths starting with '/'. It is important in a few places:

- In the cd() function.
- In the constructor.
- In the exists() function.
- In the relativePath() function.

Note that since ZIP uses '/' on all platforms, the '\' separator is not supported.

Definition at line 54 of file quazipdir.h.

12.72.2 Constructor & Destructor Documentation

12.72.2.1 QuaZipDir::QuaZipDir (const QuaZipDir & *that*)

Definition at line 50 of file quazipdir.cpp.

Referenced by exists().

```
50                                                  :
51     d(that.d)
52 {
53 }
```

Here is the caller graph for this function:

12.72.2.2 QuaZipDir::QuaZipDir (QuaZip * *zip*, const QString & *dir* = `QString()`)

If *dir* is not specified, points to the root of the archive. The same happens if the *dir* is "/".

Definition at line 55 of file quazipdir.cpp.

References d.

```
55                                                          :
56     d(new QuaZipDirPrivate(zip, dir))
57 {
58     if (d->dir.startsWith('/'))
59         d->dir = d->dir.mid(1);
60 }
```

12.72.2.3 QuaZipDir::~QuaZipDir ( )

Definition at line 62 of file quazipdir.cpp.

```
63 {
64 }
```

12.72.3 Member Function Documentation

12.72.3.1 QuaZip::CaseSensitivity QuaZipDir::caseSensitivity ( ) const

Definition at line 82 of file quazipdir.cpp.

References d.

Referenced by setCaseSensitivity().

```
83 {
84     return d->caseSensitivity;
85 }
```

Here is the caller graph for this function:

12.72.3.2 bool QuaZipDir::cd (const QString & *dirName*)

If the path starts with '/', it is interpreted as an absolute path from the root of the archive. Otherwise, it is interpreted as a path relative to the current directory as was set by the previous cd() or the constructor.

Note that the subsequent path() call will not return a path starting with '/' in all cases.

Definition at line 87 of file quazipdir.cpp.

References cd(), d, dirName(), exists(), isRoot(), and path().

Referenced by cd(), and cdUp().

```
88 {
89     if (directoryName == "/") {
90         d->dir = "";
91         return true;
92     }
93     QString dirName = directoryName;
94     if (dirName.endsWith('/'))
95         dirName.chop(1);
96     if (dirName.contains('/')) {
97         QuaZipDir dir(*this);
98         if (dirName.startsWith('/')) {
99 #ifdef QUAZIP_QUAZIPDIR_DEBUG
100             qDebug("QuaZipDir::cd(%s): going to /",
101                     dirName.toUtf8().constData());
102 #endif
103             if (!dir.cd("/"))
104                 return false;
105         }
106         QStringList path = dirName.split('/', QString::SkipEmptyParts);
107         for (QStringList::const_iterator i = path.constBegin();
108                 i != path.end();
```

```
                ++i) {
            const QString &step = *i;
#ifdef QUAZIP_QUAZIPDIR_DEBUG
            qDebug("QuaZipDir::cd(%s): going to %s",
                    dirName.toUtf8().constData(),
                    step.toUtf8().constData());
#endif
            if (!dir.cd(step))
                return false;
        }
        d->dir = dir.path();
        return true;
    } else { // no '/'
        if (dirName == ".") {
            return true;
        } else if (dirName == "..") {
            if (isRoot()) {
                return false;
            } else {
                int slashPos = d->dir.lastIndexOf('/');
                if (slashPos == -1) {
                    d->dir = "";
                } else {
                    d->dir = d->dir.left(slashPos);
                }
                return true;
            }
        } else { // a simple subdirectory
            if (exists(dirName)) {
                if (isRoot())
                    d->dir = dirName;
                else
                    d->dir += "/" + dirName;
                return true;
            } else {
                return false;
            }
        }
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.72.3.3 bool QuaZipDir::cdUp ( )

Definition at line 150 of file quazipdir.cpp.

References cd().

```
{
    return cd("..");
}
```

Here is the call graph for this function:

12.72.3.4 uint QuaZipDir::count ( ) const

Definition at line 155 of file quazipdir.cpp.

References entryList().

```
{
    return entryList().count();
}
```

Here is the call graph for this function:

12.72.3.5 QString QuaZipDir::dirName ( ) const

The name doesn't include the path.

Definition at line 160 of file quazipdir.cpp.

References d.

Referenced by cd().

```
161 {
162     return QDir(d->dir).dirName();
163 }
```

Here is the caller graph for this function:

12.72.3.6 QList< QuaZipFileInfo > QuaZipDir::entryInfoList (const QStringList & *nameFilters*, QDir::Filters *filters* = QDir::NoFilter, QDir::SortFlags *sort* = QDir::NoSort) const

Parameters

nameFilters	The list of file patterns to list, uses the same syntax as QDir.
filters	The entry type filters, only Files and Dirs are accepted.
sort	Sorting mode.

Definition at line 401 of file quazipdir.cpp.

References d.

Referenced by entryInfoList().

```
403 {
404     QList<QuaZipFileInfo> result;
405     if (d->entryInfoList(nameFilters, filters, sort, result))
406         return result;
407     else
408         return QList<QuaZipFileInfo>();
409 }
```

Here is the caller graph for this function:

12.72.3.7 QList< QuaZipFileInfo > QuaZipDir::entryInfoList (QDir::Filters *filters* = `QDir::NoFilter`, QDir::SortFlags *sort* = `QDir::NoSort`) const

This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts.

The same as entryInfoList(QStringList(), filters, sort).

Definition at line 411 of file quazipdir.cpp.

References entryInfoList().

```
413 {
414     return entryInfoList(QStringList(), filters, sort);
415 }
```

Here is the call graph for this function:

12.72.3.8 QList< QuaZipFileInfo64 > QuaZipDir::entryInfoList64 (const QStringList & *nameFilters*, QDir::Filters *filters* = `QDir::NoFilter`, QDir::SortFlags *sort* = `QDir::NoSort`) const

Parameters

nameFilters	The list of file patterns to list, uses the same syntax as QDir.
filters	The entry type filters, only Files and Dirs are accepted.
sort	Sorting mode.

Definition at line 417 of file quazipdir.cpp.

References d.

Referenced by entryInfoList64().

```
419 {
420     QList<QuaZipFileInfo64> result;
421     if (d->entryInfoList(nameFilters, filters, sort, result))
422         return result;
423     else
424         return QList<QuaZipFileInfo64>();
425 }
```

Here is the caller graph for this function:

12.72.3.9 QList< QuaZipFileInfo64 > QuaZipDir::entryInfoList64 (QDir::Filters *filters* = `QDir::NoFilter`, QDir::SortFlags *sort* = `QDir::NoSort`) const

This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts.

The same as entryInfoList64(QStringList(), filters, sort).

Definition at line 427 of file quazipdir.cpp.

References entryInfoList64().

```
{
    return entryInfoList64(QStringList(), filters, sort);
}
```

Here is the call graph for this function:

12.72.3.10 QStringList QuaZipDir::entryList (const QStringList & *nameFilters*, QDir::Filters *filters* = `QDir::NoFilter`, QDir::SortFlags *sort* = `QDir::NoSort`) const

The same as entryInfoList(nameFilters, filters, sort), but only returns entry names.

Definition at line 433 of file quazipdir.cpp.

References d.

Referenced by count(), entryList(), exists(), and operator[]().

```
{
    QStringList result;
    if (d->entryInfoList(nameFilters, filters, sort, result))
        return result;
    else
        return QStringList();
}
```

Here is the caller graph for this function:

12.72.3.11 QStringList QuaZipDir::entryList (QDir::Filters *filters* = `QDir::NoFilter`, QDir::SortFlags *sort* = `QDir::NoSort`) const

This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts.

The same as entryList(QStringList(), filters, sort).

Definition at line 443 of file quazipdir.cpp.

References entryList().

```
{
    return entryList(QStringList(), filters, sort);
}
```

Here is the call graph for this function:

12.72.3.12 bool QuaZipDir::exists (const QString & *fileName*) const

The ".." is considered to exist if the current directory is not root. The "." and "/" are considered to always exist. Paths starting with "/" are relative to the archive root, other paths are relative to the current dir.

Definition at line 449 of file quazipdir.cpp.

References QuaZip::convertCaseSensitivity(), d, entryList(), filePath(), and isRoot().

```
{
    if (filePath == "/" || filePath.isEmpty())
        return true;
    QString fileName = filePath;
    if (fileName.endsWith('/'))
        fileName.chop(1);
    if (fileName.contains('/')) {
        QFileInfo fileInfo(fileName);
#ifdef QUAZIP_QUAZIPDIR_DEBUG
        qDebug("QuaZipDir::exists(): fileName=%s, fileInfo.fileName()=%s, "
                "fileInfo.path()=%s", fileName.toUtf8().constData(),
                fileInfo.fileName().toUtf8().constData(),
                fileInfo.path().toUtf8().constData());
#endif
        QuaZipDir dir(*this);
        return dir.cd(fileInfo.path()) && dir.exists(fileInfo.fileName());
    } else {
        if (fileName == "..") {
            return !isRoot();
        } else if (fileName == ".") {
            return true;
        } else {
            QStringList entries = entryList(QDir::AllEntries, QDir::NoSort);
#ifdef QUAZIP_QUAZIPDIR_DEBUG
            qDebug("QuaZipDir::exists(): looking for %s",
                    fileName.toUtf8().constData());
            for (QStringList::const_iterator i = entries.constBegin();
                    i != entries.constEnd();
                    ++i) {
                qDebug("QuaZipDir::exists(): entry: %s",
                        i->toUtf8().constData());
            }
#endif
            Qt::CaseSensitivity cs = QuaZip::convertCaseSensitivity(
                    d->caseSensitivity);
            if (filePath.endsWith('/')) {
                return entries.contains(filePath, cs);
            } else {
                return entries.contains(fileName, cs)
                    || entries.contains(fileName + "/", cs);
            }
        }
    }
}
```

Here is the call graph for this function:

12.72.3.13 bool QuaZipDir::exists ( ) const

Definition at line 495 of file quazipdir.cpp.

References d, and QuaZipDir().

Referenced by cd().

```
496 {
497     return QuaZipDir(d->zip).exists(d->dir);
498 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.72.3.14 QString QuaZipDir::filePath (const QString & *fileName*) const

Doesn't check if the file actually exists.

Definition at line 500 of file quazipdir.cpp.

References d.

Referenced by exists().

```
501 {
502     return QDir(d->dir).filePath(fileName);
503 }
```

Here is the caller graph for this function:

12.72.3.15 QDir::Filters QuaZipDir::filter ( )

Definition at line 505 of file quazipdir.cpp.

References d.

```
506 {
507     return d->filter;
508 }
```

12.72.3.16 bool QuaZipDir::isRoot ( ) const

Not that the root path is the empty string, not '/'.

Definition at line 510 of file quazipdir.cpp.

References d.

Referenced by cd(), and exists().

```
511 {
512     return d->simplePath().isEmpty();
513 }
```

Here is the caller graph for this function:

12.72.3.17 QStringList QuaZipDir::nameFilters ( ) const

Definition at line 515 of file quazipdir.cpp.

References d.

Referenced by setNameFilters().

```
516 {
517     return d->nameFilters;
518 }
```

Here is the caller graph for this function:

12.72.3.18 bool QuaZipDir::operator!= (const QuaZipDir & *that*) [inline]

Returns

`true` if either this and *that* use different QuaZip instances or if they point to different directories.

Definition at line 75 of file quazipdir.h.

```
75 {return !operator==(that);}
```

12.72.3.19 QuaZipDir & QuaZipDir::operator= (const QuaZipDir & *that*)

Returns

`true` if both this and *that* use the same QuaZip instance and point to the same directory.

Definition at line 71 of file quazipdir.cpp.

References d.

```
72 {
73     this->d = that.d;
74     return *this;
75 }
```

12.72.3.20 bool QuaZipDir::operator== (const QuaZipDir & *that*)

Definition at line 66 of file quazipdir.cpp.

References d.

```
67 {
68     return d->zip == that.d->zip && d->dir == that.d->dir;
69 }
```

12.72.3.21 QString QuaZipDir::operator[] (int *pos*) const

Definition at line 77 of file quazipdir.cpp.

References entryList().

```
78 {
79     return entryList().at(pos);
80 }
```

Here is the call graph for this function:

12.72.3.22 QString QuaZipDir::path ( ) const

The path never starts with '/', and the root path is an empty string.

Definition at line 520 of file quazipdir.cpp.

References d.

Referenced by cd(), and setPath().

```
{
    return d->dir;
}
```

Here is the caller graph for this function:

12.72.3.23 QString QuaZipDir::relativeFilePath (const QString & *fileName*) const

This function is mostly useless, provided only for the sake of completeness.

Parameters

fileName	The path to the file, should start with "/" if relative to the archive root.

Returns

Path relative to the current dir.

Definition at line 525 of file quazipdir.cpp.

References d.

```
{
    return QDir("/" + d->dir).relativeFilePath(fileName);
}
```

12.72.3.24 void QuaZipDir::setCaseSensitivity (QuaZip::CaseSensitivity *caseSensitivity*)

Definition at line 530 of file quazipdir.cpp.

References caseSensitivity(), and d.

```
{
    d->caseSensitivity = caseSensitivity;
}
```

Here is the call graph for this function:

12.72.3.25 void QuaZipDir::setFilter (QDir::Filters *filters*)

Definition at line 535 of file quazipdir.cpp.

References d.

```
536 {
537     d->filter = filters;
538 }
```

12.72.3.26 void QuaZipDir::setNameFilters (const QStringList & *nameFilters*)

Definition at line 540 of file quazipdir.cpp.

References d, and nameFilters().

```
541 {
542     d->nameFilters = nameFilters;
543 }
```

Here is the call graph for this function:

12.72.3.27 void QuaZipDir::setPath (const QString & *path*)

The difference from cd() is that this function never checks if the path actually exists and doesn't use relative paths, so it's possible to go to the root directory with setPath("").

Note that this function still chops the trailing and/or leading '/' and treats a single '/' as the root path (path() will still return an empty string).

Definition at line 545 of file quazipdir.cpp.

References d, and path().

```
546 {
547     QString newDir = path;
```

```
    if (newDir == "/") {
        d->dir = "";
    } else {
        if (newDir.endsWith('/'))
            newDir.chop(1);
        if (newDir.startsWith('/'))
            newDir = newDir.mid(1);
        d->dir = newDir;
    }
}
```

Here is the call graph for this function:

12.72.3.28 void QuaZipDir::setSorting (QDir::SortFlags *sort*)

Definition at line 559 of file quazipdir.cpp.

References d.

```
{
    d->sorting = sort;
}
```

12.72.3.29 QDir::SortFlags QuaZipDir::sorting ( ) const

Definition at line 564 of file quazipdir.cpp.

References d.

```
{
    return d->sorting;
}
```

12.72.4 Field Documentation

12.72.4.1 QSharedDataPointer<QuaZipDirPrivate> QuaZipDir::d [private]

Definition at line 56 of file quazipdir.h.

Referenced by caseSensitivity(), cd(), dirName(), entryInfoList(), entryInfoList64(), entryList(), exists(), filePath(), filter(), isRoot(), nameFilters(), operator=(), operator==(), path(), QuaZipDir(), relativeFilePath(), setCaseSensitivity(), setFilter(), setNameFilters(), setPath(), setSorting(), and sorting().

The documentation for this class was generated from the following files:

- src/ckb/quazip/quazipdir.h
- src/ckb/quazip/quazipdir.cpp

12.73 QuaZipFile Class Reference

A file inside ZIP archive.

```
#include <quazip/quazipfile.h>
```

Inheritance diagram for QuaZipFile:

Collaboration diagram for QuaZipFile:

Public Member Functions

- QuaZipFile ()

  Constructs a QuaZipFile instance.
- QuaZipFile (QObject *parent)

  Constructs a QuaZipFile instance.
- QuaZipFile (const QString &zipName, QObject *parent=NULL)

  Constructs a QuaZipFile instance.
- QuaZipFile (const QString &zipName, const QString &fileName, QuaZip::CaseSensitivity cs=QuaZip::cs-Default, QObject *parent=NULL)

  Constructs a QuaZipFile instance.
- QuaZipFile (QuaZip *zip, QObject *parent=NULL)

  Constructs a QuaZipFile instance.
- virtual ~QuaZipFile ()

  Destroys a QuaZipFile instance.
- QString getZipName () const

  Returns the ZIP archive file name.
- QuaZip * getZip () const

  Returns a pointer to the associated QuaZip object.
- QString getFileName () const

  Returns file name.
- QuaZip::CaseSensitivity getCaseSensitivity () const

  Returns case sensitivity of the file name.
- QString getActualFileName () const

  Returns the actual file name in the archive.
- void setZipName (const QString &zipName)

  Sets the ZIP archive file name.
- bool isRaw () const

  Returns `true` if the file was opened in raw mode.
- void setZip (QuaZip *zip)

  Binds to the existing QuaZip instance.
- void setFileName (const QString &fileName, QuaZip::CaseSensitivity cs=QuaZip::csDefault)

  Sets the file name.
- virtual bool open (OpenMode mode)

  Opens a file for reading.
- bool open (OpenMode mode, const char *password)

  Opens a file for reading.
- bool open (OpenMode mode, int *method, int *level, bool raw, const char *password=NULL)

  Opens a file for reading.
- bool open (OpenMode mode, const QuaZipNewInfo &info, const char *password=NULL, quint32 crc=0, int method=Z_DEFLATED, int level=Z_DEFAULT_COMPRESSION, bool raw=false, int windowBits=-MAX_WB-ITS, int memLevel=MAX_MEM_LEVEL, int strategy=Z_DEFAULT_STRATEGY)

  Opens a file for writing.
- virtual bool isSequential () const

  Returns `true`, but beware!
- virtual qint64 pos () const

  Returns current position in the file.
- virtual bool atEnd () const

  Returns `true` if the end of file was reached.
- virtual qint64 size () const

  Returns file size.

- qint64 csize () const

  Returns compressed file size.
- qint64 usize () const

  Returns uncompressed file size.
- bool getFileInfo (QuaZipFileInfo *info)

  Gets information about current file.
- bool getFileInfo (QuaZipFileInfo64 *info)

  Gets information about current file with zip64 support.
- virtual void close ()

  Closes the file.
- int getZipError () const

  Returns the error code returned by the last ZIP/UNZIP API call.
- virtual qint64 bytesAvailable () const

  Returns the number of bytes available for reading.

Protected Member Functions

- qint64 readData (char *data, qint64 maxSize)

  Implementation of the QIODevice::readData().
- qint64 writeData (const char *data, qint64 maxSize)

  Implementation of the QIODevice::writeData().

Private Member Functions

- QuaZipFile (const QuaZipFile &that)
- QuaZipFile & operator= (const QuaZipFile &that)

Private Attributes

- QuaZipFilePrivate * p

Friends

- class QuaZipFilePrivate

12.73.1 Detailed Description

This is the most interesting class. Not only it provides C++ interface to the ZIP/UNZIP package, but also integrates it with Qt by subclassing QIODevice. This makes possible to access files inside ZIP archive using QTextStream or QDataStream, for example. Actually, this is the main purpose of the whole QuaZIP library.

You can either use existing QuaZip instance to create instance of this class or pass ZIP archive file name to this class, in which case it will create internal QuaZip object. See constructors' descriptions for details. Writing is only possible with the existing instance.

Note that due to the underlying library's limitation it is not possible to use multiple QuaZipFile instances to open several files in the same archive at the same time. If you need to write to multiple files in parallel, then you should write to temporary files first, then pack them all at once when you have finished writing. If you need to read multiple files inside the same archive in parallel, you should extract them all into a temporary directory first.

12.73.2 Sequential or random-access?

At the first thought, QuaZipFile has fixed size, the start and the end and should be therefore considered random-access device. But there is one major obstacle to making it random-access: ZIP/UNZIP API does not support seek() operation and the only way to implement it is through reopening the file and re-reading to the required position, but this is prohibitively slow.

Therefore, QuaZipFile is considered to be a sequential device. This has advantage of availability of the ungetChar() operation (QIODevice does not implement it properly for non-sequential devices unless they support seek()). Disadvantage is a somewhat strange behaviour of the size() and pos() functions. This should be kept in mind while using this class.

Definition at line 74 of file quazipfile.h.

12.73.3 Constructor & Destructor Documentation

12.73.3.1 QuaZipFile::QuaZipFile (const QuaZipFile & *that*) [private]

12.73.3.2 QuaZipFile::QuaZipFile ( )

You should use setZipName() and setFileName() or setZip() before trying to call open() on the constructed object.

Definition at line 108 of file quazipfile.cpp.

```
108                         :
109   p(new QuaZipFilePrivate(this))
110 {
111 }
```

12.73.3.3 QuaZipFile::QuaZipFile (QObject * *parent*)

parent argument specifies this object's parent object.

You should use setZipName() and setFileName() or setZip() before trying to call open() on the constructed object.

Definition at line 113 of file quazipfile.cpp.

```
113                                     :
114   QIODevice(parent),
115   p(new QuaZipFilePrivate(this))
116 {
117 }
```

12.73.3.4 QuaZipFile::QuaZipFile (const QString & *zipName*, QObject * *parent* = NULL)

parent argument specifies this object's parent object and *zipName* specifies ZIP archive file name.

You should use setFileName() before trying to call open() on the constructed object.

QuaZipFile constructed by this constructor can be used for read only access. Use QuaZipFile(QuaZip*,QObject*) for writing.

Definition at line 119 of file quazipfile.cpp.

```
119                                                         :
120   QIODevice(parent),
121   p(new QuaZipFilePrivate(this, zipName))
122 {
123 }
```

12.73.3.5 QuaZipFile::QuaZipFile (const QString & *zipName*, const QString & *fileName*, QuaZip::CaseSensitivity *cs* = QuaZip::csDefault, QObject * *parent* = NULL)

parent argument specifies this object's parent object, *zipName* specifies ZIP archive file name and *fileName* and *cs* specify a name of the file to open inside archive.

QuaZipFile constructed by this constructor can be used for read only access. Use QuaZipFile(QuaZip*,QObject*) for writing.

See Also

QuaZip::setCurrentFile()

Definition at line 125 of file quazipfile.cpp.

```
126                                                 :
127   QIODevice(parent),
128   p(new QuaZipFilePrivate(this, zipName, fileName, cs))
129 {
130 }
```

12.73.3.6 QuaZipFile::QuaZipFile (QuaZip * *zip*, QObject * *parent* = NULL)

parent argument specifies this object's parent object.

zip is the pointer to the existing QuaZip object. This QuaZipFile object then can be used to read current file in the *zip* or to write to the file inside it.

Warning

Using this constructor for reading current file can be tricky. Let's take the following example:

```
QuaZip zip("archive.zip");
zip.open(QuaZip::mdUnzip);
zip.setCurrentFile("file-in-archive");
QuaZipFile file(&zip);
file.open(QIODevice::ReadOnly);
// ok, now we can read from the file
file.read(somewhere, some);
zip.setCurrentFile("another-file-in-archive"); // oops...
QuaZipFile anotherFile(&zip);
anotherFile.open(QIODevice::ReadOnly);
anotherFile.read(somewhere, some); // this is still ok...
file.read(somewhere, some); // and this is NOT
```

So, what exactly happens here? When we change current file in the `zip` archive, `file` that references it becomes invalid (actually, as far as I understand ZIP/UNZIP sources, it becomes closed, but QuaZipFile has no means to detect it).

Summary: do not close `zip` object or change its current file as long as QuaZipFile is open. Even better - use another constructors which create internal QuaZip instances, one per object, and therefore do not cause unnecessary trouble. This constructor may be useful, though, if you already have a QuaZip instance and do not want to access several files at once. Good example:

```
QuaZip zip("archive.zip");
zip.open(QuaZip::mdUnzip);
// first, we need some information about archive itself
QByteArray comment=zip.getComment();
// and now we are going to access files inside it
QuaZipFile file(&zip);
for(bool more=zip.goToFirstFile(); more; more=zip.goToNextFile()) {
  file.open(QIODevice::ReadOnly);
  // do something cool with file here
  file.close(); // do not forget to close!
}
zip.close();
```

Definition at line 132 of file quazipfile.cpp.

```
                                                    :
  QIODevice(parent),
  p(new QuaZipFilePrivate(this, zip))
{
}
```

12.73.3.7 QuaZipFile::~QuaZipFile ( ) [virtual]

Closes file if open, destructs internal QuaZip object (if it exists and *is* internal, of course).

Definition at line 138 of file quazipfile.cpp.

References close(), and p.

```
{
  if (isOpen())
    close();
  delete p;
}
```

Here is the call graph for this function:

12.73.4 Member Function Documentation

12.73.4.1 bool QuaZipFile::atEnd ( ) const [virtual]

This function returns `false` in the case of error. This means that you called this function on either not open file, or a file in the not open archive or even on a QuaZipFile instance that does not even have QuaZip instance associated. Do not do that because there is no means to determine whether `false` is returned because of error or because end of file was reached. Well, on the other side you may interpret `false` return value as "there is no file open to check for end of file and there is no end of file therefore".

When writing, this function always returns `true` (because you are always writing to the end of file).

Error code returned by getZipError() is not affected by this function call.

Definition at line 361 of file quazipfile.cpp.

References QuaZip::getUnzFile(), p, unzeof(), and QuaZipFilePrivate::zip.

```
{
  if(p->zip==NULL) {
    qWarning("QuaZipFile::atEnd(): call setZipName() or setZip() first");
    return false;
  }
  if(!isOpen()) {
    qWarning("QuaZipFile::atEnd(): file is not open");
    return false;
  }
  if(openMode()&ReadOnly)
      // the same problem as with pos()
    return QIODevice::bytesAvailable() == 0
        && unzeof(p->zip->getUnzFile())==1;
```

```
  else
    return true;
}
```

Here is the call graph for this function:

12.73.4.2 qint64 QuaZipFile::bytesAvailable ( ) const [virtual]

Definition at line 499 of file quazipfile.cpp.

References pos(), and size().

```
{
    return size() - pos();
}
```

Here is the call graph for this function:

12.73.4.3 void QuaZipFile::close ( ) [virtual]

Call getZipError() to determine if the close was successful.

Definition at line 432 of file quazipfile.cpp.

References QuaZip::close(), QuaZipFilePrivate::crc, QuaZip::getUnzFile(), QuaZip::getZipError(), QuaZip::getZipFile(), QuaZipFilePrivate::internal, QuaZip::isOpen(), isRaw(), p, QuaZipFilePrivate::resetZipError(), QuaZipFilePrivate::setZipError(), QuaZipFilePrivate::uncompressedSize, UNZ_OK, unzCloseCurrentFile(), QuaZipFilePrivate::zip, zipCloseFileInZip(), zipCloseFileInZipRaw64(), and QuaZipFilePrivate::zipError.

Referenced by JlCompress::compressFile(), JlCompress::compressSubDir(), JlCompress::extractFile(), and ~QuaZipFile().

```
{
  p->resetZipError();
  if(p->zip==NULL||!p->zip->isOpen()) return;
```

```
  if(!isOpen()) {
    qWarning("QuaZipFile::close(): file isn't open");
    return;
  }
  if(openMode()&ReadOnly)
    p->setZipError(unzCloseCurrentFile(p->zip->getUnzFile()));
  else if(openMode()&WriteOnly)
    if(isRaw()) p->setZipError(zipCloseFileInZipRaw64(p->zip->getZipFile(), p->uncompressedSize, p->crc));
    else p->setZipError(zipCloseFileInZip(p->zip->getZipFile()));
  else {
    qWarning("Wrong open mode: %d", (int)openMode());
    return;
  }
  if(p->zipError==UNZ_OK) setOpenMode(QIODevice::NotOpen);
  else return;
  if(p->internal) {
    p->zip->close();
    p->setZipError(p->zip->getZipError());
  }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.73.4.4 qint64 QuaZipFile::csize ( ) const

Equivalent to calling getFileInfo() and then getting compressedSize field, but more convenient and faster.

File must be open for reading before calling this function.

Returns -1 on error, call getZipError() to get error code.

Definition at line 391 of file quazipfile.cpp.

References unz_file_info64_s::compressed_size, QuaZip::getMode(), QuaZip::getUnzFile(), QuaZip::mdUnzip, p, QuaZipFilePrivate::setZipError(), UNZ_OK, unzGetCurrentFileInfo64(), QuaZipFilePrivate::zip, and QuaZipFilePrivate::zipError.

Referenced by size().

```
{
  unz_file_info64 info_z;
  p->setZipError(UNZ_OK);
  if(p->zip==NULL||p->zip->getMode()!=QuaZip::mdUnzip) return -1;
  p->setZipError(unzGetCurrentFileInfo64(p->
  zip->getUnzFile(), &info_z, NULL, 0, NULL, 0, NULL, 0));
  if(p->zipError!=UNZ_OK)
    return -1;
  return info_z.compressed_size;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.73.4.5 QString QuaZipFile::getActualFileName ( ) const

This is *not* a ZIP archive file name, but a name of file inside archive. It is not necessary the same name that you have passed to the QuaZipFile(const QString&,const QString&,QuaZip::CaseSensitivity,QObject*), setFileName() or QuaZip::setCurrentFile() - this is the real file name inside archive, so it may differ in case if the file name search was case-insensitive.

Equivalent to calling getCurrentFileName() on the associated QuaZip object. Returns null string if there is no associated QuaZip object or if it does not have a current file yet. And this is the case if you called setFileName() but did not open the file yet. So this is perfectly fine:

```
QuaZipFile file("somezip.zip");
file.setFileName("somefile");
QString name=file.getName(); // name=="somefile"
QString actual=file.getActualFileName(); // actual is null string
file.open(QIODevice::ReadOnly);
QString actual=file.getActualFileName(); // actual can be "SoMeFiLe" on Windows
```

See Also

getZipName(), getFileName(), QuaZip::CaseSensitivity

Definition at line 155 of file quazipfile.cpp.

References QuaZip::getCurrentFileName(), QuaZip::getZipError(), p, QuaZipFilePrivate::setZipError(), UNZ_OK, and QuaZipFilePrivate::zip.

```
{
  p->setZipError(UNZ_OK);
  if (p->zip == NULL || (openMode() & WriteOnly))
    return QString();
  QString name=p->zip->getCurrentFileName();
  if(name.isNull())
    p->setZipError(p->zip->getZipError());
  return name;
}
```

Here is the call graph for this function:

12.73.4.6 QuaZip::CaseSensitivity QuaZipFile::getCaseSensitivity ( ) const

This function returns case sensitivity argument you passed to this object either by using QuaZipFile(const QString&,const QString&,QuaZip::CaseSensitivity,QObject*) or by calling setFileName().

Returns unpredictable value if getFileName() returns null string (this is the case when you did not used setFileName() or constructor above).

See Also

getFileName

Definition at line 484 of file quazipfile.cpp.

References QuaZipFilePrivate::caseSensitivity, and p.

```
{
  return p->caseSensitivity;
}
```

12.73.4.7 bool QuaZipFile::getFileInfo (QuaZipFileInfo * *info*)

This function does the same thing as calling QuaZip::getCurrentFileInfo() on the associated QuaZip object, but you can not call getCurrentFileInfo() if the associated QuaZip is internal (because you do not have access to it), while you still can call this function in that case.

File must be open for reading before calling this function.

Returns

`false` in the case of an error.

This function doesn't support zip64, but will still work fine on zip64 archives if file sizes are below 4 GB, otherwise the values will be set as if converted using QuaZipFileInfo64::toQuaZipFileInfo().

See Also

getFileInfo(QuaZipFileInfo64*)

Definition at line 413 of file quazipfile.cpp.

References QuaZipFileInfo64::toQuaZipFileInfo().

```
414 {
415     QuaZipFileInfo64 info64;
416     if (getFileInfo(&info64)) {
417         info64.toQuaZipFileInfo(*info);
418         return true;
419     } else {
420         return false;
421     }
422 }
```

Here is the call graph for this function:

12.73.4.8 bool QuaZipFile::getFileInfo (QuaZipFileInfo64 * *info*)

This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts.

See Also

getFileInfo(QuaZipFileInfo*)

Definition at line 424 of file quazipfile.cpp.

References QuaZip::getCurrentFileInfo(), QuaZip::getMode(), QuaZip::getZipError(), QuaZip::mdUnzip, p, QuaZipFilePrivate::setZipError(), UNZ_OK, QuaZipFilePrivate::zip, and QuaZipFilePrivate::zipError.

```
425 {
426     if(p->zip==NULL||p->zip->getMode()!=QuaZip::mdUnzip) return false;
427     p->zip->getCurrentFileInfo(info);
428     p->setZipError(p->zip->getZipError());
429     return p->zipError==UNZ_OK;
430 }
```

Here is the call graph for this function:

12.73.4.9 QString QuaZipFile::getFileName ( ) const

This function returns file name you passed to this object either by using QuaZipFile(const QString&,const QString&,-QuaZip::CaseSensitivity,QObject∗) or by calling setFileName(). Real name of the file may differ in case if you used case-insensitivity.

Returns null string if there is no file name set yet. This is the case when this QuaZipFile operates on the existing QuaZip object (constructor QuaZipFile(QuaZip∗,QObject∗) or setZip() was used).

See Also

getActualFileName

Definition at line 479 of file quazipfile.cpp.

References QuaZipFilePrivate::fileName, and p.

```
{
  return p->fileName;
}
```

12.73.4.10 QuaZip ∗ QuaZipFile::getZip ( ) const

Returns NULL if there is no associated QuaZip or it is internal (so you will not mess with it).

Definition at line 150 of file quazipfile.cpp.

References QuaZipFilePrivate::internal, p, and QuaZipFilePrivate::zip.

```
{
    return p->internal ? NULL : p->zip;
}
```

12.73.4.11 int QuaZipFile::getZipError ( ) const

Definition at line 494 of file quazipfile.cpp.

References p, and QuaZipFilePrivate::zipError.

Referenced by JlCompress::compressFile(), and JlCompress::extractFile().

```
{
  return p->zipError;
}
```

Here is the caller graph for this function:

12.73.4.12 QString QuaZipFile::getZipName ( ) const

If this object was created by passing QuaZip pointer to the constructor, this function will return that QuaZip's file name (or null string if that object does not have file name yet).

Otherwise, returns associated ZIP archive file name or null string if there are no name set yet.

See Also

setZipName() getFileName()

Definition at line 145 of file quazipfile.cpp.

References QuaZip::getZipName(), p, and QuaZipFilePrivate::zip.

```
{
  return p->zip==NULL ? QString() : p->zip->getZipName();
}
```

Here is the call graph for this function:

12.73.4.13 bool QuaZipFile::isRaw ( ) const

If the file is not open, the returned value is undefined.

See Also

open(OpenMode,int∗,int∗,bool,const char∗)

Definition at line 489 of file quazipfile.cpp.

References p, and QuaZipFilePrivate::raw.

Referenced by close().

```
490 {
491   return p->raw;
492 }
```

Here is the caller graph for this function:

12.73.4.14 bool QuaZipFile::isSequential ( ) const [virtual]

Definition at line 337 of file quazipfile.cpp.

```
338 {
339   return true;
340 }
```

12.73.4.15 bool QuaZipFile::open (OpenMode *mode*) [virtual]

Returns `true` on success, `false` otherwise. Call getZipError() to get error code.

Note

Since ZIP/UNZIP API provides buffered reading only, QuaZipFile does not support unbuffered reading. So do not pass QIODevice::Unbuffered flag in *mode*, or open will fail.

Definition at line 221 of file quazipfile.cpp.

Referenced by KbFirmware::_fileForBoard(), JICompress::compressFile(), JICompress::compressSubDir(), and JICompress::extractFile().

```
222 {
223   return open(mode, NULL);
224 }
```

Here is the caller graph for this function:

12.73.4.16 bool QuaZipFile::open (OpenMode *mode*, const char * *password*) [inline]

This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts. Argument *password* specifies a password to decrypt the file. If it is NULL then this function behaves just like open(OpenMode).

Definition at line 298 of file quazipfile.h.

```
299     {return open(mode, NULL, NULL, false, password);}
```

12.73.4.17 bool QuaZipFile::open (OpenMode *mode*, int * *method*, int * *level*, bool *raw*, const char * *password* = NULL)

This is an overloaded member function, provided for convenience. It differs from the above function only in what argument(s) it accepts. Argument *password* specifies a password to decrypt the file.

An integers pointed by *method* and *level* will receive codes of the compression method and level used. See unzip.h.

If raw is `true` then no decompression is performed.

method should not be `NULL`. *level* can be `NULL` if you don't want to know the compression level.

Definition at line 226 of file quazipfile.cpp.

References QuaZipFilePrivate::caseSensitivity, QuaZip::close(), QuaZipFilePrivate::fileName, QuaZip::getMode(), QuaZip::getUnzFile(), QuaZip::getZipError(), QuaZip::hasCurrentFile(), QuaZipFilePrivate::internal, QuaZip::mdUnzip, QuaZip::open(), p, QuaZipFilePrivate::raw, QuaZipFilePrivate::resetZipError(), QuaZip::setCurrentFile(), QuaZipFilePrivate::setZipError(), UNZ_OK, unzOpenCurrentFile3(), QuaZipFilePrivate::zip, and QuaZipFilePrivate::zipError.

```
227 {
228   p->resetZipError();
229   if(isOpen()) {
230     qWarning("QuaZipFile::open(): already opened");
231     return false;
232   }
233   if(mode&Unbuffered) {
234     qWarning("QuaZipFile::open(): Unbuffered mode is not supported");
235     return false;
236   }
237   if((mode&ReadOnly)&&!(mode&WriteOnly)) {
238     if(p->internal) {
239       if(!p->zip->open(QuaZip::mdUnzip)) {
240         p->setZipError(p->zip->getZipError());
241         return false;
242       }
243       if(!p->zip->setCurrentFile(p->fileName, p->
      caseSensitivity)) {
244         p->setZipError(p->zip->getZipError());
245         p->zip->close();
246         return false;
247       }
248     } else {
249       if(p->zip==NULL) {
250         qWarning("QuaZipFile::open(): zip is NULL");
251         return false;
```

```
      }
      if(p->zip->getMode()!=QuaZip::mdUnzip) {
        qWarning("QuaZipFile::open(): file open mode %d incompatible with ZIP open mode %d",
            (int)mode, (int)p->zip->getMode());
        return false;
      }
      if(!p->zip->hasCurrentFile()) {
        qWarning("QuaZipFile::open(): zip does not have current file");
        return false;
      }
    }
    p->setZipError(unzOpenCurrentFile3(p->zip->
  getUnzFile(), method, level, (int)raw, password));
    if(p->zipError==UNZ_OK) {
      setOpenMode(mode);
      p->raw=raw;
      return true;
    } else
      return false;
  }
  qWarning("QuaZipFile::open(): open mode %d not supported by this function", (int)mode);
  return false;
}
```

Here is the call graph for this function:

12.73.4.18 bool QuaZipFile::open (OpenMode *mode*, const QuaZipNewInfo & *info*, const char * *password* = NULL, quint32 *crc* = 0, int *method* = Z_DEFLATED, int *level* = Z_DEFAULT_COMPRESSION, bool *raw* = false, int *windowBits* = -MAX_WBITS, int *memLevel* = MAX_MEM_LEVEL, int *strategy* = Z_DEFAULT_STRATEGY)

info argument specifies information about file. It should at least specify a correct file name. Also, it is a good idea to specify correct timestamp (by default, current time will be used). See QuaZipNewInfo.

The *password* argument specifies the password for crypting. Pass NULL if you don't need any crypting. The *crc* argument was supposed to be used for crypting too, but then it turned out that it's false information, so you need to set it to 0 unless you want to use the raw mode (see below).

Arguments *method* and *level* specify compression method and level. The only method supported is Z_DEFLATED, but you may also specify 0 for no compression. If all of the files in the archive use both method 0 and either level 0 is explicitly specified or data descriptor writing is disabled with QuaZip::setDataDescriptorWritingEnabled(), then the resulting archive is supposed to be compatible with the 1.0 ZIP format version, should you need that. Except for this, *level* has no other effects with method 0.

If *raw* is `true`, no compression is performed. In this case, *crc* and uncompressedSize field of the *info* are required.

Arguments *windowBits*, *memLevel*, *strategy* provide zlib algorithms tuning. See deflateInit2() in zlib.

Definition at line 275 of file quazipfile.cpp.

References QuaZipNewInfo::comment, QuaZipFilePrivate::crc, QuaZipNewInfo::dateTime, zip_fileinfo::dosDate, zip_fileinfo::external_fa, QuaZipNewInfo::externalAttr, QuaZipNewInfo::extraGlobal, QuaZipNewInfo::extraLocal, QuaZip::getCommentCodec(), QuaZip::getFileNameCodec(), QuaZip::getMode(), QuaZip::getZipFile(), QuaZipFilePrivate::internal, zip_fileinfo::internal_fa, QuaZipNewInfo::internalAttr, QuaZip::isDataDescriptorWritingEnabled(), QuaZip::isZip64Enabled(), QuaZip::mdAdd, QuaZip::mdAppend, QuaZip::mdCreate, QuaZipNewInfo::name, p, QuaZipFilePrivate::raw, QuaZipFilePrivate::resetZipError(), QuaZipFilePrivate::setZipError(), tm_zip_s::tm_hour, tm_zip_s::tm_mday, tm_zip_s::tm_min, tm_zip_s::tm_mon, tm_zip_s::tm_sec, tm_zip_s::tm_year, zip_fileinfo::tmz_date, QuaZipFilePrivate::uncompressedSize, QuaZipNewInfo::uncompressedSize, UNZ_OK, QuaZipFilePrivate::writePos, QuaZipFilePrivate::zip, ZIP_WRITE_DATA_DESCRIPTOR, zipClearFlags(), QuaZipFilePrivate::zipError, zipOpenNewFileInZip3_64(), and zipSetFlags().

```
{
  zip_fileinfo info_z;
  p->resetZipError();
  if(isOpen()) {
    qWarning("QuaZipFile::open(): already opened");
    return false;
  }
  if((mode&WriteOnly)&&!(mode&ReadOnly)) {
    if(p->internal) {
      qWarning("QuaZipFile::open(): write mode is incompatible with internal QuaZip approach");
      return false;
    }
    if(p->zip==NULL) {
      qWarning("QuaZipFile::open(): zip is NULL");
      return false;
    }
    if(p->zip->getMode()!=QuaZip::mdCreate&&p->zip->getMode()!=QuaZip::mdAppend&&p->zip->getMode()!=QuaZip::mdAdd) {
      qWarning("QuaZipFile::open(): file open mode %d incompatible with ZIP open mode %d",
          (int)mode, (int)p->zip->getMode());
      return false;
    }
    info_z.tmz_date.tm_year=info.dateTime.date().year();
    info_z.tmz_date.tm_mon=info.dateTime.date().month() - 1;
    info_z.tmz_date.tm_mday=info.dateTime.date().day();
    info_z.tmz_date.tm_hour=info.dateTime.time().hour();
    info_z.tmz_date.tm_min=info.dateTime.time().minute();
    info_z.tmz_date.tm_sec=info.dateTime.time().second();
    info_z.dosDate = 0;
    info_z.internal_fa=(uLong)info.internalAttr;
    info_z.external_fa=(uLong)info.externalAttr;
    if (p->zip->isDataDescriptorWritingEnabled())
        zipSetFlags(p->zip->getZipFile(), ZIP_WRITE_DATA_DESCRIPTOR);
    else
        zipClearFlags(p->zip->getZipFile(), ZIP_WRITE_DATA_DESCRIPTOR);
    p->setZipError(zipOpenNewFileInZip3_64(p->zip->getZipFile(),
            p->zip->getFileNameCodec()->fromUnicode(info.name).constData(), &info_z,
            info.extraLocal.constData(), info.extraLocal.length(),
            info.extraGlobal.constData(), info.extraGlobal.length(),
            p->zip->getCommentCodec()->fromUnicode(info.comment).constData(),
            method, level, (int)raw,
            windowBits, memLevel, strategy,
            password, (uLong)crc, p->zip->isZip64Enabled()));
    if(p->zipError==UNZ_OK) {
      p->writePos=0;
      setOpenMode(mode);
      p->raw=raw;
      if(raw) {
        p->crc=crc;
        p->uncompressedSize=info.uncompressedSize;
      }
      return true;
    } else
      return false;
  }
  qWarning("QuaZipFile::open(): open mode %d not supported by this function", (int)mode);
  return false;
}
```

Here is the call graph for this function:

12.73.4.19 QuaZipFile& QuaZipFile::operator= (const QuaZipFile & *that*) [private]

12.73.4.20 qint64 QuaZipFile::pos ( ) const [virtual]

Implementation of the QIODevice::pos(). When reading, this function is a wrapper to the ZIP/UNZIP unztell(), therefore it is unable to keep track of the ungetChar() calls (which is non-virtual and therefore is dangerous to reimplement). So if you are using ungetChar() feature of the QIODevice, this function reports incorrect value until you get back characters which you ungot.

When writing, pos() returns number of bytes already written (uncompressed unless you use raw mode).

Note

Although QuaZipFile is a sequential device and therefore pos() should always return zero, it does not, because it would be misguiding. Keep this in mind.

This function returns -1 if the file or archive is not open.

Error code returned by getZipError() is not affected by this function call.

Definition at line 342 of file quazipfile.cpp.

References QuaZip::getUnzFile(), p, unztell(), QuaZipFilePrivate::writePos, and QuaZipFilePrivate::zip.

Referenced by bytesAvailable().

```
{
  if(p->zip==NULL) {
    qWarning("QuaZipFile::pos(): call setZipName() or setZip() first");
    return -1;
  }
  if(!isOpen()) {
    qWarning("QuaZipFile::pos(): file is not open");
    return -1;
  }
  if(openMode()&ReadOnly)
      // QIODevice::pos() is broken for sequential devices,
      // but thankfully bytesAvailable() returns the number of
      // bytes buffered, so we know how far ahead we are.
    return unztell(p->zip->getUnzFile()) - QIODevice::bytesAvailable();
  else
    return p->writePos;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.73.4.21 qint64 QuaZipFile::readData (char * *data*, qint64 *maxSize*) [protected]

Definition at line 457 of file quazipfile.cpp.

References QuaZip::getUnzFile(), p, QuaZipFilePrivate::setZipError(), UNZ_OK, unzReadCurrentFile(), and QuaZipFilePrivate::zip.

```
{
  p->setZipError(UNZ_OK);
  qint64 bytesRead=unzReadCurrentFile(p->zip->getUnzFile(), data, (unsigned
  )maxSize);
  if (bytesRead < 0) {
    p->setZipError((int) bytesRead);
    return -1;
  }
  return bytesRead;
}
```

Here is the call graph for this function:

12.73.4.22 void QuaZipFile::setFileName (const QString & *fileName*, QuaZip::CaseSensitivity *cs* = QuaZip::csDefault)

Will do nothing if at least one of the following conditions is met:

- ZIP name has not been set yet (getZipName() returns null string).
- This QuaZipFile is associated with external QuaZip. In this case you should call that QuaZip's setCurrentFile() function instead!
- File is already open so setting the name is meaningless.

See Also

QuaZip::setCurrentFile

Definition at line 191 of file quazipfile.cpp.

References QuaZipFilePrivate::caseSensitivity, QuaZipFilePrivate::fileName, QuaZipFilePrivate::internal, p, and QuaZipFilePrivate::zip.

```
{
  if(p->zip==NULL) {
    qWarning("QuaZipFile::setFileName(): call setZipName() first");
    return;
  }
  if(!p->internal) {
    qWarning("QuaZipFile::setFileName(): should not be used when not using internal QuaZip");
    return;
  }
  if(isOpen()) {
    qWarning("QuaZipFile::setFileName(): can not set file name for already opened file");
    return;
  }
  p->fileName=fileName;
  if (p->fileName.startsWith('/'))
      p->fileName = p->fileName.mid(1);
  p->caseSensitivity=cs;
}
```

12.73.4.23 void QuaZipFile::setZip (QuaZip * *zip*)

This function destroys internal QuaZip object, if any, and makes this QuaZipFile to use current file in the *zip* object for any further operations. See QuaZipFile(QuaZip*,QObject*) for the possible pitfalls.

Will do nothing if the file is currently open. You must close() it first.

Definition at line 178 of file quazipfile.cpp.

References QuaZipFilePrivate::fileName, QuaZipFilePrivate::internal, p, and QuaZipFilePrivate::zip.

```
{
  if(isOpen()) {
    qWarning("QuaZipFile::setZip(): file is already open - can not set ZIP");
    return;
  }
  if(p->zip!=NULL && p->internal)
    delete p->zip;
  p->zip=zip;
  p->fileName=QString();
  p->internal=false;
}
```

12.73.4.24 void QuaZipFile::setZipName (const QString & *zipName*)

Automatically creates internal QuaZip object and destroys previously created internal QuaZip object, if any.

Will do nothing if this file is already open. You must close() it first.

Definition at line 166 of file quazipfile.cpp.

References QuaZipFilePrivate::internal, p, and QuaZipFilePrivate::zip.

```
{
  if(isOpen()) {
    qWarning("QuaZipFile::setZipName(): file is already open - can not set ZIP name");
    return;
  }
  if(p->zip!=NULL && p->internal)
    delete p->zip;
  p->zip=new QuaZip(zipName);
  p->internal=true;
}
```

12.73.4.25 qint64 QuaZipFile::size ( ) const [virtual]

This function returns csize() if the file is open for reading in raw mode, usize() if it is open for reading in normal mode and pos() if it is open for writing.

Returns -1 on error, call getZipError() to get error code.

Note

> This function returns file size despite that QuaZipFile is considered to be sequential device, for which size() should return bytesAvailable() instead. But its name would be very misguiding otherwise, so just keep in mind this inconsistence.

Definition at line 379 of file quazipfile.cpp.

References csize(), p, QuaZipFilePrivate::raw, usize(), and QuaZipFilePrivate::writePos.

Referenced by bytesAvailable().

```
{
  if(!isOpen()) {
    qWarning("QuaZipFile::atEnd(): file is not open");
    return -1;
  }
  if(openMode()&ReadOnly)
    return p->raw?csize():usize();
  else
    return p->writePos;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.73.4.26 qint64 QuaZipFile::usize ( ) const

Equivalent to calling getFileInfo() and then getting uncompressedSize field, but more convenient and faster. See getFileInfo() for a warning.

File must be open for reading before calling this function.

Returns -1 on error, call getZipError() to get error code.

Definition at line 402 of file quazipfile.cpp.

References QuaZip::getMode(), QuaZip::getUnzFile(), QuaZip::mdUnzip, p, QuaZipFilePrivate::setZipError(), unz_file_info64_s::uncompressed_size, UNZ_OK, unzGetCurrentFileInfo64(), QuaZipFilePrivate::zip, and QuaZipFilePrivate::zipError.

Referenced by size().

```
{
  unz_file_info64 info_z;
  p->setZipError(UNZ_OK);
  if(p->zip==NULL||p->zip->getMode()!=QuaZip::mdUnzip) return -1;
  p->setZipError(unzGetCurrentFileInfo64(p->zip->getUnzFile(), &info_z, NULL, 0, NULL, 0, NULL, 0));
  if(p->zipError!=UNZ_OK)
    return -1;
  return info_z.uncompressed_size;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.73.4.27 qint64 QuaZipFile::writeData (const char * *data*, qint64 *maxSize*) [protected]

Definition at line 468 of file quazipfile.cpp.

References QuaZip::getZipFile(), p, QuaZipFilePrivate::setZipError(), QuaZipFilePrivate::writePos, QuaZipFilePrivate::zip, ZIP_OK, QuaZipFilePrivate::zipError, and zipWriteInFileInZip().

```
{
  p->setZipError(ZIP_OK);
  p->setZipError(zipWriteInFileInZip(p->zip->
  getZipFile(), data, (uint)maxSize));
  if(p->zipError!=ZIP_OK) return -1;
  else {
    p->writePos+=maxSize;
    return maxSize;
  }
}
```

Here is the call graph for this function:

12.73.5 Friends And Related Function Documentation

12.73.5.1 friend class QuaZipFilePrivate [friend]

Definition at line 75 of file quazipfile.h.

12.73.6 Field Documentation

12.73.6.1 QuaZipFilePrivate* QuaZipFile::p [private]

Definition at line 78 of file quazipfile.h.

Referenced by atEnd(), close(), csize(), getActualFileName(), getCaseSensitivity(), getFileInfo(), getFileName(), getZip(), getZipError(), getZipName(), isRaw(), open(), pos(), readData(), setFileName(), setZip(), setZipName(), size(), usize(), writeData(), and ~QuaZipFile().

The documentation for this class was generated from the following files:

- src/ckb/quazip/quazipfile.h
- src/ckb/quazip/quazipfile.cpp

12.74 QuaZipFileInfo Struct Reference

Information about a file inside archive.

```
#include <src/ckb/quazip/quazipfileinfo.h>
```

Collaboration diagram for QuaZipFileInfo:

Public Member Functions

- QFile::Permissions getPermissions () const

  Get the file permissions.

Data Fields

- QString name

  File name.
- quint16 versionCreated

Version created by.

- quint16 versionNeeded

  Version needed to extract.

- quint16 flags

  General purpose flags.

- quint16 method

  Compression method.

- QDateTime dateTime

  Last modification date and time.

- quint32 crc

  CRC.

- quint32 compressedSize

  Compressed file size.

- quint32 uncompressedSize

  Uncompressed file size.

- quint16 diskNumberStart

  Disk number start.

- quint16 internalAttr

  Internal file attributes.

- quint32 externalAttr

  External file attributes.

- QString comment

  Comment.

- QByteArray extra

  Extra field.

12.74.1 Detailed Description

Deprecated Use QuaZipFileInfo64 instead. Not only it supports large files, but also more convenience methods as well.

Call QuaZip::getCurrentFileInfo() or QuaZipFile::getFileInfo() to fill this structure.

Definition at line 41 of file quazipfileinfo.h.

12.74.2 Member Function Documentation

12.74.2.1 QFile::Permissions QuaZipFileInfo::getPermissions ( ) const

Returns the high 16 bits of external attributes converted to QFile::Permissions.

Definition at line 52 of file quazipfileinfo.cpp.

References externalAttr, and permissionsFromExternalAttr().

```
{
    return permissionsFromExternalAttr(externalAttr);
}
```

Here is the call graph for this function:

12.74.3 Field Documentation

12.74.3.1 QString QuaZipFileInfo::comment

Definition at line 67 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.2 quint32 QuaZipFileInfo::compressedSize

Definition at line 57 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.3 quint32 QuaZipFileInfo::crc

Definition at line 55 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.4 QDateTime QuaZipFileInfo::dateTime

Definition at line 53 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.5 quint16 QuaZipFileInfo::diskNumberStart

Definition at line 61 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.6 quint32 QuaZipFileInfo::externalAttr

Definition at line 65 of file quazipfileinfo.h.

Referenced by getPermissions(), and QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.7 QByteArray QuaZipFileInfo::extra

Definition at line 69 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.8 quint16 QuaZipFileInfo::flags

Definition at line 49 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.9 quint16 QuaZipFileInfo::internalAttr

Definition at line 63 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.10 quint16 QuaZipFileInfo::method

Definition at line 51 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.11 QString QuaZipFileInfo::name

Definition at line 43 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.12 quint32 QuaZipFileInfo::uncompressedSize

Definition at line 59 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.13 quint16 QuaZipFileInfo::versionCreated

Definition at line 45 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

12.74.3.14 quint16 QuaZipFileInfo::versionNeeded

Definition at line 47 of file quazipfileinfo.h.

Referenced by QuaZipFileInfo64::toQuaZipFileInfo().

The documentation for this struct was generated from the following files:

- src/ckb/quazip/quazipfileinfo.h
- src/ckb/quazip/quazipfileinfo.cpp

12.75 QuaZipFileInfo64 Struct Reference

Information about a file inside archive (with zip64 support).

```
#include <src/ckb/quazip/quazipfileinfo.h>
```

Collaboration diagram for QuaZipFileInfo64:

Public Member Functions

- QFile::Permissions getPermissions () const

  Get the file permissions.
- bool toQuaZipFileInfo (QuaZipFileInfo &info) const

  Converts to QuaZipFileInfo.
- QDateTime getNTFSmTime (int ∗fineTicks=NULL) const

  Returns the NTFS modification time.
- QDateTime getNTFSaTime (int ∗fineTicks=NULL) const

  Returns the NTFS access time.
- QDateTime getNTFScTime (int ∗fineTicks=NULL) const

  Returns the NTFS creation time.
- bool isEncrypted () const

  Checks whether the file is encrypted.

Data Fields

- QString name

  File name.
- quint16 versionCreated

  Version created by.
- quint16 versionNeeded

  Version needed to extract.
- quint16 flags

  General purpose flags.
- quint16 method

  Compression method.
- QDateTime dateTime

  Last modification date and time.
- quint32 crc

  CRC.

- quint64 compressedSize

  Compressed file size.
- quint64 uncompressedSize

  Uncompressed file size.
- quint16 diskNumberStart

  Disk number start.
- quint16 internalAttr

  Internal file attributes.
- quint32 externalAttr

  External file attributes.
- QString comment

  Comment.
- QByteArray extra

  Extra field.

12.75.1 Detailed Description

Call QuaZip::getCurrentFileInfo() or QuaZipFile::getFileInfo() to fill this structure.

Definition at line 81 of file quazipfileinfo.h.

12.75.2 Member Function Documentation

12.75.2.1 QDateTime QuaZipFileInfo64::getNTFSaTime (int * *fineTicks* = NULL) const

The getNTFS*Time() functions only work if there is an NTFS extra field present. Otherwise, they all return invalid null timestamps.

Parameters

fineTicks	If not NULL, the fractional part of milliseconds returned there, measured in 100-nanosecond ticks. Will be set to zero if there is no NTFS extra field.

See Also

dateTime
getNTFSmTime()
getNTFScTime()

Returns

The NTFS access time, UTC

Definition at line 168 of file quazipfileinfo.cpp.

References extra, and getNTFSTime().

```
{
    return getNTFSTime(extra, 8, fineTicks);
}
```

Here is the call graph for this function:

12.75.2.2 QDateTime QuaZipFileInfo64::getNTFScTime (int * *fineTicks* = NULL) const

The getNTFS*Time() functions only work if there is an NTFS extra field present. Otherwise, they all return invalid null timestamps.

Parameters

fineTicks	If not NULL, the fractional part of milliseconds returned there, measured in 100-nanosecond ticks. Will be set to zero if there is no NTFS extra field.

See Also

dateTime
getNTFSmTime()
getNTFSaTime()

Returns

The NTFS creation time, UTC

Definition at line 173 of file quazipfileinfo.cpp.

References extra, and getNTFSTime().

```
174 {
175     return getNTFSTime(extra, 16, fineTicks);
176 }
```

Here is the call graph for this function:

12.75.2.3 QDateTime QuaZipFileInfo64::getNTFSmTime (int * *fineTicks* = NULL) const

The getNTFS*Time() functions only work if there is an NTFS extra field present. Otherwise, they all return invalid null timestamps.

Parameters

fineTicks	If not NULL, the fractional part of milliseconds returned there, measured in 100-nanosecond ticks. Will be set to zero if there is no NTFS extra field.

See Also

dateTime
getNTFSaTime()
getNTFScTime()

Returns

The NTFS modification time, UTC

Definition at line 163 of file quazipfileinfo.cpp.

References extra, and getNTFSTime().

```
164 {
165     return getNTFSTime(extra, 0, fineTicks);
166 }
```

Here is the call graph for this function:

12.75.2.4 QFile::Permissions QuaZipFileInfo64::getPermissions ( ) const

Returns the high 16 bits of external attributes converted to QFile::Permissions.

Definition at line 57 of file quazipfileinfo.cpp.

References externalAttr, and permissionsFromExternalAttr().

Referenced by JlCompress::extractFile().

```
58 {
59     return permissionsFromExternalAttr(externalAttr);
60 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.75.2.5 bool QuaZipFileInfo64::isEncrypted ( ) const [inline]

Definition at line 175 of file quazipfileinfo.h.

```
175 {return (flags & 1) != 0;}
```

12.75.2.6 bool QuaZipFileInfo64::toQuaZipFileInfo (QuaZipFileInfo & *info*) const

If any of the fields are greater than 0xFFFFFFFFu, they are set to 0xFFFFFFFFu exactly, not just truncated. This function should be mainly used for compatibility with the old code expecting QuaZipFileInfo, in the cases when it's impossible or otherwise unadvisable (due to ABI compatibility reasons, for example) to modify that old code to use QuaZipFileInfo64.

Returns

`true` if all fields converted correctly, `false` if an overflow occured.

Definition at line 62 of file quazipfileinfo.cpp.

References QuaZipFileInfo::comment, comment, QuaZipFileInfo::compressedSize, compressedSize, QuaZipFileInfo::crc, crc, QuaZipFileInfo::dateTime, dateTime, QuaZipFileInfo::diskNumberStart, diskNumberStart, QuaZipFileInfo::externalAttr, externalAttr, QuaZipFileInfo::extra, extra, QuaZipFileInfo::flags, flags, QuaZipFileInfo::internalAttr, internalAttr, QuaZipFileInfo::method, method, QuaZipFileInfo::name, name, QuaZipFileInfo::uncompressedSize, uncompressedSize, QuaZipFileInfo::versionCreated, versionCreated, QuaZipFileInfo::versionNeeded, and versionNeeded.

Referenced by QuaZip::getCurrentFileInfo(), and QuaZipFile::getFileInfo().

```
63 {
64     bool noOverflow = true;
65     info.name = name;
66     info.versionCreated = versionCreated;
67     info.versionNeeded = versionNeeded;
68     info.flags = flags;
69     info.method = method;
70     info.dateTime = dateTime;
71     info.crc = crc;
72     if (compressedSize > 0xFFFFFFFFu) {
73         info.compressedSize = 0xFFFFFFFFu;
74         noOverflow = false;
75     } else {
76         info.compressedSize = compressedSize;
77     }
78     if (uncompressedSize > 0xFFFFFFFFu) {
79         info.uncompressedSize = 0xFFFFFFFFu;
80         noOverflow = false;
81     } else {
82         info.uncompressedSize = uncompressedSize;
83     }
84     info.diskNumberStart = diskNumberStart;
85     info.internalAttr = internalAttr;
```

```
    info.externalAttr = externalAttr;
    info.comment = comment;
    info.extra = extra;
    return noOverflow;
}
```

Here is the caller graph for this function:

12.75.3 Field Documentation

12.75.3.1 QString QuaZipFileInfo64::comment

Definition at line 114 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), and toQuaZipFileInfo().

12.75.3.2 quint64 QuaZipFileInfo64::compressedSize

Definition at line 104 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), QuaZipDir_getFileInfo(), and toQuaZipFileInfo().

12.75.3.3 quint32 QuaZipFileInfo64::crc

Definition at line 102 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), QuaZipDir_getFileInfo(), and toQuaZipFileInfo().

12.75.3.4 QDateTime QuaZipFileInfo64::dateTime

This is the time stored in the standard ZIP header. This format only allows to store time with 2-second precision, so the seconds will always be even and the milliseconds will always be zero. If you need more precise date and time, you can try to call the getNTFSmTime() function or its siblings, provided that the archive itself contains these NTFS times.

Definition at line 100 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), and toQuaZipFileInfo().

12.75.3.5 quint16 QuaZipFileInfo64::diskNumberStart

Definition at line 108 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), QuaZipDir_getFileInfo(), and toQuaZipFileInfo().

12.75.3.6 quint32 QuaZipFileInfo64::externalAttr

Definition at line 112 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), getPermissions(), QuaZipDir_getFileInfo(), and toQuaZipFileInfo().

12.75.3.7 QByteArray QuaZipFileInfo64::extra

Definition at line 116 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), getNTFSaTime(), getNTFScTime(), getNTFSmTime(), and toQuaZipFileInfo().

12.75.3.8 quint16 QuaZipFileInfo64::flags

Definition at line 89 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), QuaZipDir_getFileInfo(), and toQuaZipFileInfo().

12.75.3.9 quint16 QuaZipFileInfo64::internalAttr

Definition at line 110 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), QuaZipDir_getFileInfo(), and toQuaZipFileInfo().

12.75.3.10 quint16 QuaZipFileInfo64::method

Definition at line 91 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), QuaZipDir_getFileInfo(), and toQuaZipFileInfo().

12.75.3.11 QString QuaZipFileInfo64::name

Definition at line 83 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), JlCompress::getFileList(), QuaZipDir_getFileInfo(), and toQuaZipFileInfo().

12.75.3.12 quint64 QuaZipFileInfo64::uncompressedSize

Definition at line 106 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), QuaZipDir_getFileInfo(), and toQuaZipFileInfo().

12.75.3.13 quint16 QuaZipFileInfo64::versionCreated

Definition at line 85 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), QuaZipDir_getFileInfo(), and toQuaZipFileInfo().

12.75.3.14 quint16 QuaZipFileInfo64::versionNeeded

Definition at line 87 of file quazipfileinfo.h.

Referenced by QuaZip::getCurrentFileInfo(), QuaZipDir_getFileInfo(), and toQuaZipFileInfo().

The documentation for this struct was generated from the following files:

- src/ckb/quazip/quazipfileinfo.h
- src/ckb/quazip/quazipfileinfo.cpp

12.76 QuaZipFilePrivate Class Reference

The implementation class for QuaZip.

Collaboration diagram for QuaZipFilePrivate:

Private Member Functions

- void resetZipError () const

  Resets zipError.
- void setZipError (int zipError) const

  Sets the zip error.
- QuaZipFilePrivate (QuaZipFile ∗q)

  The constructor for the corresponding QuaZipFile constructor.
- QuaZipFilePrivate (QuaZipFile ∗q, const QString &zipName)

  The constructor for the corresponding QuaZipFile constructor.
- QuaZipFilePrivate (QuaZipFile ∗q, const QString &zipName, const QString &fileName, QuaZip::CaseSensitivity cs)

  The constructor for the corresponding QuaZipFile constructor.
- QuaZipFilePrivate (QuaZipFile ∗q, QuaZip ∗zip)

  The constructor for the QuaZipFile constructor accepting a file name.
- ∼QuaZipFilePrivate ()

  The destructor.

Private Attributes

- QuaZipFile ∗ q

  The pointer to the associated QuaZipFile instance.
- QuaZip ∗ zip

  The QuaZip object to work with.
- QString fileName

  The file name.

- QuaZip::CaseSensitivity caseSensitivity

  Case sensitivity mode.
- bool raw

  Whether this file is opened in the raw mode.
- qint64 writePos

  Write position to keep track of.
- quint64 uncompressedSize

  Uncompressed size to write along with a raw file.
- quint32 crc

  CRC to write along with a raw file.
- bool internal

  Whether zip points to an internal QuaZip instance.
- int zipError

  The last error.

Friends

- class QuaZipFile

12.76.1 Detailed Description

This class contains all the private stuff for the QuaZipFile class, thus allowing to preserve binary compatibility between releases, the technique known as the Pimpl (private implementation) idiom.

Definition at line 37 of file quazipfile.cpp.

12.76.2 Constructor & Destructor Documentation

12.76.2.1 QuaZipFilePrivate::QuaZipFilePrivate (QuaZipFile * *q*) [inline],[private]

Definition at line 78 of file quazipfile.cpp.

```
78                                          :
79        q(q), zip(NULL), internal(true), zipError(UNZ_OK) {}
```

12.76.2.2 QuaZipFilePrivate::QuaZipFilePrivate (QuaZipFile * *q*, const QString & *zipName*) [inline],[private]

Definition at line 81 of file quazipfile.cpp.

```
81                                                                  :
82        q(q), internal(true), zipError(UNZ_OK)
83        {
84          zip=new QuaZip(zipName);
85        }
```

12.76.2.3 QuaZipFilePrivate::QuaZipFilePrivate (QuaZipFile * *q*, const QString & *zipName*, const QString & *fileName*, QuaZip::CaseSensitivity *cs*) [inline],[private]

Definition at line 87 of file quazipfile.cpp.

```
                                :
    q(q), internal(true), zipError(UNZ_OK)
    {
      zip=new QuaZip(zipName);
      this->fileName=fileName;
      if (this->fileName.startsWith('/'))
          this->fileName = this->fileName.mid(1);
      this->caseSensitivity=cs;
    }
```

12.76.2.4 QuaZipFilePrivate::QuaZipFilePrivate (QuaZipFile * *q*, QuaZip * *zip*) [inline],[private]

Definition at line 98 of file quazipfile.cpp.

```
                                                    :
    q(q), zip(zip), internal(false), zipError(UNZ_OK) {}
```

12.76.2.5 QuaZipFilePrivate::~QuaZipFilePrivate ( ) [inline],[private]

Definition at line 101 of file quazipfile.cpp.

```
  {
    if (internal)
      delete zip;
  }
```

12.76.3 Member Function Documentation

12.76.3.1 void QuaZipFilePrivate::resetZipError ( ) const [inline],[private]

Definition at line 69 of file quazipfile.cpp.

References UNZ_OK.

Referenced by QuaZipFile::close(), and QuaZipFile::open().

```
{setZipError(UNZ_OK);}
```

Here is the caller graph for this function:

12.76.3.2 void QuaZipFilePrivate::setZipError (int *zipError*) const [private]

This function is marked as const although it changes one field. This allows to call it from const functions that don't change anything by themselves.

Definition at line 211 of file quazipfile.cpp.

References q, UNZ_OK, and zipError.

Referenced by QuaZipFile::close(), QuaZipFile::csize(), QuaZipFile::getActualFileName(), QuaZipFile::getFileInfo(), QuaZipFile::open(), QuaZipFile::readData(), QuaZipFile::usize(), and QuaZipFile::writeData().

```
{
  QuaZipFilePrivate *fakeThis = const_cast<QuaZipFilePrivate*>(this); //
   non-const
  fakeThis->zipError=zipError;
  if(zipError==UNZ_OK)
    q->setErrorString(QString());
  else
    q->setErrorString(QuaZipFile::tr("ZIP/UNZIP API error %1").arg(zipError));
}
```

Here is the caller graph for this function:

12.76.4 Friends And Related Function Documentation

12.76.4.1 friend class QuaZipFile [friend]

Definition at line 38 of file quazipfile.cpp.

12.76.5 Field Documentation

12.76.5.1 QuaZip::CaseSensitivity QuaZipFilePrivate::caseSensitivity [private]

Definition at line 47 of file quazipfile.cpp.

Referenced by QuaZipFile::getCaseSensitivity(), QuaZipFile::open(), and QuaZipFile::setFileName().

12.76.5.2 quint32 QuaZipFilePrivate::crc [private]

Definition at line 59 of file quazipfile.cpp.

Referenced by QuaZipFile::close(), and QuaZipFile::open().

12.76.5.3 QString QuaZipFilePrivate::fileName [private]

Definition at line 45 of file quazipfile.cpp.

Referenced by QuaZipFile::getFileName(), QuaZipFile::open(), QuaZipFile::setFileName(), and QuaZipFile::setZip().

12.76.5.4 bool QuaZipFilePrivate::internal [private]

This is true if the archive was opened by name, rather than by supplying an existing QuaZip instance.

Definition at line 65 of file quazipfile.cpp.

Referenced by QuaZipFile::close(), QuaZipFile::getZip(), QuaZipFile::open(), QuaZipFile::setFileName(), QuaZipFile::setZip(), and QuaZipFile::setZipName().

12.76.5.5 QuaZipFile* QuaZipFilePrivate::q [private]

Definition at line 41 of file quazipfile.cpp.

Referenced by setZipError().

12.76.5.6 bool QuaZipFilePrivate::raw [private]

Definition at line 49 of file quazipfile.cpp.

Referenced by QuaZipFile::isRaw(), QuaZipFile::open(), and QuaZipFile::size().

12.76.5.7 quint64 QuaZipFilePrivate::uncompressedSize [private]

Definition at line 57 of file quazipfile.cpp.

Referenced by QuaZipFile::close(), and QuaZipFile::open().

12.76.5.8 qint64 QuaZipFilePrivate::writePos [private]

QIODevice::pos() is broken for non-seekable devices, so we need our own position.

Definition at line 55 of file quazipfile.cpp.

Referenced by QuaZipFile::open(), QuaZipFile::pos(), QuaZipFile::size(), and QuaZipFile::writeData().

12.76.5.9 QuaZip* QuaZipFilePrivate::zip [private]

Definition at line 43 of file quazipfile.cpp.

Referenced by QuaZipFile::atEnd(), QuaZipFile::close(), QuaZipFile::csize(), QuaZipFile::getActualFileName(), QuaZipFile::getFileInfo(), QuaZipFile::getZip(), QuaZipFile::getZipName(), QuaZipFile::open(), QuaZipFile::pos(), QuaZipFile::readData(), QuaZipFile::setFileName(), QuaZipFile::setZip(), QuaZipFile::setZipName(), QuaZipFile::usize(), and QuaZipFile::writeData().

12.76.5.10 int QuaZipFilePrivate::zipError [private]

Definition at line 67 of file quazipfile.cpp.

Referenced by QuaZipFile::close(), QuaZipFile::csize(), QuaZipFile::getFileInfo(), QuaZipFile::getZipError(), QuaZipFile::open(), setZipError(), QuaZipFile::usize(), and QuaZipFile::writeData().

The documentation for this class was generated from the following file:

- src/ckb/quazip/quazipfile.cpp

12.77 QuaZipNewInfo Struct Reference

Information about a file to be created.

`#include <src/ckb/quazip/quazipnewinfo.h>`

Collaboration diagram for QuaZipNewInfo:

Public Member Functions

- QuaZipNewInfo (const QString &name)

  Constructs QuaZipNewInfo instance.
- QuaZipNewInfo (const QString &name, const QString &file)

  Constructs QuaZipNewInfo instance.
- QuaZipNewInfo (const QuaZipFileInfo &existing)

  Initializes the new instance from existing file info.
- QuaZipNewInfo (const QuaZipFileInfo64 &existing)

  Initializes the new instance from existing file info.
- void setFileDateTime (const QString &file)

  Sets the file timestamp from the existing file.
- void setFilePermissions (const QString &file)

  Sets the file permissions from the existing file.
- void setPermissions (QFile::Permissions permissions)

  Sets the file permissions.
- void setFileNTFSTimes (const QString &fileName)

  Sets the NTFS times from an existing file.
- void setFileNTFSmTime (const QDateTime &mTime, int fineTicks=0)

  Sets the NTFS modification time.
- void setFileNTFSaTime (const QDateTime &aTime, int fineTicks=0)

  Sets the NTFS access time.
- void setFileNTFScTime (const QDateTime &cTime, int fineTicks=0)

  Sets the NTFS creation time.

Data Fields

- QString name

  File name.
- QDateTime dateTime

  File timestamp.
- quint16 internalAttr

  File internal attributes.
- quint32 externalAttr

  File external attributes.
- QString comment

  File comment.
- QByteArray extraLocal

  File local extra field.
- QByteArray extraGlobal

  File global extra field.
- ulong uncompressedSize

  Uncompressed file size.

12.77.1 Detailed Description

This structure holds information about a file to be created inside ZIP archive. At least name should be set to something correct before passing this structure to QuaZipFile::open(OpenMode,const QuaZipNewInfo&,int,int,bool).

Zip64 support of this structure is slightly limited: in the raw mode (when a pre-compressed file is written into a ZIP file as-is), it is necessary to specify the uncompressed file size and the appropriate field is 32 bit. Since the raw mode is used extremely rare, there is no real need to have a separate QuaZipNewInfo64 structure like QuaZipFileInfo64. It may be added in the future though, if there is a demand for the raw mode with zip64 archives.

Definition at line 50 of file quazipnewinfo.h.

12.77.2 Constructor & Destructor Documentation

12.77.2.1 QuaZipNewInfo::QuaZipNewInfo (const QString & *name*)

Initializes name with *name*, dateTime with current date and time. Attributes are initialized with zeros, comment and extra field with null values.

Definition at line 79 of file quazipnewinfo.cpp.

```
79                                                  :
80   name(name), dateTime(QDateTime::currentDateTime()),
      internalAttr(0), externalAttr(0),
81   uncompressedSize(0)
82 {
83 }
```

12.77.2.2 QuaZipNewInfo::QuaZipNewInfo (const QString & *name*, const QString & *file*)

Initializes name with *name*. Timestamp and permissions are taken from the specified file. If the *file* does not exists or its timestamp is inaccessible (e. g. you do not have read permission for the directory file in), uses current time and zero permissions. Other attributes are initialized with zeros, comment and extra field with null values.

See Also

setFileDateTime()

Definition at line 85 of file quazipnewinfo.cpp.

References dateTime, and QuaZipNewInfo_setPermissions().

```
85                                                                  :
86   name(name), internalAttr(0), externalAttr(0),
      uncompressedSize(0)
87 {
88   QFileInfo info(file);
89   QDateTime lm = info.lastModified();
90   if (!info.exists()) {
91     dateTime = QDateTime::currentDateTime();
92   } else {
93     dateTime = lm;
94     QuaZipNewInfo_setPermissions(this, info.permissions(), info.isDir());
95   }
96 }
```

Here is the call graph for this function:

12.77.2.3 QuaZipNewInfo::QuaZipNewInfo (const QuaZipFileInfo & *existing*)

Mainly used when copying files between archives.

Both extra fields are initialized to existing.extra. QuaZipNewInfo

Parameters

existing	

Definition at line 69 of file quazipnewinfo.cpp.

References QuaZipNewInfo_init().

```
70 {
71     QuaZipNewInfo_init(*this, existing);
72 }
```

Here is the call graph for this function:

12.77.2.4 QuaZipNewInfo::QuaZipNewInfo (const QuaZipFileInfo64 & *existing*)

Mainly used when copying files between archives.

Both extra fields are initialized to existing.extra. QuaZipNewInfo

Parameters

existing	

Definition at line 74 of file quazipnewinfo.cpp.

References QuaZipNewInfo_init().

```
75 {
76     QuaZipNewInfo_init(*this, existing);
77 }
```

Here is the call graph for this function:

12.77.3 Member Function Documentation

12.77.3.1 void QuaZipNewInfo::setFileDateTime (const QString & *file*)

Use this function to set the file timestamp from the existing file. Use it like this:

```
QuaZipFile zipFile(&zip);
QFile file("file-to-add");
file.open(QIODevice::ReadOnly);
QuaZipNewInfo info("file-name-in-archive");
info.setFileDateTime("file-to-add"); // take the timestamp from file
zipFile.open(QIODevice::WriteOnly, info);
```

This function does not change dateTime if some error occured (e. g. file is inaccessible).

Definition at line 98 of file quazipnewinfo.cpp.

References dateTime.

```
99 {
100   QFileInfo info(file);
101   QDateTime lm = info.lastModified();
102   if (info.exists())
103     dateTime = lm;
104 }
```

12.77.3.2 void QuaZipNewInfo::setFileNTFSaTime (const QDateTime & *aTime*, int *fineTicks* = 0)

The time is written into the NTFS record in both the local and the global extra fields, updating the existing record if there is one, or creating a new one and appending it to the end of each extra field. When updating an existing record, all other fields are left intact.

Parameters

aTime	The new access time.
fineTicks	The fractional part of milliseconds, in 100-nanosecond ticks (i. e. 9999 ticks = 999.9 microsecond). Values greater than 9999 will add milliseconds or even seconds, but this can be confusing and therefore is discouraged.

Definition at line 267 of file quazipnewinfo.cpp.

References extraGlobal, extraLocal, and setNTFSTime().

Referenced by setFileNTFSTimes().

```
268 {
269     setNTFSTime(extraLocal, aTime, 8, fineTicks);
270     setNTFSTime(extraGlobal, aTime, 8, fineTicks);
271 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.77.3.3 void QuaZipNewInfo::setFileNTFScTime (const QDateTime & *cTime*, int *fineTicks* = 0)

The time is written into the NTFS record in both the local and the global extra fields, updating the existing record if there is one, or creating a new one and appending it to the end of each extra field. When updating an existing record, all other fields are left intact.

Parameters

cTime	The new creation time.
fineTicks	The fractional part of milliseconds, in 100-nanosecond ticks (i. e. 9999 ticks = 999.9 microsecond). Values greater than 9999 will add milliseconds or even seconds, but this can be confusing and therefore is discouraged.

Definition at line 273 of file quazipnewinfo.cpp.

References extraGlobal, extraLocal, and setNTFSTime().

Referenced by setFileNTFSTimes().

```
274 {
275     setNTFSTime(extraLocal, cTime, 16, fineTicks);
276     setNTFSTime(extraGlobal, cTime, 16, fineTicks);
277 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.77.3.4 void QuaZipNewInfo::setFileNTFSmTime (const QDateTime & *mTime*, int *fineTicks* = 0)

The time is written into the NTFS record in both the local and the global extra fields, updating the existing record if there is one, or creating a new one and appending it to the end of each extra field. When updating an existing record, all other fields are left intact.

Parameters

mTime	The new modification time.
fineTicks	The fractional part of milliseconds, in 100-nanosecond ticks (i. e. 9999 ticks = 999.9 microsecond). Values greater than 9999 will add milliseconds or even seconds, but this can be confusing and therefore is discouraged.

Definition at line 261 of file quazipnewinfo.cpp.

References extraGlobal, extraLocal, and setNTFSTime().

Referenced by setFileNTFSTimes().

```
{
    setNTFSTime(extraLocal, mTime, 0, fineTicks);
    setNTFSTime(extraGlobal, mTime, 0, fineTicks);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.77.3.5 void QuaZipNewInfo::setFileNTFSTimes (const QString & *fileName*)

If the file doesn't exist, a warning is printed to the stderr and nothing is done. Otherwise, all three times, as reported by QFileInfo::lastModified(), QFileInfo::lastRead() and QFileInfo::created(), are written to the NTFS extra field record.

The NTFS record is written to both the local and the global extra fields, updating the existing record if there is one, or creating a new one and appending it to the end of each extra field.

The microseconds will be zero, as they aren't reported by QFileInfo.

Parameters

fileName	

Definition at line 118 of file quazipnewinfo.cpp.

References setFileNTFSaTime(), setFileNTFScTime(), and setFileNTFSmTime().

```
{
    QFileInfo fi(fileName);
    if (!fi.exists()) {
        qWarning("QuaZipNewInfo::setFileNTFSTimes(): '%s' doesn't exist",
                 fileName.toUtf8().constData());
        return;
    }
    setFileNTFSmTime(fi.lastModified());
    setFileNTFSaTime(fi.lastRead());
    setFileNTFScTime(fi.created());
}
```

Here is the call graph for this function:

12.77.3.6 void QuaZipNewInfo::setFilePermissions (const QString & *file*)

Takes permissions from the file and sets the high 16 bits of external attributes. Uses QFileInfo to get permissions on all platforms.

Definition at line 106 of file quazipnewinfo.cpp.

References QuaZipNewInfo_setPermissions().

```
{
    QFileInfo info = QFileInfo(file);
    QFile::Permissions perm = info.permissions();
    QuaZipNewInfo_setPermissions(this, perm, info.isDir());
}
```

Here is the call graph for this function:

12.77.3.7 void QuaZipNewInfo::setPermissions (QFile::Permissions *permissions*)

Modifies the highest 16 bits of external attributes. The type part is set to dir if the name ends with a slash, and to regular file otherwise.

Definition at line 113 of file quazipnewinfo.cpp.

References name, and QuaZipNewInfo_setPermissions().

```
{
    QuaZipNewInfo_setPermissions(this, permissions,
  name.endsWith('/'));
}
```

Here is the call graph for this function:

12.77.4 Field Documentation

12.77.4.1 QString QuaZipNewInfo::comment

Will be encoded using QuaZip::getCommentCodec().

Definition at line 75 of file quazipnewinfo.h.

Referenced by QuaZipFile::open().

12.77.4.2 QDateTime QuaZipNewInfo::dateTime

This is the last file modification date and time. Will be stored in the archive central directory. It is a good practice to set it to the source file timestamp instead of archive creating time. Use setFileDateTime() or QuaZipNewInfo(const QString&, const QString&).

Definition at line 62 of file quazipnewinfo.h.

Referenced by QuaZipFile::open(), QuaZipNewInfo(), and setFileDateTime().

12.77.4.3 quint32 QuaZipNewInfo::externalAttr

The highest 16 bits contain Unix file permissions and type (dir or file). The constructor QuaZipNewInfo(const QString&, const QString&) takes permissions from the provided file.

Definition at line 71 of file quazipnewinfo.h.

Referenced by QuaZipFile::open(), and QuaZipNewInfo_setPermissions().

12.77.4.4 QByteArray QuaZipNewInfo::extraGlobal

Definition at line 79 of file quazipnewinfo.h.

Referenced by QuaZipFile::open(), setFileNTFSaTime(), setFileNTFScTime(), and setFileNTFSmTime().

12.77.4.5 QByteArray QuaZipNewInfo::extraLocal

Definition at line 77 of file quazipnewinfo.h.

Referenced by QuaZipFile::open(), setFileNTFSaTime(), setFileNTFScTime(), and setFileNTFSmTime().

12.77.4.6 quint16 QuaZipNewInfo::internalAttr

Definition at line 64 of file quazipnewinfo.h.

Referenced by QuaZipFile::open().

12.77.4.7 QString QuaZipNewInfo::name

This field holds file name inside archive, including path relative to archive root.

Definition at line 55 of file quazipnewinfo.h.

Referenced by QuaZipFile::open(), and setPermissions().

12.77.4.8 ulong QuaZipNewInfo::uncompressedSize

This is only needed if you are using raw file zipping mode, i. e. adding precompressed file in the zip archive.

Definition at line 84 of file quazipnewinfo.h.

Referenced by QuaZipFile::open().

The documentation for this struct was generated from the following files:

- src/ckb/quazip/quazipnewinfo.h
- src/ckb/quazip/quazipnewinfo.cpp

12.78 QuaZipPrivate Class Reference

All the internal stuff for the QuaZip class.

Collaboration diagram for QuaZipPrivate:

Private Member Functions

- QTextCodec ∗ getDefaultFileNameCodec ()
- QuaZipPrivate (QuaZip ∗q)

  The constructor for the corresponding QuaZip constructor.
- QuaZipPrivate (QuaZip ∗q, const QString &zipName)

  The constructor for the corresponding QuaZip constructor.
- QuaZipPrivate (QuaZip ∗q, QIODevice ∗ioDevice)

  The constructor for the corresponding QuaZip constructor.
- template<typename TFileInfo >
  bool getFileInfoList (QList< TFileInfo > ∗result) const

  Returns either a list of file names or a list of QuaZipFileInfo.
- void clearDirectoryMap ()

  Stores map of filenames and file locations for unzipping.
- void addCurrentFileToDirectoryMap (const QString &fileName)
- bool goToFirstUnmappedFile ()

Private Attributes

- QuaZip ∗ q

  The pointer to the corresponding QuaZip instance.
- QTextCodec ∗ fileNameCodec

  The codec for file names.
- QTextCodec ∗ commentCodec

  The codec for comments.
- QString zipName

  The archive file name.
- QIODevice ∗ ioDevice

  The device to access the archive.

- QString comment

  The global comment.
- QuaZip::Mode mode

  The open mode.
- union {
  unzFile **unzFile_f**
  The internal handle for UNZIP modes.
  zipFile **zipFile_f**
  The internal handle for ZIP modes.
  };

- bool hasCurrentFile_f

  Whether a current file is set.
- int zipError

  The last error.
- bool dataDescriptorWritingEnabled

  Whether the data descriptor writing mode is enabled.
- bool zip64

  The zip64 mode.
- bool autoClose

  The auto-close flag.
- QHash< QString, unz64_file_pos > directoryCaseSensitive
- QHash< QString, unz64_file_pos > directoryCaseInsensitive
- unz64_file_pos lastMappedDirectoryEntry

Static Private Attributes

- static QTextCodec * defaultFileNameCodec = NULL

Friends

- class QuaZip

12.78.1 Detailed Description

This class keeps all the private stuff for the QuaZip class so it can be changed without breaking binary compatibility, according to the Pimpl idiom.

Definition at line 39 of file quazip.cpp.

12.78.2 Constructor & Destructor Documentation

12.78.2.1 QuaZipPrivate::QuaZipPrivate (QuaZip * *q*) [inline],[private]

Definition at line 81 of file quazip.cpp.

References lastMappedDirectoryEntry, unz64_file_pos_s::num_of_file, and unz64_file_pos_s::pos_in_zip_directory.

```
:
    q(q),
    fileNameCodec(getDefaultFileNameCodec()),
    commentCodec(QTextCodec::codecForLocale()),
    ioDevice(NULL),
    mode(QuaZip::mdNotOpen),
```

```
87        hasCurrentFile_f(false),
88        zipError(UNZ_OK),
89        dataDescriptorWritingEnabled(true),
90        zip64(false),
91        autoClose(true)
92      {
93          lastMappedDirectoryEntry.num_of_file = 0;
94          lastMappedDirectoryEntry.pos_in_zip_directory = 0;
95      }
```

12.78.2.2 QuaZipPrivate::QuaZipPrivate (QuaZip * *q*, const QString & *zipName*) [inline],[private]

Definition at line 97 of file quazip.cpp.

References lastMappedDirectoryEntry, unz64_file_pos_s::num_of_file, and unz64_file_pos_s::pos_in_zip_directory.

```
97                                                          :
98        q(q),
99        fileNameCodec(getDefaultFileNameCodec()),
100        commentCodec(QTextCodec::codecForLocale()),
101        zipName(zipName),
102        ioDevice(NULL),
103        mode(QuaZip::mdNotOpen),
104        hasCurrentFile_f(false),
105        zipError(UNZ_OK),
106        dataDescriptorWritingEnabled(true),
107        zip64(false),
108        autoClose(true)
109      {
110          lastMappedDirectoryEntry.num_of_file = 0;
111          lastMappedDirectoryEntry.pos_in_zip_directory = 0;
112      }
```

12.78.2.3 QuaZipPrivate::QuaZipPrivate (QuaZip * *q*, QIODevice * *ioDevice*) [inline],[private]

Definition at line 114 of file quazip.cpp.

References lastMappedDirectoryEntry, unz64_file_pos_s::num_of_file, and unz64_file_pos_s::pos_in_zip_directory.

```
114                                                          :
115          q(q),
116        fileNameCodec(getDefaultFileNameCodec()),
117        commentCodec(QTextCodec::codecForLocale()),
118        ioDevice(ioDevice),
119        mode(QuaZip::mdNotOpen),
120        hasCurrentFile_f(false),
121        zipError(UNZ_OK),
122        dataDescriptorWritingEnabled(true),
123        zip64(false),
124        autoClose(true)
125      {
126          lastMappedDirectoryEntry.num_of_file = 0;
127          lastMappedDirectoryEntry.pos_in_zip_directory = 0;
128      }
```

12.78.3 Member Function Documentation

12.78.3.1 void QuaZipPrivate::addCurrentFileToDirectoryMap (const QString & *fileName*) [inline],[private]

Definition at line 153 of file quazip.cpp.

References directoryCaseInsensitive, directoryCaseSensitive, hasCurrentFile_f, lastMappedDirectoryEntry, unz64_file_pos_s::pos_in_zip_directory, and unzGetFilePos64().

Referenced by QuaZip::getCurrentFileInfo(), and QuaZip::getCurrentFileName().

```
{
    if (!hasCurrentFile_f || fileName.isEmpty()) {
        return;
    }
    // Adds current file to filename map as fileName
    unz64_file_pos fileDirectoryPos;
    unzGetFilePos64(unzFile_f, &fileDirectoryPos);
    directoryCaseSensitive.insert(fileName, fileDirectoryPos);
    // Only add lowercase to directory map if not already there
    // ensures only map the first one seen
    QString lower = fileName.toLower();
    if (!directoryCaseInsensitive.contains(lower))
        directoryCaseInsensitive.insert(lower, fileDirectoryPos);
    // Mark last one
    if (fileDirectoryPos.pos_in_zip_directory >
  lastMappedDirectoryEntry.pos_in_zip_directory)
        lastMappedDirectoryEntry = fileDirectoryPos;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.78.3.2 void QuaZipPrivate::clearDirectoryMap ( ) [inline],[private]

Definition at line 145 of file quazip.cpp.

References directoryCaseInsensitive, directoryCaseSensitive, lastMappedDirectoryEntry, unz64_file_pos_s::num_of_file, and unz64_file_pos_s::pos_in_zip_directory.

Referenced by QuaZip::close().

```
{
    directoryCaseInsensitive.clear();
    directoryCaseSensitive.clear();
    lastMappedDirectoryEntry.num_of_file = 0;
    lastMappedDirectoryEntry.pos_in_zip_directory = 0;
}
```

Here is the caller graph for this function:

12.78.3.3 QTextCodec* QuaZipPrivate::getDefaultFileNameCodec ( ) [inline],[private]

Definition at line 72 of file quazip.cpp.

References defaultFileNameCodec.

```
73     {
74         if (defaultFileNameCodec == NULL) {
75             return QTextCodec::codecForLocale();
76         } else {
77             return defaultFileNameCodec;
78         }
79     }
```

12.78.3.4 template<typename TFileInfo > bool QuaZipPrivate::getFileInfoList (QList< TFileInfo > * *result*) const [private]

Definition at line 687 of file quazip.cpp.

References QuaZip::getCurrentFileName(), QuaZip::goToFirstFile(), QuaZip::goToNextFile(), QuaZip::hasCurrentFile(), QuaZip::mdUnzip, mode, q, QuaZip::setCurrentFile(), UNZ_OK, and zipError.

Referenced by QuaZip::getFileInfoList(), QuaZip::getFileInfoList64(), and QuaZip::getFileNameList().

```
688 {
689   QuaZipPrivate *fakeThis=const_cast<QuaZipPrivate*>(this);
690   fakeThis->zipError=UNZ_OK;
691   if (mode!=QuaZip::mdUnzip) {
692     qWarning("QuaZip::getFileNameList/getFileInfoList(): "
693              "ZIP is not open in mdUnzip mode");
694     return false;
695   }
696   QString currentFile;
697   if (q->hasCurrentFile()) {
698       currentFile = q->getCurrentFileName();
699   }
700   if (q->goToFirstFile()) {
701       do {
702           bool ok;
703           result->append(QuaZip_getFileInfo<TFileInfo>(q, &ok));
704           if (!ok)
705               return false;
706       } while (q->goToNextFile());
707   }
708   if (zipError != UNZ_OK)
709       return false;
```

```
  if (currentFile.isEmpty()) {
      if (!q->goToFirstFile())
          return false;
  } else {
      if (!q->setCurrentFile(currentFile))
          return false;
  }
  return true;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.78.3.5 bool QuaZipPrivate::goToFirstUnmappedFile ( ) [private]

Definition at line 172 of file quazip.cpp.

References hasCurrentFile_f, lastMappedDirectoryEntry, QuaZip::mdUnzip, mode, unz64_file_pos_s::pos_in_zip_directory, UNZ_END_OF_LIST_OF_FILE, UNZ_OK, unzGoToFilePos64(), unzGoToFirstFile(), unzGoToNextFile(), and zipError.

Referenced by QuaZip::setCurrentFile().

```
{
    zipError = UNZ_OK;
    if (mode != QuaZip::mdUnzip) {
        qWarning("QuaZipPrivate::goToNextUnmappedFile(): ZIP is not open in mdUnzip mode");
        return false;
    }
    // If not mapped anything, go to beginning
    if (lastMappedDirectoryEntry.pos_in_zip_directory == 0) {
        unzGoToFirstFile(unzFile_f);
    } else {
        // Goto the last one mapped, plus one
        unzGoToFilePos64(unzFile_f, &lastMappedDirectoryEntry);
        unzGoToNextFile(unzFile_f);
    }
```

```
    hasCurrentFile_f=zipError==UNZ_OK;
    if(zipError==UNZ_END_OF_LIST_OF_FILE)
      zipError=UNZ_OK;
    return hasCurrentFile_f;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.78.4 Friends And Related Function Documentation

12.78.4.1 friend class QuaZip [friend]

Definition at line 40 of file quazip.cpp.

12.78.5 Field Documentation

12.78.5.1 union { ... } [private]

12.78.5.2 bool QuaZipPrivate::autoClose [private]

Definition at line 71 of file quazip.cpp.

Referenced by QuaZip::isAutoClose(), QuaZip::open(), and QuaZip::setAutoClose().

12.78.5.3 QString QuaZipPrivate::comment [private]

Definition at line 53 of file quazip.cpp.

Referenced by QuaZip::close(), and QuaZip::setComment().

12.78.5.4 QTextCodec* QuaZipPrivate::commentCodec [private]

Definition at line 47 of file quazip.cpp.

Referenced by QuaZip::close(), QuaZip::getComment(), QuaZip::getCommentCodec(), QuaZip::getCurrentFileInfo(), and QuaZip::setCommentCodec().

12.78.5.5 bool QuaZipPrivate::dataDescriptorWritingEnabled [private]

Definition at line 67 of file quazip.cpp.

Referenced by QuaZip::isDataDescriptorWritingEnabled(), QuaZip::open(), and QuaZip::setDataDescriptorWritingEnabled().

12.78.5.6 QTextCodec * QuaZipPrivate::defaultFileNameCodec = NULL [static], [private]

Definition at line 140 of file quazip.cpp.

Referenced by getDefaultFileNameCodec(), and QuaZip::setDefaultFileNameCodec().

12.78.5.7 QHash<QString, unz64_file_pos> QuaZipPrivate::directoryCaseInsensitive [private]

Definition at line 138 of file quazip.cpp.

Referenced by addCurrentFileToDirectoryMap(), clearDirectoryMap(), and QuaZip::setCurrentFile().

12.78.5.8 QHash<QString, unz64_file_pos> QuaZipPrivate::directoryCaseSensitive [private]

Definition at line 137 of file quazip.cpp.

Referenced by addCurrentFileToDirectoryMap(), clearDirectoryMap(), and QuaZip::setCurrentFile().

12.78.5.9 QTextCodec* QuaZipPrivate::fileNameCodec [private]

Definition at line 45 of file quazip.cpp.

Referenced by QuaZip::getCurrentFileInfo(), QuaZip::getCurrentFileName(), QuaZip::getFileNameCodec(), and QuaZip::setFileNameCodec().

12.78.5.10 bool QuaZipPrivate::hasCurrentFile_f [private]

Definition at line 63 of file quazip.cpp.

Referenced by addCurrentFileToDirectoryMap(), QuaZip::goToFirstFile(), goToFirstUnmappedFile(), QuaZip::goToNextFile(), QuaZip::hasCurrentFile(), and QuaZip::setCurrentFile().

12.78.5.11 QIODevice* QuaZipPrivate::ioDevice [private]

Definition at line 51 of file quazip.cpp.

Referenced by QuaZip::close(), QuaZip::getIoDevice(), QuaZip::open(), QuaZip::setIoDevice(), and QuaZip::setZipName().

12.78.5.12 unz64_file_pos QuaZipPrivate::lastMappedDirectoryEntry [private]

Definition at line 139 of file quazip.cpp.

Referenced by addCurrentFileToDirectoryMap(), clearDirectoryMap(), goToFirstUnmappedFile(), and QuaZipPrivate().

12.78.5.13 QuaZip::Mode QuaZipPrivate::mode [private]

Definition at line 55 of file quazip.cpp.

Referenced by QuaZip::close(), QuaZip::getComment(), QuaZip::getCurrentFileInfo(), QuaZip::getCurrentFileName(), QuaZip::getEntriesCount(), getFileInfoList(), QuaZip::getMode(), QuaZip::goToFirstFile(), goToFirstUnmappedFile(), QuaZip::goToNextFile(), QuaZip::isOpen(), QuaZip::open(), and QuaZip::setCurrentFile().

12.78.5.14 QuaZip* QuaZipPrivate::q [private]

Definition at line 43 of file quazip.cpp.

Referenced by getFileInfoList().

12.78.5.15 bool QuaZipPrivate::zip64 [private]

Definition at line 69 of file quazip.cpp.

Referenced by QuaZip::isZip64Enabled(), and QuaZip::setZip64Enabled().

12.78.5.16 int QuaZipPrivate::zipError [private]

Definition at line 65 of file quazip.cpp.

Referenced by QuaZip::close(), QuaZip::getComment(), QuaZip::getCurrentFileInfo(), QuaZip::getCurrentFileName(), QuaZip::getEntriesCount(), getFileInfoList(), QuaZip::getZipError(), QuaZip::goToFirstFile(), goToFirstUnmappedFile(), QuaZip::goToNextFile(), QuaZip::open(), and QuaZip::setCurrentFile().

12.78.5.17 QString QuaZipPrivate::zipName [private]

Definition at line 49 of file quazip.cpp.

Referenced by QuaZip::close(), QuaZip::getIoDevice(), QuaZip::getZipName(), QuaZip::open(), QuaZip::setIoDevice(), and QuaZip::setZipName().

The documentation for this class was generated from the following file:

- src/ckb/quazip/quazip.cpp

12.79 QWidget Class Reference

Inheritance diagram for QWidget:

Collaboration diagram for QWidget:

The documentation for this class was generated from the following file:

- src/ckb/keywidget.h

12.80 RebindWidget Class Reference

```
#include <src/ckb/rebindwidget.h>
```

Inheritance diagram for RebindWidget:

Collaboration diagram for RebindWidget:

Public Member Functions

- RebindWidget (QWidget ∗parent)
- ∼RebindWidget ()
- void setBind (KbBind ∗newBind, KbProfile ∗newProfile)
- void setSelection (const QStringList &newSelection, bool applyPrevious=false)

Private Slots

- void applyChanges (const QStringList &keys, bool doUnbind)
- void on_applyButton_clicked ()
- void on_cancelButton_clicked ()
- void on_resetButton_clicked ()
- void on_unbindButton_clicked ()
- void on_typingBox_currentIndexChanged (int index)
- void on_modBox_currentIndexChanged (int index)
- void on_fnBox_currentIndexChanged (int index)
- void on_numBox_currentIndexChanged (int index)
- void on_mediaBox_currentIndexChanged (int index)
- void on_mbBox_currentIndexChanged (int index)
- void on_mb2Box_currentIndexChanged (int index)
- void on_wheelBox_currentIndexChanged (int index)
- void on_dpiBox_currentIndexChanged (int index)
- void on_modeBox_currentIndexChanged (int index)
- void on_lightBox_currentIndexChanged (int index)
- void on_lockBox_currentIndexChanged (int index)
- void on_programKpBox_textChanged (const QString &arg1)
- void on_programKrBox_textChanged (const QString &arg1)
- void on_animBox_currentIndexChanged (int index)
- void on_typingButton_clicked (bool checked)
- void on_modButton_clicked (bool checked)
- void on_fnButton_clicked (bool checked)

- void on_numButton_clicked (bool checked)
- void on_mediaButton_clicked (bool checked)
- void on_mbButton_clicked (bool checked)
- void on_mb2Button_clicked (bool checked)
- void on_wheelButton_clicked (bool checked)
- void on_dpiButton_clicked (bool checked)
- void on_modeButton_clicked (bool checked)
- void on_lightButton_clicked (bool checked)
- void on_lockButton_clicked (bool checked)
- void on_programKpButton_clicked (bool checked)
- void on_programKrButton_clicked (bool checked)
- void on_programKpSIBox_clicked (bool checked)
- void on_programKrSIBox_clicked (bool checked)
- void on_animButton_clicked (bool checked)
- void on_pteMacroBox_textChanged ()
- void on_btnStartMacro_clicked ()

  RebindWidget::on_btnStartMacro_clicked starts macro recording. A new notification channel and MacroReader are created to do the job.
- void on_btnStopMacro_clicked ()

  RebindWidget::on_btnStopMacro_clicked ends the macro recording. Notify channel ist closed, the ReaderThread is deleted if the notification is really down.
- void on_btnClearMacro_clicked ()

  RebindWidget::on_btnClearMacro_clicked changes the help info an the panel. The job of clearing the input panels is triggerd with signal/slot via the RebindWidget.ui file.

Private Member Functions

- void setBox (QWidget *box)
- void convertMacroBox ()

  RebindWidget::convertMacroBox converts the macroBox content. The KB sends each keypress as "key [+|-]<keyname><newline>".
- void helpStatus (int status)

  RebindWidget::helpStatus shows a help line in the ui.

Private Attributes

- Ui::RebindWidget * ui
- KbBind * bind
- KbProfile * profile
- QStringList selection
- QStringList typingKeys
- QStringList modKeys
- QStringList fnKeys
- QStringList numKeys
- QStringList mediaKeys
- QStringList mouseKeys
- QStringList mouseExtKeys
- QStringList wheelKeys
- MacroReader * macReader

  macReader holds the MacroReader when macro recording starts.

Static Private Attributes

- static const int TAB_KB = 0
- static const int TAB_MOUSE = 1
- static const int TAB_ANIM = 2
- static const int TAB_SPECIAL = 3
- static const int TAB_PROGRAM = 4
- static const int TAB_MACRO = 5

12.80.1 Detailed Description

Definition at line 15 of file rebindwidget.h.

12.80.2 Constructor & Destructor Documentation

12.80.2.1 RebindWidget::RebindWidget (QWidget * *parent*) [explicit]

Definition at line 9 of file rebindwidget.cpp.

References Ui_RebindWidget::fnBox, fnKeys, KeyMap::friendlyName(), Ui_RebindWidget::lightWrapBox, Ui_RebindWidget::mediaBox, mediaKeys, Ui_RebindWidget::modBox, Ui_RebindWidget::modeWrapBox, modKeys, mouseExtKeys, mouseKeys, Ui_RebindWidget::numBox, numKeys, Ui_RebindWidget::programKpExtra, Ui_RebindWidget::programKrExtra, Ui_RebindWidget::progTipLabel, Ui_RebindWidget::setupUi(), ui, and wheelKeys.

```
9                                       :
10     QWidget(parent),
11     ui(new Ui::RebindWidget),
12     bind(0), profile(0), macReader(0)
13 {
14     ui->setupUi(this);
15     ui->lightWrapBox->hide();
16     ui->modeWrapBox->hide();
17     ui->programKpExtra->hide();
18     ui->programKrExtra->hide();
19
20     // Populate key lists
21     modKeys << "caps" << "lshift" << "rshift" << "lctrl" << "rctrl" << "lwin" << "rwin" << "lalt" <<
       "ralt" << "rmenu" << "fn";
22     fnKeys << "esc" << "f1" << "f2" << "f3" << "f4" << "f5" << "f6" << "f7" << "f8" << "f9" << "f10"
      << "f11" << "f12" << "prtscn" << "scroll" << "pause" << "f13" << "f14" << "f15" << "f16" << "f17" << "f18" <
      < "f19" << "f20" << "ins" << "del" << "home" << "end" << "pgup" << "pgdn" << "power" << "lightup" << "
      lightdn" << "up" << "down" << "left" << "right";
23     numKeys << "numlock" << "num0" << "num1" << "num2" << "num3" << "num4" << "num5" << "num6" << "
      num7" << "num8" << "num9" << "numslash" << "numstar" << "numminus" << "numplus" << "numdot" << "numenter";
24     mediaKeys << "stop" << "prev" << "play" << "next" << "volup" << "voldn" << "mute" << "eject";
25     mouseKeys << "mouse1" << "mouse2" << "mouse3";
26     mouseExtKeys << "mouse4" << "mouse5" << "mouse6" << "mouse7" << "mouse8";
27     wheelKeys << "wheelup" << "wheeldn";
28     // Populate boxes
29     foreach(const QString& key, modKeys)
30         ui->modBox->addItem(KeyMap::friendlyName(key));
31     foreach(const QString& key, fnKeys)
32         ui->fnBox->addItem(KeyMap::friendlyName(key).replace("\n", " / "));
33     foreach(const QString& key, numKeys)
34         ui->numBox->addItem(KeyMap::friendlyName(key).remove("NumPad "));
35     foreach(const QString& key, mediaKeys)
36         ui->mediaBox->addItem(KeyMap::friendlyName(key));
37 #ifdef Q_OS_MACX
38     // Replace some OSX keys with their actual meanings
39     ui->modBox->setItemText(modKeys.indexOf("lwin") + 1, "Left Cmd");
40     ui->modBox->setItemText(modKeys.indexOf("rwin") + 1, "Right Cmd");
41     ui->modBox->setItemText(modKeys.indexOf("lalt") + 1, "Left Option");
42     ui->modBox->setItemText(modKeys.indexOf("ralt") + 1, "Right Option");
43     ui->fnBox->setItemText(fnKeys.indexOf("prtscn") + 1, "F13");
44     ui->fnBox->setItemText(fnKeys.indexOf("scroll") + 1, "F14");
45     ui->fnBox->setItemText(fnKeys.indexOf("pause") + 1, "F15");
46     ui->fnBox->setItemText(fnKeys.indexOf("f13") + 1, "F13 (Windows/Linux)");
47     ui->fnBox->setItemText(fnKeys.indexOf("f14") + 1, "F14 (Windows/Linux)");
48     ui->fnBox->setItemText(fnKeys.indexOf("f15") + 1, "F15 (Windows/Linux)");
49     ui->fnBox->setItemText(fnKeys.indexOf("ins") + 1, "Help");
50     ui->numBox->setItemText(numKeys.indexOf("numlock") + 1, "Clear");
51
52     // Add tip label
```

```
    ui->progTipLabel->setText("<p style=\"line-height:150%\">Tip: use the <font face=\"monospace\">open</font> command to launch a file, directory, or app. For instance, to start Safari:<br /><font face=\"monospace\">  open /Applications/Safari.app</font></p>");
#else
    ui->progTipLabel->setText("<p style=\"line-height:150%\">Tip: use <font face=\"monospace\">xdg-open</font> to launch a file or directory. For instance, to open your home folder:<br /><font face=\"monospace\">  xdg-open " + QStandardPaths::writableLocation(QStandardPaths::HomeLocation) + "</font></p>");
#endif
}
```

Here is the call graph for this function:

12.80.2.2 RebindWidget::~RebindWidget ( )

Definition at line 59 of file rebindwidget.cpp.

References ui.

```
                                {
    delete ui;
}
```

12.80.3 Member Function Documentation

12.80.3.1 void RebindWidget::applyChanges (const QStringList & *keys*, bool *doUnbind*) [private],[slot]

Definition at line 327 of file rebindwidget.cpp.

References anim, KeyAction::animAction(), Ui_RebindWidget::animBox, Ui_RebindWidget::animKrBox, KbLight::animList(), Ui_RebindWidget::animOnceBox, bind, DPI_OFFSET, KeyAction::dpiAction(), Ui_RebindWidget::dpiBox, Ui_RebindWidget::dpiCustXBox, Ui_RebindWidget::dpiCustYBox, Ui_RebindWidget::fnBox, fnKeys, KbAnim::guid(), KbBind::light(), KeyAction::lightAction(), Ui_RebindWidget::lightBox, Ui_RebindWidget::lightWrapBox, KeyAction::lockAction(), Ui_RebindWidget::lockBox, KeyAction::macroAction(), Ui_RebindWidget::mb2Box, Ui_RebindWidget::mbBox, Ui_RebindWidget::mediaBox, mediaKeys, Ui_RebindWidget::modBox, KeyAction::modeAction(), Ui_RebindWidget::modeBox, Ui_RebindWidget::modeWrapBox, modKeys, mouseExtKeys, mouseKeys, KbBind::noAction(), Ui_RebindWidget::numBox, numKeys, KeyAction::PROGRAM_PR_MULTI, KeyAction::PROGRAM_RE_INDEF, KeyAction::PROGRAM_RE_KPSTOP, KeyAction::PROGRAM_RE_MULTI, KeyAction::programAction(), Ui_RebindWidget::programKpBox, Ui_RebindWidget::programKpModeBox, Ui_RebindWidget::programKpSIBox, Ui_RebindWidget::programKrBox, Ui_RebindWidget::programKrModeBox, Ui_RebindWidget::programKrSIBox, Ui_RebindWidget::pteMacroBox, Ui_RebindWidget::pteMacroComment, Ui_RebindWidget::pteMacroText, KbBind::setAction(), Ui_RebindWidget::typingBox, typingKeys, ui, Ui_RebindWidget::wheelBox, and wheelKeys.

Referenced by on_applyButton_clicked(), and setSelection().

```
                                                                {
    if(ui->typingBox->currentIndex() > 0)
        bind->setAction(keys, typingKeys[ui->typingBox->currentIndex() -
```

```
1]);
  else if(ui->modBox->currentIndex() > 0)
      bind->setAction(keys, modKeys[ui->modBox->currentIndex() - 1]);
  else if(ui->fnBox->currentIndex() > 0)
      bind->setAction(keys, fnKeys[ui->fnBox->currentIndex() - 1]);
  else if(ui->numBox->currentIndex() > 0)
      bind->setAction(keys, numKeys[ui->numBox->currentIndex() - 1]);
  else if(ui->mediaBox->currentIndex() > 0)
      bind->setAction(keys, mediaKeys[ui->mediaBox->currentIndex() - 1]);
  else if(ui->mbBox->currentIndex() > 0)
      bind->setAction(keys, mouseKeys[ui->mbBox->currentIndex() - 1]);
  else if(ui->mb2Box->currentIndex() > 0)
      bind->setAction(keys, mouseExtKeys[ui->mb2Box->currentIndex() - 1]);
  else if(ui->wheelBox->currentIndex() > 0)
      bind->setAction(keys, wheelKeys[ui->wheelBox->currentIndex() - 1]);
  else if(ui->dpiBox->currentIndex() > 0)
      bind->setAction(keys, KeyAction::dpiAction(ui->dpiBox->currentIndex() - DPI_OFFSET, ui->dpiCustXBox->value(), ui->dpiCustYBox->value()));
  else if(ui->modeBox->currentIndex() > 0)
      bind->setAction(keys, KeyAction::modeAction(ui->modeBox->currentIndex() - 3 - (ui->modeWrapBox->isChecked() && ui->modeBox->currentIndex() < 3 ? 2 : 0)));
  else if(ui->lightBox->currentIndex() > 0)
      bind->setAction(keys, KeyAction::lightAction(ui->lightBox->currentIndex() - 1 + (ui->lightWrapBox->isChecked() ? 2 : 0)));
  else if(ui->lockBox->currentIndex() > 0)
      bind->setAction(keys, KeyAction::lockAction(ui->lockBox->currentIndex() - 1));
  else if(ui->animBox->currentIndex() > 0){
      KbAnim* anim = bind->light()->animList().at(ui->animBox->currentIndex() - 1);
      bind->setAction(keys, KeyAction::animAction(anim->guid(), !ui->animOnceBox->isChecked(), ui->animKrBox->isChecked()));
  } else if(!ui->programKpBox->text().isEmpty() || !ui->programKrBox->text().isEmpty()){
      int kpStop = 0, krStop = 0;
      if(!ui->programKpBox->text().isEmpty()){
          if(!ui->programKpSIBox->isChecked())
              kpStop = KeyAction::PROGRAM_PR_MULTI;
          else
              kpStop = ui->programKpModeBox->currentIndex();
      }
      if(!ui->programKrBox->text().isEmpty()){
          if(!ui->programKrSIBox->isChecked())
              krStop = KeyAction::PROGRAM_RE_MULTI;
          else if(ui->programKrModeBox->currentIndex() == 0)
              krStop = KeyAction::PROGRAM_RE_INDEF;
          else
              krStop = KeyAction::PROGRAM_RE_KPSTOP;
      }
      bind->setAction(keys, KeyAction::programAction(ui->programKpBox->text(), ui->programKrBox->text(), kpStop | krStop));
  } else if (ui->pteMacroBox->toPlainText().length() > 0) {
      // G-key macro handling:
      // Set the macro definiton for all keys selected (indeed, it may be multiple keys).
      // First, concat the Macro Key Definion and the Macro plain text
      // after escaping possible colos in the parts for Macro Text and Macro Comment.
      QString mac;
      mac = ui->pteMacroComment->toPlainText().replace(":", "&das_IST_31N_col0n;");
      mac = ui->pteMacroText->toPlainText().replace(":", "&das_IST_31N_col0n;") + ":" + mac;
      mac = ui->pteMacroBox->toPlainText() + ":" + mac;
      bind->setAction(keys, KeyAction::macroAction(mac));
  } else if(doUnbind)
      bind->noAction(keys);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.80.3.2 void RebindWidget::convertMacroBox ( ) [private]

the ckb-daemon needs a shorter format, only " [+|-]<keyname>"

That function does the conversion.

Definition at line 776 of file rebindwidget.cpp.

References Ui_RebindWidget::pteMacroBox, and ui.

Referenced by on_btnStopMacro_clicked().

```
776                                 {
777     QString in;
778
779     in = ui->pteMacroBox->toPlainText();
780     in.replace (QRegExp("\n"), ",");
781     in.replace (QRegExp("key "), "");
782     ui->pteMacroBox->setPlainText(in);
783 }
```

Here is the caller graph for this function:

12.80.3.3 void RebindWidget::helpStatus (int *status*) [private]

Parameters

status	determines what to display.

Definition at line 752 of file rebindwidget.cpp.

References Ui_RebindWidget::lbl_macro, and ui.

Referenced by on_btnClearMacro_clicked(), on_btnStartMacro_clicked(), on_btnStopMacro_clicked(), and setBox().

```
752                                         {
753     switch (status) {
754     case 1:
755         ui->lbl_macro->setText("Type in a macro name in the comment box and click start.");
756         break;
757     case 2:
758         ui->lbl_macro->setText("Type your macro and click stop when finished.");
759         break;
760     case 3:
761         ui->lbl_macro->setText("Click Apply or change values in Macro Key Actions in advance.");
762         break;
763     default:
764         ui->lbl_macro->setText(QString("Oops: Some magic in RebindWidget::helpStatus (%1)").arg(
      status));
765     }
766 }
```

Here is the caller graph for this function:

12.80.3.4 void RebindWidget::on_animBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 592 of file rebindwidget.cpp.

References Ui_RebindWidget::animBox, Ui_RebindWidget::animButton, setBox(), and ui.

```
592                                                 {
593     if(index == 0)
```

```
        ui->animButton->setChecked(false);
    else {
        ui->animButton->setChecked(true);
        setBox(ui->animBox);
    }
}
```

Here is the call graph for this function:

12.80.3.5 void RebindWidget::on_animButton_clicked (bool *checked*) [private],[slot]

Definition at line 689 of file rebindwidget.cpp.

References Ui_RebindWidget::animBox, and ui.

```
689                                                 {
690     if(checked && ui->animBox->currentIndex() == 0)
691         ui->animBox->setCurrentIndex(1);
692 }
```

12.80.3.6 void RebindWidget::on_applyButton_clicked ( ) [private],[slot]

Definition at line 386 of file rebindwidget.cpp.

References applyChanges(), on_btnStopMacro_clicked(), and selection.

```
386                                         {
387     // Normally, this should be done via signalling.
388     // Because there is no serarate thread, we have to call it directly
389     // (otherwise we could do Key char conversion step by step,
390     // but so it is more easy to change the key definition):
391     on_btnStopMacro_clicked();
392     applyChanges(selection, true);
393 }
```

Here is the call graph for this function:

12.80.3.7 void RebindWidget::on_btnClearMacro_clicked ( ) [private],[slot]

Definition at line 744 of file rebindwidget.cpp.

References helpStatus().

```
744                                         {
745     helpStatus(1);
746 }
```

Here is the call graph for this function:

12.80.3.8 void RebindWidget::on_btnStartMacro_clicked ( ) [private],[slot]

The UI is protected against false clicking (e.g. if you type start and than Apply, the channel is closed in wrong order).

At this time, all neccessary params like macroNumber, macroPath, cmdFile etc. had been cached.

Definition at line 703 of file rebindwidget.cpp.

References Ui_RebindWidget::applyButton, bind, Ui_RebindWidget::btnStartMacro, Ui_RebindWidget::btnStopMacro, KbBind::getMacroNumber(), KbBind::getMacroPath(), KbBind::handleNotificationChannel(), helpStatus(), macReader, Ui_RebindWidget::pteMacroBox, Ui_RebindWidget::pteMacroText, Ui_RebindWidget::resetButton, ui, and Ui_RebindWidget::unbindButton.

```
703                                         {
704     if (!macReader) {
705         bind->handleNotificationChannel(true);
706         macReader = new MacroReader(bind->getMacroNumber(),
      bind->getMacroPath(), ui->pteMacroBox, ui->
      pteMacroText);
707         // because of the second thread we need to disable three of the four bottom buttons.
708         // Clicking "Stop" will enable them again.
709         ui->applyButton->setEnabled(false);
710         ui->resetButton->setEnabled(false);
711         ui->unbindButton->setEnabled(false);
712         ui->btnStartMacro->setEnabled(false);
713         ui->btnStopMacro->setEnabled(true);
714         helpStatus(2);
715     }
716 }
```

Here is the call graph for this function:

12.80.3.9 void RebindWidget::on_btnStopMacro_clicked ( ) [private],[slot]

Afterwards, the characters in the MacroBox are changed from KB-out format to cmd-in format. At last the UI changes to the new state.

Definition at line 725 of file rebindwidget.cpp.

References Ui_RebindWidget::applyButton, bind, Ui_RebindWidget::btnStartMacro, Ui_RebindWidget::btnStopMacro, convertMacroBox(), KbBind::handleNotificationChannel(), helpStatus(), macReader, Ui_RebindWidget::resetButton, ui, and Ui_RebindWidget::unbindButton.

Referenced by on_applyButton_clicked().

```
725                                         {
726     if (macReader) {
727         bind->handleNotificationChannel(false);
728         delete macReader;
729         macReader = 0;
730         convertMacroBox();
731         ui->applyButton->setEnabled(true);
732         ui->resetButton->setEnabled(true);
733         ui->unbindButton->setEnabled(true);
734         ui->btnStartMacro->setEnabled(true);
735         ui->btnStopMacro->setEnabled(false);
736         helpStatus(3);
737     }
738 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.80.3.10 void RebindWidget::on_cancelButton_clicked ( ) [private],[slot]

Definition at line 395 of file rebindwidget.cpp.

References selection, and setSelection().

```
395                                         {
396     // Re-load selection
397     setSelection(selection);
398 }
```

Here is the call graph for this function:

12.80.3.11 void RebindWidget::on_dpiBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 518 of file rebindwidget.cpp.

References DPI_CUST_IDX, Ui_RebindWidget::dpiBox, Ui_RebindWidget::dpiButton, Ui_RebindWidget::dpiCustLabel, Ui_RebindWidget::dpiCustXBox, Ui_RebindWidget::dpiCustYBox, setBox(), and ui.

```
518                                                     {
519     if(index != DPI_CUST_IDX){
520         // Clear custom DPI
521         ui->dpiCustXBox->setEnabled(false);
522         ui->dpiCustYBox->setEnabled(false);
523         ui->dpiCustLabel->setEnabled(false);
524     } else {
525         ui->dpiCustXBox->setEnabled(true);
526         ui->dpiCustYBox->setEnabled(true);
527         ui->dpiCustLabel->setEnabled(true);
528     }
529     if(index == 0)
530         ui->dpiButton->setChecked(false);
531     else {
532         ui->dpiButton->setChecked(true);
533         setBox(ui->dpiBox);
534     }
535 }
```

Here is the call graph for this function:

12.80.3.12 void RebindWidget::on_dpiButton_clicked (bool *checked*) [private],[slot]

Definition at line 674 of file rebindwidget.cpp.

References Ui_RebindWidget::dpiBox, and ui.

```
674                                                 {
675     if(checked && ui->dpiBox->currentIndex() == 0)
676         ui->dpiBox->setCurrentIndex(1);
677 }
```

12.80.3.13 void RebindWidget::on_fnBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 464 of file rebindwidget.cpp.

References Ui_RebindWidget::fnBox, Ui_RebindWidget::fnButton, setBox(), and ui.

```
464                                                         {
465     if(index == 0)
466         ui->fnButton->setChecked(false);
467     else {
468         ui->fnButton->setChecked(true);
469         setBox(ui->fnBox);
470     }
471 }
```

Here is the call graph for this function:

12.80.3.14 void RebindWidget::on_fnButton_clicked (bool *checked*) [private],[slot]

Definition at line 611 of file rebindwidget.cpp.

References Ui_RebindWidget::fnBox, and ui.

```
611                                                 {
612     if(checked && ui->fnBox->currentIndex() == 0)
613         ui->fnBox->setCurrentIndex(1);
614 }
```

12.80.3.15 void RebindWidget::on_lightBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 550 of file rebindwidget.cpp.

References Ui_RebindWidget::lightBox, Ui_RebindWidget::lightButton, Ui_RebindWidget::lightWrapBox, setBox(), and ui.

```
550                                                         {
551     if(index == 0){
552         ui->lightButton->setChecked(false);
553         ui->lightWrapBox->hide();
554     } else {
555         ui->lightWrapBox->show();
556         ui->lightButton->setChecked(true);
557         setBox(ui->lightBox);
558     }
559 }
```

Here is the call graph for this function:

12.80.3.16 void RebindWidget::on_lightButton_clicked (bool *checked*) [private],[slot]

Definition at line 631 of file rebindwidget.cpp.

References Ui_RebindWidget::lightBox, and ui.

```
631                                                 {
632     if(checked && ui->lightBox->currentIndex() == 0)
633         ui->lightBox->setCurrentIndex(1);
634 }
```

12.80.3.17 void RebindWidget::on_lockBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 561 of file rebindwidget.cpp.

References Ui_RebindWidget::lockBox, Ui_RebindWidget::lockButton, setBox(), and ui.

```
561                                                         {
562     if(index == 0)
563         ui->lockButton->setChecked(false);
564     else {
565         ui->lockButton->setChecked(true);
566         setBox(ui->lockBox);
567     }
568 }
```

Here is the call graph for this function:

12.80.3.18 void RebindWidget::on_lockButton_clicked (bool *checked*) [private],[slot]

Definition at line 636 of file rebindwidget.cpp.

References Ui_RebindWidget::lockBox, and ui.

```
636                                                 {
637     if(checked && ui->lockBox->currentIndex() == 0)
638         ui->lockBox->setCurrentIndex(1);
639 }
```

12.80.3.19 void RebindWidget::on_mb2Box_currentIndexChanged (int *index*) [private],[slot]

Definition at line 500 of file rebindwidget.cpp.

References Ui_RebindWidget::mb2Box, Ui_RebindWidget::mb2Button, setBox(), and ui.

```
500                                                         {
501     if(index == 0)
502         ui->mb2Button->setChecked(false);
503     else {
504         ui->mb2Button->setChecked(true);
505         setBox(ui->mb2Box);
506     }
507 }
```

Here is the call graph for this function:

12.80.3.20 void RebindWidget::on_mb2Button_clicked (bool *checked*) [private],[slot]

Definition at line 664 of file rebindwidget.cpp.

References Ui_RebindWidget::mb2Box, and ui.

```
664                                                 {
665     if(checked && ui->mb2Box->currentIndex() == 0)
666         ui->mb2Box->setCurrentIndex(1);
667 }
```

12.80.3.21 void RebindWidget::on_mbBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 491 of file rebindwidget.cpp.

References Ui_RebindWidget::mbBox, Ui_RebindWidget::mbButton, setBox(), and ui.

```
491                                                         {
492     if(index == 0)
493         ui->mbButton->setChecked(false);
494     else {
495         ui->mbButton->setChecked(true);
496         setBox(ui->mbBox);
497     }
498 }
```

Here is the call graph for this function:

12.80.3.22 void RebindWidget::on_mbButton_clicked (bool *checked*) [private],[slot]

Definition at line 659 of file rebindwidget.cpp.

References Ui_RebindWidget::mbBox, and ui.

```
659                                                 {
660     if(checked && ui->mbBox->currentIndex() == 0)
661         ui->mbBox->setCurrentIndex(1);
662 }
```

12.80.3.23 void RebindWidget::on_mediaBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 482 of file rebindwidget.cpp.

References Ui_RebindWidget::mediaBox, Ui_RebindWidget::mediaButton, setBox(), and ui.

```
482                                                                 {
483     if(index == 0)
484         ui->mediaButton->setChecked(false);
485     else {
486         ui->mediaButton->setChecked(true);
487         setBox(ui->mediaBox);
488     }
489 }
```

Here is the call graph for this function:

12.80.3.24 void RebindWidget::on_mediaButton_clicked (bool *checked*) [private],[slot]

Definition at line 621 of file rebindwidget.cpp.

References Ui_RebindWidget::mediaBox, and ui.

```
621                                                 {
622     if(checked && ui->mediaBox->currentIndex() == 0)
623         ui->mediaBox->setCurrentIndex(1);
624 }
```

12.80.3.25 void RebindWidget::on_modBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 455 of file rebindwidget.cpp.

References Ui_RebindWidget::modBox, Ui_RebindWidget::modButton, setBox(), and ui.

```
455                                                     {
456     if(index == 0)
457         ui->modButton->setChecked(false);
458     else {
459         ui->modButton->setChecked(true);
460         setBox(ui->modBox);
461     }
462 }
```

Here is the call graph for this function:

12.80.3.26 void RebindWidget::on_modButton_clicked (bool *checked*) [private],[slot]

Definition at line 606 of file rebindwidget.cpp.

References Ui_RebindWidget::modBox, and ui.

```
606                                                 {
607     if(checked && ui->modBox->currentIndex() == 0)
608         ui->modBox->setCurrentIndex(1);
609 }
```

12.80.3.27 void RebindWidget::on_modeBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 537 of file rebindwidget.cpp.

References Ui_RebindWidget::modeBox, Ui_RebindWidget::modeButton, Ui_RebindWidget::modeWrapBox, setBox(), and ui.

```
537                                                     {
538     if(index == 1 || index == 2)
539         ui->modeWrapBox->show();
540     else
541         ui->modeWrapBox->hide();
542     if(index == 0)
543         ui->modeButton->setChecked(false);
544     else {
545         ui->modeButton->setChecked(true);
546         setBox(ui->modeBox);
547     }
548 }
```

Here is the call graph for this function:

12.80.3.28 void RebindWidget::on_modeButton_clicked (bool *checked*) [private],[slot]

Definition at line 626 of file rebindwidget.cpp.

References Ui_RebindWidget::modeBox, and ui.

```
626                                                 {
627     if(checked && ui->modeBox->currentIndex() == 0)
628         ui->modeBox->setCurrentIndex(1);
629 }
```

12.80.3.29 void RebindWidget::on_numBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 473 of file rebindwidget.cpp.

References Ui_RebindWidget::numBox, Ui_RebindWidget::numButton, setBox(), and ui.

```
473                                                         {
474     if(index == 0)
475         ui->numButton->setChecked(false);
476     else {
477         ui->numButton->setChecked(true);
478         setBox(ui->numBox);
479     }
480 }
```

Here is the call graph for this function:

12.80.3.30 void RebindWidget::on_numButton_clicked (bool *checked*) [private],[slot]

Definition at line 616 of file rebindwidget.cpp.

References Ui_RebindWidget::numBox, and ui.

```
616                                                 {
617     if(checked && ui->numBox->currentIndex() == 0)
618         ui->numBox->setCurrentIndex(1);
619 }
```

12.80.3.31 void RebindWidget::on_programKpBox_textChanged (const QString & *arg1*) [private],[slot]

Definition at line 570 of file rebindwidget.cpp.

References Ui_RebindWidget::programKpBox, Ui_RebindWidget::programKpButton, Ui_RebindWidget::programKpExtra, setBox(), and ui.

```
570                                                             {
571     if(arg1.isEmpty()){
572         ui->programKpButton->setChecked(false);
573         ui->programKpExtra->hide();
574     } else {
575         ui->programKpButton->setChecked(true);
576         setBox(ui->programKpBox);
577         ui->programKpExtra->show();
578     }
579 }
```

Here is the call graph for this function:

12.80.3.32 void RebindWidget::on_programKpButton_clicked (bool *checked*) [private],[slot]

Definition at line 641 of file rebindwidget.cpp.

References Ui_RebindWidget::programKpBox, setBox(), and ui.

```
641                                                     {
642     if(!checked){
643         ui->programKpBox->setText("");
644     } else if(ui->programKpBox->text().isEmpty()){
645         ui->programKpBox->setFocus();
646         setBox(ui->programKpBox);
647     }
648 }
```

Here is the call graph for this function:

12.80.3.33 void RebindWidget::on_programKpSlBox_clicked (bool *checked*) [private],[slot]

Definition at line 679 of file rebindwidget.cpp.

References Ui_RebindWidget::programKpModeBox, and ui.

```
679                                                     {
680     ui->programKpModeBox->setCurrentIndex(0);
681     ui->programKpModeBox->setEnabled(checked);
682 }
```

12.80.3.34 void RebindWidget::on_programKrBox_textChanged (const QString & *arg1*) [private],[slot]

Definition at line 581 of file rebindwidget.cpp.

References Ui_RebindWidget::programKrBox, Ui_RebindWidget::programKrButton, Ui_RebindWidget::programKrExtra, setBox(), and ui.

```
581                                                     {
582     if(arg1.isEmpty()){
583         ui->programKrButton->setChecked(false);
584         ui->programKrExtra->hide();
585     } else {
586         ui->programKrButton->setChecked(true);
587         setBox(ui->programKrBox);
588         ui->programKrExtra->show();
589     }
590 }
```

Here is the call graph for this function:

12.80.3.35 void RebindWidget::on_programKrButton_clicked (bool *checked*) [private],[slot]

Definition at line 650 of file rebindwidget.cpp.

References Ui_RebindWidget::programKrBox, setBox(), and ui.

```
650                                                         {
651     if(!checked){
652         ui->programKrBox->setText("");
653     } else if(ui->programKrBox->text().isEmpty()){
654         ui->programKrBox->setFocus();
655         setBox(ui->programKrBox);
656     }
657 }
```

Here is the call graph for this function:

12.80.3.36 void RebindWidget::on_programKrSlBox_clicked (bool *checked*) [private],[slot]

Definition at line 684 of file rebindwidget.cpp.

References Ui_RebindWidget::programKrModeBox, and ui.

```
684                                                         {
685     ui->programKrModeBox->setCurrentIndex(0);
686     ui->programKrModeBox->setEnabled(checked);
687 }
```

12.80.3.37 void RebindWidget::on_pteMacroBox_textChanged ( ) [private],[slot]

Definition at line 449 of file rebindwidget.cpp.

References Ui_RebindWidget::pteMacroBox, setBox(), and ui.

```
449                                                 {
450     if (ui->pteMacroBox->toPlainText().length() > 0) {
451         setBox(ui->pteMacroBox);
452     }
453 }
```

Here is the call graph for this function:

12.80.3.38 void RebindWidget::on_resetButton_clicked ( ) [private],[slot]

Definition at line 400 of file rebindwidget.cpp.

References bind, KbBind::resetAction(), and selection.

```
400                                         {
401     bind->resetAction(selection);
402 }
```

Here is the call graph for this function:

12.80.3.39 void RebindWidget::on_typingBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 440 of file rebindwidget.cpp.

References setBox(), Ui_RebindWidget::typingBox, Ui_RebindWidget::typingButton, and ui.

```
440                                                         {
441     if(index == 0)
442         ui->typingButton->setChecked(false);
443     else {
444         ui->typingButton->setChecked(true);
445         setBox(ui->typingBox);
446     }
447 }
```

Here is the call graph for this function:

12.80.3.40 void RebindWidget::on_typingButton_clicked (bool *checked*) [private],[slot]

Definition at line 601 of file rebindwidget.cpp.

References Ui_RebindWidget::typingBox, and ui.

```
601                                                 {
602     if(checked && ui->typingBox->currentIndex() == 0)
603         ui->typingBox->setCurrentIndex(1);
604 }
```

12.80.3.41 void RebindWidget::on_unbindButton_clicked ( ) [private],[slot]

Definition at line 404 of file rebindwidget.cpp.

References bind, KbBind::noAction(), and selection.

```
404                                         {
405     bind->noAction(selection);
406 }
```

Here is the call graph for this function:

12.80.3.42 void RebindWidget::on_wheelBox_currentIndexChanged (int *index*) [private],[slot]

Definition at line 509 of file rebindwidget.cpp.

References setBox(), ui, Ui_RebindWidget::wheelBox, and Ui_RebindWidget::wheelButton.

```
509                                                     {
510     if(index == 0)
511         ui->wheelButton->setChecked(false);
512     else {
513         ui->wheelButton->setChecked(true);
514         setBox(ui->wheelBox);
515     }
516 }
```

Here is the call graph for this function:

12.80.3.43 void RebindWidget::on_wheelButton_clicked (bool *checked*) [private],[slot]

Definition at line 669 of file rebindwidget.cpp.

References ui, and Ui_RebindWidget::wheelBox.

```
669                                                 {
670     if(checked && ui->wheelBox->currentIndex() == 0)
671         ui->wheelBox->setCurrentIndex(1);
672 }
```

12.80.3.44 void RebindWidget::setBind (KbBind * *newBind,* KbProfile * *newProfile*)

Definition at line 63 of file rebindwidget.cpp.

References bind, KeyMap::byPosition(), KbBind::defaultAction(), KbPerf::dpi(), KbPerf::DPI_COUNT, Ui_RebindWidget::dpiBox, Ui_RebindWidget::dpiButton, Ui_RebindWidget::dpiCustLabel, Ui_RebindWidget::dpiCustXBox, Ui_RebindWidget::dpiCustYBox, Ui_RebindWidget::dpiWarning, fnKeys, Key::friendlyName(), KeyMap::isISO(), KbBind::isMouse(), KeyAction::isNormal(), KeyMap::K95, KeyMap::layout(), KbBind::map(), mediaKeys, Ui_RebindWidget::modeBox, KbProfile::modes(), modKeys, KbMode::name(), numKeys, KbBind::perf(), profile, setSelection(), Ui_RebindWidget::typingBox, typingKeys, and ui.

Referenced by KbBindWidget::newLayout(), and KbBindWidget::setBind().

```
63                                                                  {
64     bind = newBind;
65     profile = newProfile;
66     setSelection(QStringList());
67
68     // Populate typing keys by position
69     ui->typingBox->clear();
70     ui->typingBox->addItem(" ");
71     typingKeys.clear();
72     // Use the K95 map as it has all keys
73     const KeyMap& map = KeyMap(KeyMap::K95, bind->map().
     layout());
74     foreach(const QString& name, map.byPosition()){
75         KeyAction action(KbBind::defaultAction(name));
76         if(action.isNormal() && !modKeys.contains(name) && !fnKeys.contains(name) && !
     numKeys.contains(name) && !mediaKeys.contains(name) && name != "enter" && name != "tab" &&
     name != "bspace"){
77             const Key& pos = map[name];
78             QString friendly = pos.friendlyName();
79             ui->typingBox->addItem(friendly);
80             typingKeys.append(name);
81         }
82     }
83     typingKeys << "enter" << "tab" << "bspace";
84     ui->typingBox->addItem("Enter");
85     ui->typingBox->addItem("Tab");
86     ui->typingBox->addItem("Backspace");
87     if(!map.isISO()){
88         // Add ISO backslash (aka KEY_102ND) to ANSI options
89         typingKeys << "bslash_iso";
90         ui->typingBox->addItem("Backslash (ISO layout)");
91     }
92
93     // Populate mode list
94     ui->modeBox->clear();
95     ui->modeBox->addItem(" ");
96     ui->modeBox->addItem("(Previous)");
97     ui->modeBox->addItem("(Next)");
98     int idx = 1;
99     foreach(KbMode* mode, newProfile->modes())
100         ui->modeBox->addItem(QString("%1: %2").arg(idx++).arg(mode->
     name()));
101
102     // Enable/disable DPI based on device
103     if(bind->isMouse()){
104         ui->dpiButton->setEnabled(true);
105         ui->dpiBox->setEnabled(true);
106         ui->dpiWarning->hide();
107         // Fill DPI slots
108         const KbPerf* perf = bind->perf();
109         for(int i = 0; i < KbPerf::DPI_COUNT; i++){
110             bool sniper = (i == 0);
111             int boxIdx = i + 3;
```

```
            QPoint dpi = perf->dpi(i);
            QString text = tr(sniper ? "Sniper:\t%1 x %2" : "%3:\t%1 x %2").arg(dpi.x()).arg(dpi.y());
            if(!sniper) text = text.arg(i);
            ui->dpiBox->setItemText(boxIdx, text);
        }
    } else {
        ui->dpiButton->setEnabled(false);
        ui->dpiBox->setEnabled(false);
        ui->dpiWarning->show();
    }
    // Always disable custom DPI boxes until selected
    ui->dpiCustXBox->setEnabled(false);
    ui->dpiCustYBox->setEnabled(false);
    ui->dpiCustLabel->setEnabled(false);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.80.3.45 void RebindWidget::setBox (QWidget * *box*) [private]

Definition at line 408 of file rebindwidget.cpp.

References Ui_RebindWidget::animBox, Ui_RebindWidget::dpiBox, Ui_RebindWidget::fnBox, helpStatus(), Ui_RebindWidget::lightBox, Ui_RebindWidget::lockBox, Ui_RebindWidget::mb2Box, Ui_RebindWidget::mbBox, Ui_RebindWidget::mediaBox, Ui_RebindWidget::modBox, Ui_RebindWidget::modeBox, Ui_RebindWidget::numBox, Ui_RebindWidget::programKpBox, Ui_RebindWidget::programKpButton, Ui_RebindWidget::programKrBox, Ui_RebindWidget::programKrButton, Ui_RebindWidget::pteMacroBox, Ui_RebindWidget::typingBox, ui, and Ui_RebindWidget::wheelBox.

Referenced by on_animBox_currentIndexChanged(), on_dpiBox_currentIndexChanged(), on_fnBox_currentIndexChanged(), on_lightBox_currentIndexChanged(), on_lockBox_currentIndexChanged(), on_mb2Box_currentIndexChanged(), on_mbBox_currentIndexChanged(), on_mediaBox_currentIndexChanged(), on_modBox_currentIndexChanged(), on_modeBox_currentIndexChanged(), on_numBox_currentIndexChanged(), on_programKpBox_textChanged(), on_programKpButton_clicked(), on_programKrBox_textChanged(), on_programKrButton_clicked(), on_pteMacroBox_textChanged(), on_typingBox_currentIndexChanged(), on_wheelBox_currentIndexChanged(), and setSelection().

```
408                                     {
409     // Un-select every item except for the current one.
410     // on_*_currentIndexChanged will take care of deselecting the checkbox.
411     // Key
412     if(box != ui->typingBox) ui->typingBox->setCurrentIndex(0);
413     if(box != ui->modBox) ui->modBox->setCurrentIndex(0);
414     if(box != ui->fnBox) ui->fnBox->setCurrentIndex(0);
415     if(box != ui->numBox) ui->numBox->setCurrentIndex(0);
416     if(box != ui->mediaBox) ui->mediaBox->setCurrentIndex(0);
417     // Mouse
418     if(box != ui->mbBox) ui->mbBox->setCurrentIndex(0);
419     if(box != ui->mb2Box) ui->mb2Box->setCurrentIndex(0);
420     if(box != ui->wheelBox) ui->wheelBox->setCurrentIndex(0);
421     if(box != ui->dpiBox) ui->dpiBox->setCurrentIndex(0);
422     // Anim
423     if(box != ui->animBox) ui->animBox->setCurrentIndex(0);
424     // Special
425     if(box != ui->modeBox) ui->modeBox->setCurrentIndex(0);
426     if(box != ui->lightBox) ui->lightBox->setCurrentIndex(0);
427     if(box != ui->lockBox) ui->lockBox->setCurrentIndex(0);
428     // Program
429     if(box != ui->programKpBox && box != ui->programKrBox){
430         ui->programKpButton->setChecked(false);
431         ui->programKrButton->setChecked(false);
432     }
433     // Clear macro panel
434     if (box != ui->pteMacroBox) {
435         ui->pteMacroBox->setPlainText("");
436         helpStatus(1);
437     }
438 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.80.3.46 void RebindWidget::setSelection (const QStringList & *newSelection,* bool *applyPrevious* = `false`)

Definition at line 128 of file rebindwidget.cpp.

References KbBind::action(), anim, Ui_RebindWidget::animBox, KeyAction::animInfo(), Ui_RebindWidget::animKrBox, KbLight::animList(), Ui_RebindWidget::animOnceBox, applyChanges(), bind, KeyAction::DPI_CUSTOM, DPI_OFFSET, Ui_RebindWidget::dpiBox, Ui_RebindWidget::dpiCustXBox, Ui_RebindWidget::dpiCustYBox, KeyAction::dpiInfo(), KbLight::findAnimIdx(), Ui_RebindWidget::fnBox, fnKeys, KeyAction::isAnim(), KeyAction::isDPI(), KeyAction::isMouse(), KeyAction::isNormal(), KeyAction::isProgram(), KeyAction::isSpecial(), KeyAction::isValidMacro(), KbBind::light(), KeyAction::LIGHT_DOWN, KeyAction::LIGHT_DOWN_WRAP, KeyAction::LIGHT_UP, KeyAction::LIGHT_UP_WRAP, Ui_RebindWidget::lightBox, Ui_RebindWidget::lightWrapBox, Ui_RebindWidget::lockBox, KeyAction::macroContent(), KeyAction::macroDisplay(), KeyAction::macroLine(), Ui_RebindWidget::mb2Box, Ui_RebindWidget::mbBox, Ui_RebindWidget::mediaBox, mediaKeys, Ui_RebindWidget::modBox, KeyAction::MODE_NEXT, KeyAction::MODE_NEXT_WRAP, KeyAction::MODE_PREV, KeyAction::MODE_PREV_WRAP, Ui_RebindWidget::modeBox, Ui_RebindWidget::modeWrapBox, modKeys, mouseExtKeys, mouseKeys, KbAnim::name(), Ui_RebindWidget::numBox, numKeys, KeyAction::PROGRAM_PR_MULTI, KeyAction::PROGRAM_RE_INDEF, KeyAction::PROGRAM_RE_KPSTOP, KeyAction::PROGRAM_RE_MULTI, KeyAction::programInfo(),

Ui_RebindWidget::programKpBox, Ui_RebindWidget::programKpModeBox, Ui_RebindWidget::programKpSIBox, Ui_RebindWidget::programKrBox, Ui_RebindWidget::programKrModeBox, Ui_RebindWidget::programKrSIBox, Ui_RebindWidget::pteMacroBox, Ui_RebindWidget::pteMacroComment, Ui_RebindWidget::pteMacroText, selection, setBox(), KeyAction::specialInfo(), TAB_ANIM, TAB_KB, TAB_MACRO, TAB_MOUSE, TAB_PROGRAM, TAB_SPECIAL, Ui_RebindWidget::tabWidget, Ui_RebindWidget::typingBox, typingKeys, ui, Ui_RebindWidget::wheelBox, and wheelKeys.

Referenced by KbBindWidget::newSelection(), on_cancelButton_clicked(), setBind(), and KbBindWidget::updateBind().

```
{
    if(bind){
        // Populate animation list
        // FIXME: There should be a trigger to update this whenever an animation is added/removed, even if the key selection hasn't changed
        ui->animBox->clear();
        ui->animBox->addItem(" ");
        foreach(KbAnim* anim, bind->light()->animList())
            ui->animBox->addItem(anim->name());
    }

    // Apply changes to previous selection (if any)
    if(!selection.isEmpty() && applyPrevious){
        QStringList previous = selection;
        selection = QStringList();
        applyChanges(previous, false);
    }

    selection = newSelection;
    if(newSelection.isEmpty()){
        hide();
        return;
    } else
        show();

    bool hasAction = false;
    QString action;
    if(selection.count() == 1){
        // Select action from the UI
        action = bind->action(selection.first());
        if(!action.isEmpty())
            hasAction = true;
    } else {
        // Select an action from the UI if all keys are the same.
        // Select nothing if any are unbound or different
        foreach(const QString& key, selection){
            QString keyAction = bind->action(key);
            if(keyAction.isEmpty() || (hasAction && keyAction != action)){
                hasAction = false;
                break;
            } else if(action.isEmpty()){
                action = keyAction;
                hasAction = true;
            }
        }
    }

    if(!hasAction)
        action = "";
    KeyAction act(action);
    // Clear everything
    setBox(0);
    ui->dpiCustXBox->setValue(400);
    ui->dpiCustYBox->setValue(400);
    ui->animOnceBox->setChecked(false);
    ui->animKrBox->setChecked(false);
    ui->programKpBox->setText("");
    ui->programKrBox->setText("");
    ui->programKpSIBox->setChecked(false);
    ui->programKrSIBox->setChecked(false);
    ui->programKpModeBox->setCurrentIndex(0);
    ui->programKrModeBox->setCurrentIndex(0);
    ui->programKpModeBox->setEnabled(false);
    ui->programKrModeBox->setEnabled(false);
    // Clear neu UI elements in MacroTab
    ui->pteMacroBox->setPlainText("");
    ui->pteMacroText->setPlainText("");
    ui->pteMacroComment->setPlainText("");
    // Fill in field and select tab according to action type
    bool mouse = act.isMouse();
    if(mouse){
        // Mouse buttons
        ui->tabWidget->setCurrentIndex(TAB_MOUSE);
        // Set mouse buttons (indexOf returns -1 if not found, index zero is blank)
```

```
        ui->mbBox->setCurrentIndex(mouseKeys.indexOf(action) + 1);
        ui->mb2Box->setCurrentIndex(mouseExtKeys.indexOf(action) + 1);
        ui->wheelBox->setCurrentIndex(wheelKeys.indexOf(action) + 1);
        if(act.isDPI()){
            QPoint custom;
            int value = act.dpiInfo(custom);
            if(value <= -DPI_OFFSET || value > KeyAction::DPI_CUSTOM)
                return;
            ui->dpiBox->setCurrentIndex(value + DPI_OFFSET);
            if(value == KeyAction::DPI_CUSTOM){
                ui->dpiCustXBox->setValue(custom.x());
                ui->dpiCustYBox->setValue(custom.y());
            }
        }
    } else if(act.isNormal()){
        // Standard key
        ui->tabWidget->setCurrentIndex(TAB_KB);
        ui->typingBox->setCurrentIndex(typingKeys.indexOf(action) + 1);
        ui->modBox->setCurrentIndex(modKeys.indexOf(action) + 1);
        ui->fnBox->setCurrentIndex(fnKeys.indexOf(action) + 1);
        ui->numBox->setCurrentIndex(numKeys.indexOf(action) + 1);
        ui->mediaBox->setCurrentIndex(mediaKeys.indexOf(action) + 1);
    } else if(act.isProgram()){
        // Program key
        ui->tabWidget->setCurrentIndex(TAB_PROGRAM);
        QString onPress, onRelease;
        int stop = act.programInfo(onPress, onRelease);
        ui->programKpBox->setText(onPress);
        ui->programKrBox->setText(onRelease);
        switch(stop & 0x0F){
        case KeyAction::PROGRAM_PR_MULTI:
            ui->programKpSIBox->setChecked(false);
            ui->programKpModeBox->setCurrentIndex(0);
            ui->programKpModeBox->setEnabled(false);
            break;
        default:
            ui->programKpSIBox->setChecked(true);
            ui->programKpModeBox->setCurrentIndex(stop & 0x0F);
            ui->programKpModeBox->setEnabled(true);
            break;
        }
        switch(stop & 0xF0){
        case KeyAction::PROGRAM_RE_MULTI:
            ui->programKrSIBox->setChecked(false);
            ui->programKrModeBox->setCurrentIndex(0);
            ui->programKrModeBox->setEnabled(false);
            break;
        case KeyAction::PROGRAM_RE_INDEF:
            ui->programKrSIBox->setChecked(true);
            ui->programKrModeBox->setCurrentIndex(0);
            ui->programKrModeBox->setEnabled(true);
            break;
        case KeyAction::PROGRAM_RE_KPSTOP:
            ui->programKrSIBox->setChecked(true);
            ui->programKrModeBox->setCurrentIndex(1);
            ui->programKrModeBox->setEnabled(true);
            break;
        }
    } else if(act.isAnim()){
        // Animation key
        ui->tabWidget->setCurrentIndex(TAB_ANIM);
        bool onlyOnce = false, stopOnRelease = false;
        QUuid id = act.animInfo(onlyOnce, stopOnRelease);
        // Find this animation in the list. If not found, -1 will be returned, resulting in the blank space being selected
        int index = bind->light()->findAnimIdx(id);
        ui->animBox->setCurrentIndex(index + 1);
        ui->animOnceBox->setChecked(!onlyOnce);
        ui->animKrBox->setChecked(stopOnRelease);
    } else if(act.isSpecial()){
        // Other special keys
        ui->tabWidget->setCurrentIndex(TAB_SPECIAL);
        int param;
        QString sAction = act.specialInfo(param);
        // Mode selection. Check wrap-around flag
        ui->modeWrapBox->setChecked(true);
        if(sAction == "mode"){
            ui->modeWrapBox->setChecked(true);
            if(param == KeyAction::MODE_PREV_WRAP)
                param = KeyAction::MODE_PREV;
            else if(param == KeyAction::MODE_NEXT_WRAP)
                param = KeyAction::MODE_NEXT;
            else if(param < 0)
                ui->modeWrapBox->setChecked(false);
            // Set mode box to current selection, or to mode 1 if invalid
            param += 3;
            if(param >= 0 && param < ui->modeBox->count())
```

```
                ui->modeBox->setCurrentIndex(param);
            else
                // 0 -> "", 1 -> Prev, 2 -> Next, 3 -> Mode 1
                ui->modeBox->setCurrentIndex(3);
        } else if (sAction == "macro") {
            ui->tabWidget->setCurrentIndex(TAB_MACRO);
            if (act.isValidMacro()) {
                ui->pteMacroBox->setPlainText(act.macroContent());
                ui->pteMacroText->setPlainText(act.macroLine()[1].replace("
    &das_IST_31N_col0n;", ":"));
                ui->pteMacroComment->setPlainText(act.macroLine()[2].replace("
    &das_IST_31N_col0n;", ":"));
            } else {
                qDebug("RebindWidget::setSelection found invalid macro definition.");
                act.macroDisplay();
            }
        } else
            ui->modeBox->setCurrentIndex(0);
        // Brightness control. Also check wrap
        if(sAction == "light"){
            ui->lightWrapBox->setChecked(true);
            if(param == KeyAction::LIGHT_DOWN_WRAP)
                param = KeyAction::LIGHT_DOWN;
            else if(param == KeyAction::LIGHT_UP_WRAP)
                param = KeyAction::LIGHT_UP;
            else
                ui->lightWrapBox->setChecked(false);
            if(param < 0 || param > 1)
                param = -1;
            ui->lightBox->setCurrentIndex(param + 1);
        } else
            ui->lightBox->setCurrentIndex(0);
        // Win lock
        if(sAction == "lock"){
            if(param < 0 || param > 2)
                param = -1;
            ui->lockBox->setCurrentIndex(param + 1);
        } else
            ui->lockBox->setCurrentIndex(0);
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.80.4 Field Documentation

12.80.4.1 KbBind* RebindWidget::bind [private]

Definition at line 86 of file rebindwidget.h.

Referenced by applyChanges(), on_btnStartMacro_clicked(), on_btnStopMacro_clicked(), on_resetButton_clicked(), on_unbindButton_clicked(), setBind(), and setSelection().

12.80.4.2 QStringList RebindWidget::fnKeys [private]

Definition at line 92 of file rebindwidget.h.

Referenced by applyChanges(), RebindWidget(), setBind(), and setSelection().

12.80.4.3 MacroReader* RebindWidget::macReader [private]

Definition at line 98 of file rebindwidget.h.

Referenced by on_btnStartMacro_clicked(), and on_btnStopMacro_clicked().

12.80.4.4 QStringList RebindWidget::mediaKeys [private]

Definition at line 94 of file rebindwidget.h.

Referenced by applyChanges(), RebindWidget(), setBind(), and setSelection().

12.80.4.5 QStringList RebindWidget::modKeys [private]

Definition at line 91 of file rebindwidget.h.

Referenced by applyChanges(), RebindWidget(), setBind(), and setSelection().

12.80.4.6 QStringList RebindWidget::mouseExtKeys [private]

Definition at line 96 of file rebindwidget.h.

Referenced by applyChanges(), RebindWidget(), and setSelection().

12.80.4.7 QStringList RebindWidget::mouseKeys [private]

Definition at line 95 of file rebindwidget.h.

Referenced by applyChanges(), RebindWidget(), and setSelection().

12.80.4.8 QStringList RebindWidget::numKeys [private]

Definition at line 93 of file rebindwidget.h.

Referenced by applyChanges(), RebindWidget(), setBind(), and setSelection().

12.80.4.9 KbProfile* RebindWidget::profile [private]

Definition at line 87 of file rebindwidget.h.

Referenced by setBind().

12.80.4.10 QStringList RebindWidget::selection [private]

Definition at line 88 of file rebindwidget.h.

Referenced by on_applyButton_clicked(), on_cancelButton_clicked(), on_resetButton_clicked(), on_unbindButton-_clicked(), and setSelection().

12.80.4.11 const int RebindWidget::TAB_ANIM = 2 [static], [private]

Definition at line 77 of file rebindwidget.h.

Referenced by setSelection().

12.80.4.12 const int RebindWidget::TAB_KB = 0 [static], [private]

Definition at line 77 of file rebindwidget.h.

Referenced by setSelection().

12.80.4.13 const int RebindWidget::TAB_MACRO = 5 [static], [private]

Definition at line 77 of file rebindwidget.h.

Referenced by setSelection().

12.80.4.14 const int RebindWidget::TAB_MOUSE = 1 [static], [private]

Definition at line 77 of file rebindwidget.h.

Referenced by setSelection().

12.80.4.15 const int RebindWidget::TAB_PROGRAM = 4 [static], [private]

Definition at line 77 of file rebindwidget.h.

Referenced by setSelection().

12.80.4.16 const int RebindWidget::TAB_SPECIAL = 3 [static], [private]

Definition at line 77 of file rebindwidget.h.

Referenced by setSelection().

12.80.4.17 QStringList RebindWidget::typingKeys [private]

Definition at line 90 of file rebindwidget.h.

Referenced by applyChanges(), setBind(), and setSelection().

12.80.4.18 Ui::RebindWidget* RebindWidget::ui [private]

Definition at line 74 of file rebindwidget.h.

Referenced by applyChanges(), convertMacroBox(), helpStatus(), on_animBox_currentIndexChanged(), on_animButton_clicked(), on_btnStartMacro_clicked(), on_btnStopMacro_clicked(), on_dpiBox_currentIndexChanged(), on_dpiButton_clicked(), on_fnBox_currentIndexChanged(), on_fnButton_clicked(), on_lightBox_currentIndexChanged(), on_lightButton_clicked(), on_lockBox_currentIndexChanged(), on_lockButton_clicked(), on_mb2Box_currentIndexChanged(), on_mb2Button_clicked(), on_mbBox_currentIndexChanged(), on_mbButton_clicked(), on_mediaBox_currentIndexChanged(), on_mediaButton_clicked(), on_modBox_currentIndexChanged(), on_modButton_clicked(), on_modeBox_currentIndexChanged(), on_modeButton_clicked(), on_numBox_currentIndexChanged(), on_numButton_clicked(), on_programKpBox_textChanged(), on_programKpButton_clicked(), on_programKpSIBox_clicked(), on_programKrBox_textChanged(), on_programKrButton_clicked(), on_programKrSIBox_clicked(), on_pteMacroBox_textChanged(), on_typingBox_currentIndexChanged(), on_typingButton_clicked(), on_wheelBox_currentIndexChanged(), on_wheelButton_clicked(), RebindWidget(), setBind(), setBox(), setSelection(), and ~RebindWidget().

12.80.4.19 QStringList RebindWidget::wheelKeys [private]

Definition at line 97 of file rebindwidget.h.

Referenced by applyChanges(), RebindWidget(), and setSelection().

The documentation for this class was generated from the following files:

- src/ckb/rebindwidget.h
- src/ckb/rebindwidget.cpp

12.81 Ui::RebindWidget Class Reference

```
#include <src/ckb/ui_rebindwidget.h>
```

Inheritance diagram for Ui::RebindWidget:

Collaboration diagram for Ui::RebindWidget:

Public Member Functions

- void setupUi (QWidget *RebindWidget)
- void retranslateUi (QWidget *RebindWidget)

Data Fields

- QVBoxLayout * verticalLayout
- QTabWidget * tabWidget
- QWidget * keyTab
- QGridLayout * gridLayout_2
- QComboBox * numBox
- QComboBox * typingBox
- QComboBox * fnBox
- QSpacerItem * verticalSpacer_10
- QSpacerItem * verticalSpacer_3
- QSpacerItem * horizontalSpacer_2
- QRadioButton * typingButton
- QComboBox * modBox
- QSpacerItem * horizontalSpacer_3
- QRadioButton * mediaButton
- QSpacerItem * verticalSpacer_4
- QSpacerItem * horizontalSpacer_9
- QSpacerItem * horizontalSpacer_4
- QRadioButton * modButton
- QRadioButton * fnButton
- QComboBox * mediaBox
- QRadioButton * numButton
- QSpacerItem * horizontalSpacer_17
- QWidget * mouseTab
- QGridLayout * gridLayout
- QRadioButton * dpiButton
- QSpacerItem * verticalSpacer_2
- QSpacerItem * verticalSpacer_8
- QSpacerItem * horizontalSpacer_18
- QSpacerItem * horizontalSpacer_20
- QComboBox * mb2Box
- QComboBox * dpiBox
- QSpinBox * dpiCustYBox
- QComboBox * mbBox
- QComboBox * wheelBox
- QRadioButton * mbButton
- QSpinBox * dpiCustXBox
- QLabel * dpiWarning
- QRadioButton * wheelButton
- QSpacerItem * horizontalSpacer_22
- QRadioButton * mb2Button
- QLabel * dpiCustLabel
- QSpacerItem * horizontalSpacer_19
- QSpacerItem * horizontalSpacer_21
- QWidget * animTab
- QGridLayout * gridLayout_5
- QSpacerItem * verticalSpacer_11
- QComboBox * animBox

- QSpacerItem * horizontalSpacer_24
- QSpacerItem * horizontalSpacer_25
- QCheckBox * animKrBox
- QCheckBox * animOnceBox
- QSpacerItem * horizontalSpacer_26
- QRadioButton * animButton
- QSpacerItem * horizontalSpacer_23
- QWidget * actionTab
- QGridLayout * gridLayout_3
- QSpacerItem * horizontalSpacer_5
- QRadioButton * modeButton
- QCheckBox * modeWrapBox
- QCheckBox * lightWrapBox
- QSpacerItem * verticalSpacer_7
- QSpacerItem * verticalSpacer_6
- QRadioButton * lockButton
- QSpacerItem * verticalSpacer_5
- QComboBox * lightBox
- QComboBox * lockBox
- QRadioButton * lightButton
- QComboBox * modeBox
- QSpacerItem * horizontalSpacer_8
- QSpacerItem * horizontalSpacer_10
- QSpacerItem * horizontalSpacer_7
- QSpacerItem * horizontalSpacer_6
- QWidget * programTab
- QGridLayout * gridLayout_4
- QSpacerItem * verticalSpacer
- QSpacerItem * horizontalSpacer
- QCheckBox * programKpButton
- QLineEdit * programKpBox
- QSpacerItem * horizontalSpacer_11
- QSpacerItem * horizontalSpacer_13
- QLineEdit * programKrBox
- QCheckBox * programKrButton
- QSpacerItem * horizontalSpacer_12
- QWidget * programKpExtra
- QHBoxLayout * horizontalLayout_2
- QCheckBox * programKpSIBox
- QComboBox * programKpModeBox
- QSpacerItem * horizontalSpacer_15
- QWidget * programKrExtra
- QHBoxLayout * horizontalLayout_3
- QCheckBox * programKrSIBox
- QComboBox * programKrModeBox
- QSpacerItem * horizontalSpacer_16
- QLabel * progTipLabel
- QWidget * macroTab
- QWidget * layoutWidget1
- QGridLayout * gridLayout_8
- QGroupBox * groupBox_2
- QPlainTextEdit * pteMacroBox
- QPlainTextEdit * pteMacroComment
- QPlainTextEdit * pteMacroText
- QWidget * layoutWidget

- QVBoxLayout * verticalLayout_2
- QGroupBox * groupBox_3
- QGroupBox * groupBox_4
- QWidget * layoutWidget_2
- QGridLayout * gridLayout_10
- QGroupBox * groupBox
- QPushButton * btnStopMacro
- QPushButton * btnStartMacro
- QPushButton * btnClearMacro
- QLabel * lbl_macro
- QHBoxLayout * horizontalLayout
- QSpacerItem * horizontalSpacer_14
- QPushButton * unbindButton
- QPushButton * resetButton
- QPushButton * cancelButton
- QPushButton * applyButton

12.81.1 Detailed Description

Definition at line 971 of file ui_rebindwidget.h.

12.81.2 Member Function Documentation

12.81.2.1 void Ui_RebindWidget::retranslateUi (QWidget * *RebindWidget*) [inline],[inherited]

Definition at line 825 of file ui_rebindwidget.h.

References Ui_RebindWidget::actionTab, Ui_RebindWidget::animBox, Ui_RebindWidget::animButton, Ui_RebindWidget::animKrBox, Ui_RebindWidget::animOnceBox, Ui_RebindWidget::animTab, Ui_RebindWidget::applyButton, Ui_RebindWidget::btnClearMacro, Ui_RebindWidget::btnStartMacro, Ui_RebindWidget::btnStopMacro, Ui_RebindWidget::cancelButton, Ui_RebindWidget::dpiBox, Ui_RebindWidget::dpiButton, Ui_RebindWidget::dpiCustLabel, Ui_RebindWidget::dpiWarning, Ui_RebindWidget::fnBox, Ui_RebindWidget::fnButton, Ui_RebindWidget::groupBox, Ui_RebindWidget::groupBox_2, Ui_RebindWidget::groupBox_3, Ui_RebindWidget::groupBox_4, Ui_RebindWidget::keyTab, Ui_RebindWidget::lbl_macro, Ui_RebindWidget::lightBox, Ui_RebindWidget::lightButton, Ui_RebindWidget::lightWrapBox, Ui_RebindWidget::lockBox, Ui_RebindWidget::lockButton, Ui_RebindWidget::macroTab, Ui_RebindWidget::mb2Box, Ui_RebindWidget::mb2Button, Ui_RebindWidget::mbBox, Ui_RebindWidget::mbButton, Ui_RebindWidget::mediaBox, Ui_RebindWidget::mediaButton, Ui_RebindWidget::modBox, Ui_RebindWidget::modButton, Ui_RebindWidget::modeBox, Ui_RebindWidget::modeButton, Ui_RebindWidget::modeWrapBox, Ui_RebindWidget::mouseTab, Ui_RebindWidget::numBox, Ui_RebindWidget::numButton, Ui_RebindWidget::programKpButton, Ui_RebindWidget::programKpModeBox, Ui_RebindWidget::programKpSIBox, Ui_RebindWidget::programKrButton, Ui_RebindWidget::programKrModeBox, Ui_RebindWidget::programKrSIBox, Ui_RebindWidget::programTab, Ui_RebindWidget::progTipLabel, Ui_RebindWidget::pteMacroComment, Ui_RebindWidget::pteMacroText, Ui_RebindWidget::resetButton, Ui_RebindWidget::tabWidget, Ui_RebindWidget::typingBox, Ui_RebindWidget::typingButton, Ui_RebindWidget::unbindButton, Ui_RebindWidget::wheelBox, and Ui_RebindWidget::wheelButton.

Referenced by Ui_RebindWidget::setupUi().

```
826     {
827         numBox->clear();
828         numBox->insertItems(0, QStringList()
829          << QString()
830         );
831         typingBox->clear();
832         typingBox->insertItems(0, QStringList()
833          << QString()
834         );
835         fnBox->clear();
836         fnBox->insertItems(0, QStringList()
837          << QString()
```

```
        );
        typingButton->setText(QApplication::translate("RebindWidget", "Typing:", Q_NULLPTR));
        modBox->clear();
        modBox->insertItems(0, QStringList()
         << QString()
        );
        mediaButton->setText(QApplication::translate("RebindWidget", "Media:", Q_NULLPTR));
        modButton->setText(QApplication::translate("RebindWidget", "Modifier:", Q_NULLPTR));
        fnButton->setText(QApplication::translate("RebindWidget", "Miscellaneous:", Q_NULLPTR));
        mediaBox->clear();
        mediaBox->insertItems(0, QStringList()
         << QString()
        );
        numButton->setText(QApplication::translate("RebindWidget", "Number pad:", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(keyTab), QApplication::translate("RebindWidget", "Keyboard", Q_NULLPTR));
        dpiButton->setText(QApplication::translate("RebindWidget", "Change DPI:", Q_NULLPTR));
        mb2Box->clear();
        mb2Box->insertItems(0, QStringList()
         << QString()
         << QApplication::translate("RebindWidget", "4 (Back)", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "5 (Forward)", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "6", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "7", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "8", Q_NULLPTR)
        );
        dpiBox->clear();
        dpiBox->insertItems(0, QStringList()
         << QString()
         << QApplication::translate("RebindWidget", "(Up)", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "(Down)", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "Sniper", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "1:", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "2:", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "3:", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "4:", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "5:", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "Custom:", Q_NULLPTR)
        );
        mbBox->clear();
        mbBox->insertItems(0, QStringList()
         << QString()
         << QApplication::translate("RebindWidget", "Left", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "Right", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "Middle", Q_NULLPTR)
        );
        wheelBox->clear();
        wheelBox->insertItems(0, QStringList()
         << QString()
         << QApplication::translate("RebindWidget", "Up", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "Down", Q_NULLPTR)
        );
        mbButton->setText(QApplication::translate("RebindWidget", "Standard button:", Q_NULLPTR));
        dpiWarning->setText(QApplication::translate("RebindWidget", "DPI is only available for mice.", Q_NULLPTR));
        wheelButton->setText(QApplication::translate("RebindWidget", "Wheel:", Q_NULLPTR));
        mb2Button->setText(QApplication::translate("RebindWidget", "Special button:", Q_NULLPTR));
        dpiCustLabel->setText(QApplication::translate("RebindWidget", "x", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(mouseTab), QApplication::translate("RebindWidget", "Mouse", Q_NULLPTR));
        animBox->clear();
        animBox->insertItems(0, QStringList()
         << QString()
        );
        animKrBox->setText(QApplication::translate("RebindWidget", "Stop on key release", Q_NULLPTR));
        animOnceBox->setText(QApplication::translate("RebindWidget", "Restart every time", Q_NULLPTR));
        animButton->setText(QApplication::translate("RebindWidget", "Start animation on keypress:", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(animTab), QApplication::translate("RebindWidget", "Animation", Q_NULLPTR));
        modeButton->setText(QApplication::translate("RebindWidget", "Switch to mode:", Q_NULLPTR);
        modeWrapBox->setText(QApplication::translate("RebindWidget", "Wrap-around", Q_NULLPTR));
        lightWrapBox->setText(QApplication::translate("RebindWidget", "Wrap-around", Q_NULLPTR);
        lockButton->setText(QApplication::translate("RebindWidget", "Windows lock:", Q_NULLPTR));
        lightBox->clear();
        lightBox->insertItems(0, QStringList()
         << QString()
         << QApplication::translate("RebindWidget", "Up", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "Down", Q_NULLPTR)
        );
        lockBox->clear();
        lockBox->insertItems(0, QStringList()
         << QString()
```

```
        << QApplication::translate("RebindWidget", "Toggle", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "On", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Off", Q_NULLPTR)
      );
      lightButton->setText(QApplication::translate("RebindWidget", "Brightness:", Q_NULLPTR));
      modeBox->clear();
      modeBox->insertItems(0, QStringList()
        << QString()
        << QApplication::translate("RebindWidget", "(Previous)", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "(Next)", Q_NULLPTR)
      );
      tabWidget->setTabText(tabWidget->indexOf(actionTab), QApplication::translate("RebindWidget", "Special", Q_NULLPTR));
      programKpButton->setText(QApplication::translate("RebindWidget", "Launch program on key press:", Q_NULLPTR));
      programKrButton->setText(QApplication::translate("RebindWidget", "Launch program on key release:", Q_NULLPTR));
      programKpSIBox->setText(QApplication::translate("RebindWidget", "Single instance", Q_NULLPTR));
      programKpModeBox->clear();
      programKpModeBox->insertItems(0, QStringList()
        << QApplication::translate("RebindWidget", "Run indefinitely", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Stop on release", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Stop on re-press", Q_NULLPTR)
      );
      programKrSIBox->setText(QApplication::translate("RebindWidget", "Single instance", Q_NULLPTR));
      programKrModeBox->clear();
      programKrModeBox->insertItems(0, QStringList()
        << QApplication::translate("RebindWidget", "Run indefinitely", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Stop on re-press", Q_NULLPTR)
      );
      progTipLabel->setText(QApplication::translate("RebindWidget", "Tip", Q_NULLPTR));
      tabWidget->setTabText(tabWidget->indexOf(programTab), QApplication::translate("RebindWidget", "Program", Q_NULLPTR));
      groupBox_2->setTitle(QApplication::translate("RebindWidget", "Macro Key Actions", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
      pteMacroComment->setToolTip(QApplication::translate("RebindWidget", "What is this macro for?", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
      pteMacroComment->setDocumentTitle(QString());
      pteMacroComment->setPlainText(QString());
      pteMacroText->setDocumentTitle(QString());
      pteMacroText->setPlainText(QString());
      groupBox_3->setTitle(QApplication::translate("RebindWidget", "Macro Comment", Q_NULLPTR));
      groupBox_4->setTitle(QApplication::translate("RebindWidget", "Macro Text", Q_NULLPTR));
      groupBox->setTitle(QApplication::translate("RebindWidget", "Macro recording", Q_NULLPTR));
      btnStopMacro->setText(QApplication::translate("RebindWidget", "Stop", Q_NULLPTR));
      btnStartMacro->setText(QApplication::translate("RebindWidget", "Start", Q_NULLPTR));
      btnClearMacro->setText(QApplication::translate("RebindWidget", "Clear", Q_NULLPTR));
      lbl_macro->setText(QApplication::translate("RebindWidget", "Comment label for help", Q_NULLPTR));
      tabWidget->setTabText(tabWidget->indexOf(macroTab), QApplication::translate("RebindWidget", "Macro", Q_NULLPTR));
      unbindButton->setText(QApplication::translate("RebindWidget", "Unbind", Q_NULLPTR));
      resetButton->setText(QApplication::translate("RebindWidget", "Reset to Default", Q_NULLPTR));
      cancelButton->setText(QApplication::translate("RebindWidget", "Cancel", Q_NULLPTR));
      applyButton->setText(QApplication::translate("RebindWidget", "Apply", Q_NULLPTR));
      Q_UNUSED(RebindWidget);
    } // retranslateUi
```

Here is the caller graph for this function:

12.81.2.2 void Ui_RebindWidget::setupUi (QWidget * *RebindWidget*) [inline],[inherited]

Definition at line 157 of file ui_rebindwidget.h.

References Ui_RebindWidget::actionTab, Ui_RebindWidget::animBox, Ui_RebindWidget::animButton, Ui_RebindWidget::animKrBox, Ui_RebindWidget::animOnceBox, Ui_RebindWidget::animTab, Ui_RebindWidget::applyButton, Ui_RebindWidget::btnClearMacro, Ui_RebindWidget::btnStartMacro, Ui_RebindWidget::btnStopMacro, Ui_RebindWidget::cancelButton, Ui_RebindWidget::dpiBox, Ui_RebindWidget::dpiButton, Ui_RebindWidget::dpiCustLabel, Ui_RebindWidget::dpiCustXBox, Ui_RebindWidget::dpiCustYBox, Ui_RebindWidget::dpiWarning, Ui_RebindWidget::fnBox, Ui_RebindWidget::fnButton, Ui_RebindWidget::gridLayout, Ui_RebindWidget::gridLayout_10, Ui_RebindWidget::gridLayout_2, Ui_RebindWidget::gridLayout_3, Ui_RebindWidget::gridLayout_4, Ui_RebindWidget::gridLayout_5, Ui_RebindWidget::gridLayout_8, Ui_RebindWidget::groupBox, Ui_RebindWidget::groupBox_2, Ui_RebindWidget::groupBox_3, Ui_RebindWidget::groupBox_4, Ui_RebindWidget::horizontalLayout, Ui_RebindWidget::horizontalLayout_2, Ui_RebindWidget::horizontalLayout_3, Ui_RebindWidget::horizontalSpacer, Ui_RebindWidget::horizontalSpacer_10, Ui_RebindWidget::horizontalSpacer_11, Ui_RebindWidget::horizontalSpacer_12, Ui_RebindWidget::horizontalSpacer_13, Ui_RebindWidget::horizontalSpacer_14, Ui_RebindWidget::horizontalSpacer_15, Ui_RebindWidget::horizontalSpacer_16, Ui_RebindWidget::horizontalSpacer_17, Ui_RebindWidget::horizontalSpacer_18, Ui_RebindWidget::horizontalSpacer_19, Ui_RebindWidget::horizontalSpacer_2, Ui_RebindWidget::horizontalSpacer_20, Ui_RebindWidget::horizontalSpacer_21, Ui_RebindWidget::horizontalSpacer_22, Ui_RebindWidget::horizontalSpacer_23, Ui_RebindWidget::horizontalSpacer_24, Ui_RebindWidget::horizontalSpacer_25, Ui_RebindWidget::horizontalSpacer_26, Ui_RebindWidget::horizontalSpacer_3, Ui_RebindWidget::horizontalSpacer_4, Ui_RebindWidget::horizontalSpacer_5, Ui_RebindWidget::horizontalSpacer_6, Ui_RebindWidget::horizontalSpacer_7, Ui_RebindWidget::horizontalSpacer_8, Ui_RebindWidget::horizontalSpacer_9, Ui_RebindWidget::keyTab, Ui_RebindWidget::layoutWidget, Ui_RebindWidget::layoutWidget1, Ui_RebindWidget::layoutWidget_2, Ui_RebindWidget::lbl_macro, Ui_RebindWidget::lightBox, Ui_RebindWidget::lightButton, Ui_RebindWidget::lightWrapBox, Ui_RebindWidget::lockBox, Ui_RebindWidget::lockButton, Ui_RebindWidget::macroTab, Ui_RebindWidget::mb2Box, Ui_RebindWidget::mb2Button, Ui_RebindWidget::mbBox, Ui_RebindWidget::mbButton, Ui_RebindWidget::mediaBox, Ui_RebindWidget::mediaButton, Ui_RebindWidget::modBox, Ui_RebindWidget::modButton, Ui_RebindWidget::modeBox, Ui_RebindWidget::modeButton, Ui_RebindWidget::modeWrapBox, Ui_RebindWidget::mouseTab, Ui_RebindWidget::numBox, Ui_RebindWidget::numButton, Ui_RebindWidget::programKpBox, Ui_RebindWidget::programKpButton, Ui_RebindWidget::programKpExtra, Ui_RebindWidget::programKpModeBox, Ui_RebindWidget::programKpSIBox, Ui_RebindWidget::programKrBox, Ui_RebindWidget::programKrButton, Ui_RebindWidget::programKrExtra, Ui_RebindWidget::programKrModeBox, Ui_RebindWidget::programKrSIBox, Ui_RebindWidget::programTab, Ui_RebindWidget::progTipLabel, Ui_RebindWidget::pteMacroBox, Ui_RebindWidget::pteMacroComment, Ui_RebindWidget::pteMacroText, Ui_RebindWidget::resetButton, Ui_RebindWidget::retranslateUi(), Ui_RebindWidget::tabWidget, Ui_RebindWidget::typingBox, Ui_RebindWidget::typingButton, Ui_RebindWidget::unbindButton, Ui_RebindWidget::verticalLayout, Ui_RebindWidget::verticalLayout_2, Ui_RebindWidget::verticalSpacer, Ui_RebindWidget::verticalSpacer_10, Ui_RebindWidget::verticalSpacer_11, Ui_RebindWidget::verticalSpacer_2, Ui_RebindWidget::verticalSpacer_3, Ui_RebindWidget::verticalSpacer_4, Ui_RebindWidget::verticalSpacer_5, Ui_RebindWidget::verticalSpacer_6, Ui_RebindWidget::verticalSpacer_7, Ui_RebindWidget::verticalSpacer_8, Ui_RebindWidget::wheelBox, and Ui_RebindWidget::wheelButton.

Referenced by RebindWidget::RebindWidget().

```
    {
        if (RebindWidget->objectName().isEmpty())
            RebindWidget->setObjectName(QStringLiteral("RebindWidget"));
        RebindWidget->resize(687, 342);
        QSizePolicy sizePolicy(QSizePolicy::Expanding, QSizePolicy::Preferred);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(RebindWidget->sizePolicy().hasHeightForWidth());
        RebindWidget->setSizePolicy(sizePolicy);
        verticalLayout = new QVBoxLayout(RebindWidget);
        verticalLayout->setObjectName(QStringLiteral("verticalLayout"));
        tabWidget = new QTabWidget(RebindWidget);
        tabWidget->setObjectName(QStringLiteral("tabWidget"));
        keyTab = new QWidget();
        keyTab->setObjectName(QStringLiteral("keyTab"));
        sizePolicy.setHeightForWidth(keyTab->sizePolicy().hasHeightForWidth());
        keyTab->setSizePolicy(sizePolicy);
        gridLayout_2 = new QGridLayout(keyTab);
        gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
        gridLayout_2->setContentsMargins(-1, -1, -1, 0);
        numBox = new QComboBox(keyTab);
        numBox->setObjectName(QStringLiteral("numBox"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Fixed);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(numBox->sizePolicy().hasHeightForWidth());
        numBox->setSizePolicy(sizePolicy1);
```

```

        gridLayout_2->addWidget(numBox, 6, 4, 1, 1);

        typingBox = new QComboBox(keyTab);
        typingBox->setObjectName(QStringLiteral("typingBox"));
        sizePolicy1.setHeightForWidth(typingBox->sizePolicy().hasHeightForWidth());
        typingBox->setSizePolicy(sizePolicy1);

        gridLayout_2->addWidget(typingBox, 1, 1, 1, 1);

        fnBox = new QComboBox(keyTab);
        fnBox->setObjectName(QStringLiteral("fnBox"));
        sizePolicy1.setHeightForWidth(fnBox->sizePolicy().hasHeightForWidth());
        fnBox->setSizePolicy(sizePolicy1);

        gridLayout_2->addWidget(fnBox, 6, 1, 1, 1);

        verticalSpacer_10 = new QSpacerItem(0, 5, QSizePolicy::Minimum, QSizePolicy::Fixed
);

        gridLayout_2->addItem(verticalSpacer_10, 9, 1, 1, 1);

        verticalSpacer_3 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
QSizePolicy::Expanding);

        gridLayout_2->addItem(verticalSpacer_3, 15, 2, 1, 1);

        horizontalSpacer_2 = new QSpacerItem(5, 20, QSizePolicy::Fixed,
QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_2, 1, 3, 1, 1);

        typingButton = new QRadioButton(keyTab);
        typingButton->setObjectName(QStringLiteral("typingButton"));
        typingButton->setAutoExclusive(false);

        gridLayout_2->addWidget(typingButton, 0, 0, 1, 2);

        modBox = new QComboBox(keyTab);
        modBox->setObjectName(QStringLiteral("modBox"));
        sizePolicy1.setHeightForWidth(modBox->sizePolicy().hasHeightForWidth());
        modBox->setSizePolicy(sizePolicy1);

        gridLayout_2->addWidget(modBox, 1, 4, 1, 1);

        horizontalSpacer_3 = new QSpacerItem(5, 20, QSizePolicy::Fixed,
QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_3, 1, 0, 1, 1);

        mediaButton = new QRadioButton(keyTab);
        mediaButton->setObjectName(QStringLiteral("mediaButton"));
        mediaButton->setAutoExclusive(false);

        gridLayout_2->addWidget(mediaButton, 10, 0, 1, 2);

        verticalSpacer_4 = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed)
;

        gridLayout_2->addItem(verticalSpacer_4, 2, 1, 1, 1);

        horizontalSpacer_9 = new QSpacerItem(0, 20, QSizePolicy::Expanding,
QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_9, 1, 5, 1, 2);

        horizontalSpacer_4 = new QSpacerItem(0, 20, QSizePolicy::Expanding,
QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_4, 1, 2, 1, 1);

        modButton = new QRadioButton(keyTab);
        modButton->setObjectName(QStringLiteral("modButton"));

        gridLayout_2->addWidget(modButton, 0, 3, 1, 2);

        fnButton = new QRadioButton(keyTab);
        fnButton->setObjectName(QStringLiteral("fnButton"));
        fnButton->setAutoExclusive(false);

        gridLayout_2->addWidget(fnButton, 5, 0, 1, 2);

        mediaBox = new QComboBox(keyTab);
        mediaBox->setObjectName(QStringLiteral("mediaBox"));
        sizePolicy1.setHeightForWidth(mediaBox->sizePolicy().hasHeightForWidth());
        mediaBox->setSizePolicy(sizePolicy1);

```

```
        gridLayout_2->addWidget(mediaBox, 11, 1, 1, 1);

        numButton = new QRadioButton(keyTab);
        numButton->setObjectName(QStringLiteral("numButton"));
        numButton->setAutoExclusive(false);

        gridLayout_2->addWidget(numButton, 5, 3, 1, 2);

        horizontalSpacer_17 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_17, 1, 7, 1, 1);

        tabWidget->addTab(keyTab, QString());
        mouseTab = new QWidget();
        mouseTab->setObjectName(QStringLiteral("mouseTab"));
        gridLayout = new QGridLayout(mouseTab);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        dpiButton = new QRadioButton(mouseTab);
        dpiButton->setObjectName(QStringLiteral("dpiButton"));
        dpiButton->setAutoExclusive(false);

        gridLayout->addWidget(dpiButton, 3, 3, 1, 5);

        verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout->addItem(verticalSpacer_2, 5, 1, 1, 1);

        verticalSpacer_8 = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_8, 2, 1, 1, 1);

        horizontalSpacer_18 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_18, 1, 0, 1, 1);

        horizontalSpacer_20 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_20, 1, 3, 1, 1);

        mb2Box = new QComboBox(mouseTab);
        mb2Box->setObjectName(QStringLiteral("mb2Box"));
        sizePolicy1.setHeightForWidth(mb2Box->sizePolicy().hasHeightForWidth());
        mb2Box->setSizePolicy(sizePolicy1);

        gridLayout->addWidget(mb2Box, 1, 4, 1, 4);

        dpiBox = new QComboBox(mouseTab);
        dpiBox->setObjectName(QStringLiteral("dpiBox"));

        gridLayout->addWidget(dpiBox, 4, 4, 1, 1);

        dpiCustYBox = new QSpinBox(mouseTab);
        dpiCustYBox->setObjectName(QStringLiteral("dpiCustYBox"));
        dpiCustYBox->setMinimum(400);
        dpiCustYBox->setMaximum(8500);
        dpiCustYBox->setSingleStep(50);

        gridLayout->addWidget(dpiCustYBox, 4, 7, 1, 1);

        mbBox = new QComboBox(mouseTab);
        mbBox->setObjectName(QStringLiteral("mbBox"));
        sizePolicy1.setHeightForWidth(mbBox->sizePolicy().hasHeightForWidth());
        mbBox->setSizePolicy(sizePolicy1);

        gridLayout->addWidget(mbBox, 1, 1, 1, 1);

        wheelBox = new QComboBox(mouseTab);
        wheelBox->setObjectName(QStringLiteral("wheelBox"));

        gridLayout->addWidget(wheelBox, 4, 1, 1, 1);

        mbButton = new QRadioButton(mouseTab);
        mbButton->setObjectName(QStringLiteral("mbButton"));
        mbButton->setAutoExclusive(false);

        gridLayout->addWidget(mbButton, 0, 0, 1, 2);

        dpiCustXBox = new QSpinBox(mouseTab);
        dpiCustXBox->setObjectName(QStringLiteral("dpiCustXBox"));
        dpiCustXBox->setMinimum(400);
        dpiCustXBox->setMaximum(8500);
        dpiCustXBox->setSingleStep(50);
```

```
        gridLayout->addWidget(dpiCustXBox, 4, 5, 1, 1);

        dpiWarning = new QLabel(mouseTab);
        dpiWarning->setObjectName(QStringLiteral("dpiWarning"));
        QSizePolicy sizePolicy2(QSizePolicy::Preferred, QSizePolicy::Fixed);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(0);
        sizePolicy2.setHeightForWidth(dpiWarning->sizePolicy().hasHeightForWidth());
        dpiWarning->setSizePolicy(sizePolicy2);

        gridLayout->addWidget(dpiWarning, 6, 0, 1, 10);

        wheelButton = new QRadioButton(mouseTab);
        wheelButton->setObjectName(QStringLiteral("wheelButton"));

        gridLayout->addWidget(wheelButton, 3, 0, 1, 2);

        horizontalSpacer_22 = new QSpacerItem(5, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_22, 1, 8, 1, 1);

        mb2Button = new QRadioButton(mouseTab);
        mb2Button->setObjectName(QStringLiteral("mb2Button"));
        mb2Button->setAutoExclusive(false);

        gridLayout->addWidget(mb2Button, 0, 3, 1, 5);

        dpiCustLabel = new QLabel(mouseTab);
        dpiCustLabel->setObjectName(QStringLiteral("dpiCustLabel"));

        gridLayout->addWidget(dpiCustLabel, 4, 6, 1, 1);

        horizontalSpacer_19 = new QSpacerItem(0, 0, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_19, 1, 2, 1, 1);

        horizontalSpacer_21 = new QSpacerItem(0, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_21, 1, 9, 1, 1);

        tabWidget->addTab(mouseTab, QString());
        animTab = new QWidget();
        animTab->setObjectName(QStringLiteral("animTab"));
        gridLayout_5 = new QGridLayout(animTab);
        gridLayout_5->setObjectName(QStringLiteral("gridLayout_5"));
        verticalSpacer_11 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
    QSizePolicy::Expanding);

        gridLayout_5->addItem(verticalSpacer_11, 6, 2, 1, 1);

        animBox = new QComboBox(animTab);
        animBox->setObjectName(QStringLiteral("animBox"));
        sizePolicy1.setHeightForWidth(animBox->sizePolicy().hasHeightForWidth());
        animBox->setSizePolicy(sizePolicy1);

        gridLayout_5->addWidget(animBox, 4, 2, 1, 1);

        horizontalSpacer_24 = new QSpacerItem(20, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        gridLayout_5->addItem(horizontalSpacer_24, 4, 3, 1, 1);

        horizontalSpacer_25 = new QSpacerItem(438, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        gridLayout_5->addItem(horizontalSpacer_25, 4, 7, 1, 1);

        animKrBox = new QCheckBox(animTab);
        animKrBox->setObjectName(QStringLiteral("animKrBox"));

        gridLayout_5->addWidget(animKrBox, 4, 6, 1, 1);

        animOnceBox = new QCheckBox(animTab);
        animOnceBox->setObjectName(QStringLiteral("animOnceBox"));

        gridLayout_5->addWidget(animOnceBox, 4, 4, 1, 1);

        horizontalSpacer_26 = new QSpacerItem(20, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        gridLayout_5->addItem(horizontalSpacer_26, 4, 5, 1, 1);

        animButton = new QRadioButton(animTab);
```

```
        animButton->setObjectName(QStringLiteral("animButton"));
        sizePolicy1.setHeightForWidth(animButton->sizePolicy().hasHeightForWidth());
        animButton->setSizePolicy(sizePolicy1);

        gridLayout_5->addWidget(animButton, 0, 1, 1, 2);

        horizontalSpacer_23 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_5->addItem(horizontalSpacer_23, 4, 1, 1, 1);

        tabWidget->addTab(animTab, QString());
        actionTab = new QWidget();
        actionTab->setObjectName(QStringLiteral("actionTab"));
        sizePolicy.setHeightForWidth(actionTab->sizePolicy().hasHeightForWidth());
        actionTab->setSizePolicy(sizePolicy);
        gridLayout_3 = new QGridLayout(actionTab);
        gridLayout_3->setObjectName(QStringLiteral("gridLayout_3"));
        gridLayout_3->setContentsMargins(-1, -1, -1, 0);
        horizontalSpacer_5 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_5, 1, 0, 1, 1);

        modeButton = new QRadioButton(actionTab);
        modeButton->setObjectName(QStringLiteral("modeButton"));
        modeButton->setAutoExclusive(false);

        gridLayout_3->addWidget(modeButton, 0, 0, 1, 2);

        modeWrapBox = new QCheckBox(actionTab);
        modeWrapBox->setObjectName(QStringLiteral("modeWrapBox"));
        modeWrapBox->setChecked(true);

        gridLayout_3->addWidget(modeWrapBox, 1, 3, 1, 1);

        lightWrapBox = new QCheckBox(actionTab);
        lightWrapBox->setObjectName(QStringLiteral("lightWrapBox"));
        lightWrapBox->setChecked(true);

        gridLayout_3->addWidget(lightWrapBox, 4, 3, 1, 1);

        verticalSpacer_7 = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout_3->addItem(verticalSpacer_7, 2, 1, 1, 1);

        verticalSpacer_6 = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout_3->addItem(verticalSpacer_6, 5, 1, 1, 1);

        lockButton = new QRadioButton(actionTab);
        lockButton->setObjectName(QStringLiteral("lockButton"));
        lockButton->setAutoExclusive(false);

        gridLayout_3->addWidget(lockButton, 6, 0, 1, 2);

        verticalSpacer_5 = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout_3->addItem(verticalSpacer_5, 8, 1, 1, 1);

        lightBox = new QComboBox(actionTab);
        lightBox->setObjectName(QStringLiteral("lightBox"));
        sizePolicy1.setHeightForWidth(lightBox->sizePolicy().hasHeightForWidth());
        lightBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(lightBox, 4, 1, 1, 1);

        lockBox = new QComboBox(actionTab);
        lockBox->setObjectName(QStringLiteral("lockBox"));
        sizePolicy1.setHeightForWidth(lockBox->sizePolicy().hasHeightForWidth());
        lockBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(lockBox, 7, 1, 1, 1);

        lightButton = new QRadioButton(actionTab);
        lightButton->setObjectName(QStringLiteral("lightButton"));
        lightButton->setAutoExclusive(false);

        gridLayout_3->addWidget(lightButton, 3, 0, 1, 2);

        modeBox = new QComboBox(actionTab);
        modeBox->setObjectName(QStringLiteral("modeBox"));
        sizePolicy1.setHeightForWidth(modeBox->sizePolicy().hasHeightForWidth());
        modeBox->setSizePolicy(sizePolicy1);
```

```

        gridLayout_3->addWidget(modeBox, 1, 1, 1, 1);

        horizontalSpacer_8 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_8, 1, 2, 1, 1);

        horizontalSpacer_10 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_10, 7, 3, 1, 1);

        horizontalSpacer_7 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_7, 1, 4, 1, 1);

        horizontalSpacer_6 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_6, 1, 5, 1, 1);

        tabWidget->addTab(actionTab, QString());
        programTab = new QWidget();
        programTab->setObjectName(QStringLiteral("programTab"));
        gridLayout_4 = new QGridLayout(programTab);
        gridLayout_4->setObjectName(QStringLiteral("gridLayout_4"));
        verticalSpacer = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout_4->addItem(verticalSpacer, 2, 1, 1, 1);

        horizontalSpacer = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_4->addItem(horizontalSpacer, 1, 0, 1, 1);

        programKpButton = new QCheckBox(programTab);
        programKpButton->setObjectName(QStringLiteral("programKpButton"));

        gridLayout_4->addWidget(programKpButton, 0, 0, 1, 2);

        programKpBox = new QLineEdit(programTab);
        programKpBox->setObjectName(QStringLiteral("programKpBox"));

        gridLayout_4->addWidget(programKpBox, 1, 1, 1, 1);

        horizontalSpacer_11 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_4->addItem(horizontalSpacer_11, 0, 2, 1, 2);

        horizontalSpacer_13 = new QSpacerItem(20, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_4->addItem(horizontalSpacer_13, 1, 2, 1, 1);

        programKrBox = new QLineEdit(programTab);
        programKrBox->setObjectName(QStringLiteral("programKrBox"));

        gridLayout_4->addWidget(programKrBox, 4, 1, 1, 1);

        programKrButton = new QCheckBox(programTab);
        programKrButton->setObjectName(QStringLiteral("programKrButton"));

        gridLayout_4->addWidget(programKrButton, 3, 0, 1, 2);

        horizontalSpacer_12 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_4->addItem(horizontalSpacer_12, 0, 4, 1, 1);

        programKpExtra = new QWidget(programTab);
        programKpExtra->setObjectName(QStringLiteral("programKpExtra"));
        horizontalLayout_2 = new QHBoxLayout(programKpExtra);
        horizontalLayout_2->setSpacing(12);
        horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
        horizontalLayout_2->setContentsMargins(0, 0, 0, 0);
        programKpSIBox = new QCheckBox(programKpExtra);
        programKpSIBox->setObjectName(QStringLiteral("programKpSIBox"));

        horizontalLayout_2->addWidget(programKpSIBox);

        programKpModeBox = new QComboBox(programKpExtra);
        programKpModeBox->setObjectName(QStringLiteral("programKpModeBox"));

        horizontalLayout_2->addWidget(programKpModeBox);
```

```
        horizontalSpacer_15 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer_15);


        gridLayout_4->addWidget(programKpExtra, 1, 3, 1, 2);

        programKrExtra = new QWidget(programTab);
        programKrExtra->setObjectName(QStringLiteral("programKrExtra"));
        horizontalLayout_3 = new QHBoxLayout(programKrExtra);
        horizontalLayout_3->setSpacing(12);
        horizontalLayout_3->setObjectName(QStringLiteral("horizontalLayout_3"));
        horizontalLayout_3->setContentsMargins(0, 0, 0, 0);
        programKrSIBox = new QCheckBox(programKrExtra);
        programKrSIBox->setObjectName(QStringLiteral("programKrSIBox"));

        horizontalLayout_3->addWidget(programKrSIBox);

        programKrModeBox = new QComboBox(programKrExtra);
        programKrModeBox->setObjectName(QStringLiteral("programKrModeBox"));

        horizontalLayout_3->addWidget(programKrModeBox);

        horizontalSpacer_16 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout_3->addItem(horizontalSpacer_16);


        gridLayout_4->addWidget(programKrExtra, 4, 3, 1, 2);

        progTipLabel = new QLabel(programTab);
        progTipLabel->setObjectName(QStringLiteral("progTipLabel"));
        QSizePolicy sizePolicy3(QSizePolicy::Preferred, QSizePolicy::Expanding);
        sizePolicy3.setHorizontalStretch(0);
        sizePolicy3.setVerticalStretch(0);
        sizePolicy3.setHeightForWidth(progTipLabel->sizePolicy().hasHeightForWidth());
        progTipLabel->setSizePolicy(sizePolicy3);
        progTipLabel->setTextInteractionFlags(Qt::LinksAccessibleByMouse|Qt::TextSelectableByMouse);

        gridLayout_4->addWidget(progTipLabel, 5, 1, 1, 4);

        tabWidget->addTab(programTab, QString());
        macroTab = new QWidget();
        macroTab->setObjectName(QStringLiteral("macroTab"));
        layoutWidget1 = new QWidget(macroTab);
        layoutWidget1->setObjectName(QStringLiteral("layoutWidget1"));
        layoutWidget1->setGeometry(QRect(40, 12, 241, 171));
        gridLayout_8 = new QGridLayout(layoutWidget1);
        gridLayout_8->setObjectName(QStringLiteral("gridLayout_8"));
        gridLayout_8->setContentsMargins(0, 0, 0, 0);
        groupBox_2 = new QGroupBox(layoutWidget1);
        groupBox_2->setObjectName(QStringLiteral("groupBox_2"));

        gridLayout_8->addWidget(groupBox_2, 0, 0, 1, 1);

        pteMacroBox = new QPlainTextEdit(layoutWidget1);
        pteMacroBox->setObjectName(QStringLiteral("pteMacroBox"));
        pteMacroBox->setFocusPolicy(Qt::WheelFocus);
        pteMacroBox->setTabChangesFocus(true);

        gridLayout_8->addWidget(pteMacroBox, 1, 0, 1, 1);

        pteMacroComment = new QPlainTextEdit(macroTab);
        pteMacroComment->setObjectName(QStringLiteral("pteMacroComment"));
        pteMacroComment->setEnabled(true);
        pteMacroComment->setGeometry(QRect(420, 20, 311, 31));
        pteMacroComment->setFocusPolicy(Qt::WheelFocus);
        pteMacroComment->setContextMenuPolicy(Qt::NoContextMenu);
        pteMacroComment->setAcceptDrops(true);
        pteMacroComment->setToolTipDuration(1);
        pteMacroComment->setInputMethodHints(Qt::ImhNone);
        pteMacroComment->setVerticalScrollBarPolicy(Qt::ScrollBarAlwaysOff);
        pteMacroComment->setTabChangesFocus(true);
        pteMacroComment->setUndoRedoEnabled(true);
        pteMacroComment->setReadOnly(false);
        pteMacroComment->setTabStopWidth(1);
        pteMacroText = new QPlainTextEdit(macroTab);
        pteMacroText->setObjectName(QStringLiteral("pteMacroText"));
        pteMacroText->setGeometry(QRect(420, 60, 311, 61));
        pteMacroText->setFocusPolicy(Qt::StrongFocus);
        pteMacroText->setContextMenuPolicy(Qt::NoContextMenu);
        pteMacroText->setAcceptDrops(false);
        pteMacroText->setInputMethodHints(Qt::ImhNoAutoUppercase);
```

```
        pteMacroText->setUndoRedoEnabled(false);
        pteMacroText->setReadOnly(false);
        pteMacroText->setTabStopWidth(1);
        layoutWidget = new QWidget(macroTab);
        layoutWidget->setObjectName(QStringLiteral("layoutWidget"));
        layoutWidget->setGeometry(QRect(300, 20, 119, 81));
        verticalLayout_2 = new QVBoxLayout(layoutWidget);
        verticalLayout_2->setObjectName(QStringLiteral("verticalLayout_2"));
        verticalLayout_2->setContentsMargins(0, 0, 0, 0);
        groupBox_3 = new QGroupBox(layoutWidget);
        groupBox_3->setObjectName(QStringLiteral("groupBox_3"));

        verticalLayout_2->addWidget(groupBox_3);

        groupBox_4 = new QGroupBox(layoutWidget);
        groupBox_4->setObjectName(QStringLiteral("groupBox_4"));

        verticalLayout_2->addWidget(groupBox_4);

        layoutWidget_2 = new QWidget(macroTab);
        layoutWidget_2->setObjectName(QStringLiteral("layoutWidget_2"));
        layoutWidget_2->setGeometry(QRect(300, 160, 436, 30));
        gridLayout_10 = new QGridLayout(layoutWidget_2);
        gridLayout_10->setObjectName(QStringLiteral("gridLayout_10"));
        gridLayout_10->setContentsMargins(0, 0, 0, 0);
        groupBox = new QGroupBox(layoutWidget_2);
        groupBox->setObjectName(QStringLiteral("groupBox"));

        gridLayout_10->addWidget(groupBox, 0, 0, 1, 1);

        btnStopMacro = new QPushButton(layoutWidget_2);
        btnStopMacro->setObjectName(QStringLiteral("btnStopMacro"));
        btnStopMacro->setEnabled(false);

        gridLayout_10->addWidget(btnStopMacro, 0, 2, 1, 1);

        btnStartMacro = new QPushButton(layoutWidget_2);
        btnStartMacro->setObjectName(QStringLiteral("btnStartMacro"));

        gridLayout_10->addWidget(btnStartMacro, 0, 1, 1, 1);

        btnClearMacro = new QPushButton(layoutWidget_2);
        btnClearMacro->setObjectName(QStringLiteral("btnClearMacro"));

        gridLayout_10->addWidget(btnClearMacro, 0, 3, 1, 1);

        lbl_macro = new QLabel(macroTab);
        lbl_macro->setObjectName(QStringLiteral("lbl_macro"));
        lbl_macro->setGeometry(QRect(300, 130, 431, 27));
        tabWidget->addTab(macroTab, QString());
        pteMacroComment->raise();
        layoutWidget1->raise();
        layoutWidget->raise();
        pteMacroText->raise();
        layoutWidget_2->raise();
        lbl_macro->raise();

        verticalLayout->addWidget(tabWidget);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        horizontalSpacer_14 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
QSizePolicy::Minimum);

        horizontalLayout->addItem(horizontalSpacer_14);

        unbindButton = new QPushButton(RebindWidget);
        unbindButton->setObjectName(QStringLiteral("unbindButton"));

        horizontalLayout->addWidget(unbindButton);

        resetButton = new QPushButton(RebindWidget);
        resetButton->setObjectName(QStringLiteral("resetButton"));

        horizontalLayout->addWidget(resetButton);

        cancelButton = new QPushButton(RebindWidget);
        cancelButton->setObjectName(QStringLiteral("cancelButton"));

        horizontalLayout->addWidget(cancelButton);

        applyButton = new QPushButton(RebindWidget);
        applyButton->setObjectName(QStringLiteral("applyButton"));

        horizontalLayout->addWidget(applyButton);


```

```
        verticalLayout->addLayout(horizontalLayout);

        QWidget::setTabOrder(tabWidget, pteMacroComment);
        QWidget::setTabOrder(pteMacroComment, pteMacroBox);
        QWidget::setTabOrder(pteMacroBox, dpiButton);
        QWidget::setTabOrder(dpiButton, mb2Box);
        QWidget::setTabOrder(mb2Box, btnStartMacro);
        QWidget::setTabOrder(btnStartMacro, fnBox);
        QWidget::setTabOrder(fnBox, dpiCustYBox);
        QWidget::setTabOrder(dpiCustYBox, dpiBox);
        QWidget::setTabOrder(dpiBox, applyButton);
        QWidget::setTabOrder(applyButton, mbBox);
        QWidget::setTabOrder(mbBox, cancelButton);
        QWidget::setTabOrder(cancelButton, wheelBox);
        QWidget::setTabOrder(wheelBox, btnStopMacro);
        QWidget::setTabOrder(btnStopMacro, mbButton);
        QWidget::setTabOrder(mbButton, dpiCustXBox);
        QWidget::setTabOrder(dpiCustXBox, btnClearMacro);
        QWidget::setTabOrder(btnClearMacro, wheelButton);
        QWidget::setTabOrder(wheelButton, mb2Button);
        QWidget::setTabOrder(mb2Button, animBox);
        QWidget::setTabOrder(animBox, animKrBox);
        QWidget::setTabOrder(animKrBox, animOnceBox);
        QWidget::setTabOrder(animOnceBox, animButton);
        QWidget::setTabOrder(animButton, modeButton);
        QWidget::setTabOrder(modeButton, modeWrapBox);
        QWidget::setTabOrder(modeWrapBox, lightWrapBox);
        QWidget::setTabOrder(lightWrapBox, lockButton);
        QWidget::setTabOrder(lockButton, lightBox);
        QWidget::setTabOrder(lightBox, resetButton);
        QWidget::setTabOrder(resetButton, lockBox);
        QWidget::setTabOrder(lockBox, lightButton);
        QWidget::setTabOrder(lightButton, modeBox);
        QWidget::setTabOrder(modeBox, unbindButton);
        QWidget::setTabOrder(unbindButton, programKpButton);
        QWidget::setTabOrder(programKpButton, programKpBox);
        QWidget::setTabOrder(programKpBox, programKrBox);
        QWidget::setTabOrder(programKrBox, programKrButton);
        QWidget::setTabOrder(programKrButton, programKpSIBox);
        QWidget::setTabOrder(programKpSIBox, programKpModeBox);
        QWidget::setTabOrder(programKpModeBox, programKrSIBox);
        QWidget::setTabOrder(programKrSIBox, programKrModeBox);
        QWidget::setTabOrder(programKrModeBox, typingBox);
        QWidget::setTabOrder(typingBox, numBox);
        QWidget::setTabOrder(numBox, pteMacroText);
        QWidget::setTabOrder(pteMacroText, typingButton);
        QWidget::setTabOrder(typingButton, mediaButton);
        QWidget::setTabOrder(mediaButton, modBox);
        QWidget::setTabOrder(modBox, modButton);
        QWidget::setTabOrder(modButton, fnButton);
        QWidget::setTabOrder(fnButton, mediaBox);
        QWidget::setTabOrder(mediaBox, numButton);

        retranslateUi(RebindWidget);
        QObject::connect(cancelButton, SIGNAL(clicked()), pteMacroBox, SLOT(clear()));
        QObject::connect(btnClearMacro, SIGNAL(clicked()), pteMacroBox, SLOT(clear()));
        QObject::connect(btnClearMacro, SIGNAL(clicked()), pteMacroText, SLOT(clear()));
        QObject::connect(btnClearMacro, SIGNAL(clicked()), pteMacroComment, SLOT(clear()));
        QObject::connect(btnClearMacro, SIGNAL(clicked()), btnStopMacro, SLOT(animateClick()));

        tabWidget->setCurrentIndex(0);
        applyButton->setDefault(true);


        QMetaObject::connectSlotsByName(RebindWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.81.3 Field Documentation

12.81.3.1 QWidget* Ui_RebindWidget::actionTab [inherited]

Definition at line 92 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.2 QComboBox* Ui_RebindWidget::animBox [inherited]

Definition at line 84 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_animBox_currentIndexChanged(), RebindWidget::on_animButton_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.3 QRadioButton* Ui_RebindWidget::animButton [inherited]

Definition at line 90 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_animBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.4 QCheckBox* Ui_RebindWidget::animKrBox [inherited]

Definition at line 87 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), Ui_RebindWidget::retranslateUi(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.5 QCheckBox* Ui_RebindWidget::animOnceBox [inherited]

Definition at line 88 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), Ui_RebindWidget::retranslateUi(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.6 QWidget* Ui_RebindWidget::animTab [inherited]

Definition at line 81 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.7 QPushButton* Ui_RebindWidget::applyButton [inherited]

Definition at line 155 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_btnStopMacro_clicked(), Ui_-RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.8 QPushButton* Ui_RebindWidget::btnClearMacro [inherited]

Definition at line 148 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.9 QPushButton* Ui_RebindWidget::btnStartMacro [inherited]

Definition at line 147 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_btnStopMacro_clicked(), Ui_-RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.10 QPushButton* Ui_RebindWidget::btnStopMacro [inherited]

Definition at line 146 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_btnStopMacro_clicked(), Ui_-RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.11 QPushButton* Ui_RebindWidget::cancelButton [inherited]

Definition at line 154 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.12 QComboBox* Ui_RebindWidget::dpiBox [inherited]

Definition at line 68 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_dpiBox_currentIndexChanged(), RebindWidget-::on_dpiButton_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBind(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.13 QRadioButton* Ui_RebindWidget::dpiButton [inherited]

Definition at line 62 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_dpiBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), Rebind-Widget::setBind(), and Ui_RebindWidget::setupUi().

12.81.3.14 QLabel* Ui_RebindWidget::dpiCustLabel [inherited]

Definition at line 78 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_dpiBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), Rebind-Widget::setBind(), and Ui_RebindWidget::setupUi().

12.81.3.15 QSpinBox* Ui_RebindWidget::dpiCustXBox [inherited]

Definition at line 73 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_dpiBox_currentIndexChanged(), RebindWidget::setBind(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.16 QSpinBox* Ui_RebindWidget::dpiCustYBox [inherited]

Definition at line 69 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_dpiBox_currentIndexChanged(), RebindWidget::setBind(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.17 QLabel* Ui_RebindWidget::dpiWarning [inherited]

Definition at line 74 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), RebindWidget::setBind(), and Ui_RebindWidget::setupUi().

12.81.3.18 QComboBox* Ui_RebindWidget::fnBox [inherited]

Definition at line 44 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_fnBox_currentIndexChanged(), RebindWidget::on_fnButton_clicked(), RebindWidget::RebindWidget(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.19 QRadioButton* Ui_RebindWidget::fnButton [inherited]

Definition at line 56 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_fnBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.20 QGridLayout* Ui_RebindWidget::gridLayout [inherited]

Definition at line 61 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.21 QGridLayout* Ui_RebindWidget::gridLayout_10 [inherited]

Definition at line 144 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.22 QGridLayout* Ui_RebindWidget::gridLayout_2 [inherited]

Definition at line 41 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.23 QGridLayout* Ui_RebindWidget::gridLayout_3 [inherited]

Definition at line 93 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.24 QGridLayout* Ui_RebindWidget::gridLayout_4 [inherited]

Definition at line 111 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.25 QGridLayout* Ui_RebindWidget::gridLayout_5 [inherited]

Definition at line 82 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.26 QGridLayout* Ui_RebindWidget::gridLayout_8 [inherited]

Definition at line 134 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.27 QGroupBox* Ui_RebindWidget::groupBox [inherited]

Definition at line 145 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.28 QGroupBox* Ui_RebindWidget::groupBox_2 [inherited]

Definition at line 135 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.29 QGroupBox* Ui_RebindWidget::groupBox_3 [inherited]

Definition at line 141 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.30 QGroupBox* Ui_RebindWidget::groupBox_4 [inherited]

Definition at line 142 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.31 QHBoxLayout* Ui_RebindWidget::horizontalLayout [inherited]

Definition at line 150 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.32 QHBoxLayout* Ui_RebindWidget::horizontalLayout_2 [inherited]

Definition at line 122 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.33 QHBoxLayout* Ui_RebindWidget::horizontalLayout_3 [inherited]

Definition at line 127 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.34 QSpacerItem* Ui_RebindWidget::horizontalSpacer [inherited]

Definition at line 113 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.35 QSpacerItem* Ui_RebindWidget::horizontalSpacer_10 [inherited]

Definition at line 107 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.36 QSpacerItem* Ui_RebindWidget::horizontalSpacer_11 [inherited]

Definition at line 116 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.37 QSpacerItem* Ui_RebindWidget::horizontalSpacer_12 [inherited]

Definition at line 120 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.38 QSpacerItem* Ui_RebindWidget::horizontalSpacer_13 [inherited]

Definition at line 117 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.39 QSpacerItem* Ui_RebindWidget::horizontalSpacer_14 [inherited]

Definition at line 151 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.40 QSpacerItem* Ui_RebindWidget::horizontalSpacer_15 [inherited]

Definition at line 125 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.41 QSpacerItem* Ui_RebindWidget::horizontalSpacer_16 [inherited]

Definition at line 130 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.42 QSpacerItem* Ui_RebindWidget::horizontalSpacer_17 [inherited]

Definition at line 59 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.43 QSpacerItem* Ui_RebindWidget::horizontalSpacer_18 [inherited]

Definition at line 65 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.44 QSpacerItem* Ui_RebindWidget::horizontalSpacer_19 [inherited]

Definition at line 79 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.45 QSpacerItem* Ui_RebindWidget::horizontalSpacer_2 [inherited]

Definition at line 47 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.46 QSpacerItem* Ui_RebindWidget::horizontalSpacer_20 [inherited]

Definition at line 66 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.47 QSpacerItem* Ui_RebindWidget::horizontalSpacer_21 [inherited]

Definition at line 80 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.48 QSpacerItem* Ui_RebindWidget::horizontalSpacer_22 [inherited]

Definition at line 76 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.49 QSpacerItem* Ui_RebindWidget::horizontalSpacer_23 [inherited]

Definition at line 91 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.50 QSpacerItem* Ui_RebindWidget::horizontalSpacer_24 [inherited]

Definition at line 85 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.51 QSpacerItem* Ui_RebindWidget::horizontalSpacer_25 [inherited]

Definition at line 86 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.52 QSpacerItem* Ui_RebindWidget::horizontalSpacer_26 [inherited]

Definition at line 89 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.53 QSpacerItem* Ui_RebindWidget::horizontalSpacer_3 [inherited]

Definition at line 50 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.54 QSpacerItem* Ui_RebindWidget::horizontalSpacer_4 [inherited]

Definition at line 54 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.55 QSpacerItem* Ui_RebindWidget::horizontalSpacer_5 [inherited]

Definition at line 94 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.56 QSpacerItem* Ui_RebindWidget::horizontalSpacer_6 [inherited]

Definition at line 109 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.57 QSpacerItem* Ui_RebindWidget::horizontalSpacer_7 [inherited]

Definition at line 108 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.58 QSpacerItem* Ui_RebindWidget::horizontalSpacer_8 [inherited]

Definition at line 106 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.59 QSpacerItem* Ui_RebindWidget::horizontalSpacer_9 [inherited]

Definition at line 53 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.60 QWidget* Ui_RebindWidget::keyTab [inherited]

Definition at line 40 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.61 QWidget* Ui_RebindWidget::layoutWidget [inherited]

Definition at line 139 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.62 QWidget* Ui_RebindWidget::layoutWidget1 [inherited]

Definition at line 133 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.63 QWidget* Ui_RebindWidget::layoutWidget_2 [inherited]

Definition at line 143 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.64 QLabel* Ui_RebindWidget::lbl_macro [inherited]

Definition at line 149 of file ui_rebindwidget.h.

Referenced by RebindWidget::helpStatus(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.65 QComboBox* Ui_RebindWidget::lightBox [inherited]

Definition at line 102 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_lightBox_currentIndexChanged(), RebindWidget::on_lightButton_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.66 QRadioButton* Ui_RebindWidget::lightButton [inherited]

Definition at line 104 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_lightBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.67 QCheckBox* Ui_RebindWidget::lightWrapBox [inherited]

Definition at line 97 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_lightBox_currentIndexChanged(), RebindWidget::RebindWidget(), Ui_RebindWidget::retranslateUi(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.68 QComboBox* Ui_RebindWidget::lockBox [inherited]

Definition at line 103 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_lockBox_currentIndexChanged(), RebindWidget::on_lockButton_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.69 QRadioButton* Ui_RebindWidget::lockButton [inherited]

Definition at line 100 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_lockBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.70 QWidget* Ui_RebindWidget::macroTab [inherited]

Definition at line 132 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.71 QComboBox* Ui_RebindWidget::mb2Box [inherited]

Definition at line 67 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_mb2Box_currentIndexChanged(), RebindWidget::on_mb2Button_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.72 QRadioButton* Ui_RebindWidget::mb2Button [inherited]

Definition at line 77 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_mb2Box_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.73 QComboBox* Ui_RebindWidget::mbBox [inherited]

Definition at line 70 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_mbBox_currentIndexChanged(), RebindWidget::on_mbButton_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.74 QRadioButton* Ui_RebindWidget::mbButton [inherited]

Definition at line 72 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_mbBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.75 QComboBox* Ui_RebindWidget::mediaBox [inherited]

Definition at line 57 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_mediaBox_currentIndexChanged(), RebindWidget::on_mediaButton_clicked(), RebindWidget::RebindWidget(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.76 QRadioButton* Ui_RebindWidget::mediaButton [inherited]

Definition at line 51 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_mediaBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_-RebindWidget::setupUi().

12.81.3.77 QComboBox* Ui_RebindWidget::modBox [inherited]

Definition at line 49 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_modBox_currentIndexChanged(), Rebind-Widget::on_modButton_clicked(), RebindWidget::RebindWidget(), Ui_RebindWidget::retranslateUi(), Rebind-Widget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.78 QRadioButton* Ui_RebindWidget::modButton [inherited]

Definition at line 55 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_modBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_-RebindWidget::setupUi().

12.81.3.79 QComboBox* Ui_RebindWidget::modeBox [inherited]

Definition at line 105 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_modeBox_currentIndexChanged(), Rebind-Widget::on_modeButton_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBind(), RebindWidget::set-Box(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.80 QRadioButton* Ui_RebindWidget::modeButton [inherited]

Definition at line 95 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_modeBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_-RebindWidget::setupUi().

12.81.3.81 QCheckBox* Ui_RebindWidget::modeWrapBox [inherited]

Definition at line 96 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_modeBox_currentIndexChanged(), Rebind-Widget::RebindWidget(), Ui_RebindWidget::retranslateUi(), RebindWidget::setSelection(), and Ui_RebindWidget-::setupUi().

12.81.3.82 QWidget* Ui_RebindWidget::mouseTab [inherited]

Definition at line 60 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.83 QComboBox* Ui_RebindWidget::numBox [inherited]

Definition at line 42 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_numBox_currentIndexChanged(), RebindWidget::on_numButton_clicked(), RebindWidget::RebindWidget(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.84 QRadioButton* Ui_RebindWidget::numButton [inherited]

Definition at line 58 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_numBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.85 QLineEdit* Ui_RebindWidget::programKpBox [inherited]

Definition at line 115 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_programKpBox_textChanged(), RebindWidget::on_programKpButton_clicked(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.86 QCheckBox* Ui_RebindWidget::programKpButton [inherited]

Definition at line 114 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_programKpBox_textChanged(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBox(), and Ui_RebindWidget::setupUi().

12.81.3.87 QWidget* Ui_RebindWidget::programKpExtra [inherited]

Definition at line 121 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_programKpBox_textChanged(), RebindWidget::RebindWidget(), and Ui_RebindWidget::setupUi().

12.81.3.88 QComboBox* Ui_RebindWidget::programKpModeBox [inherited]

Definition at line 124 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_programKpSIBox_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.89 QCheckBox* Ui_RebindWidget::programKpSIBox [inherited]

Definition at line 123 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), Ui_RebindWidget::retranslateUi(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.90 QLineEdit* Ui_RebindWidget::programKrBox [inherited]

Definition at line 118 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_programKrBox_textChanged(), RebindWidget::on_programKrButton_clicked(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.91 QCheckBox* Ui_RebindWidget::programKrButton [inherited]

Definition at line 119 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_programKrBox_textChanged(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBox(), and Ui_RebindWidget::setupUi().

12.81.3.92 QWidget* Ui_RebindWidget::programKrExtra [inherited]

Definition at line 126 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_programKrBox_textChanged(), RebindWidget::RebindWidget(), and Ui_RebindWidget::setupUi().

12.81.3.93 QComboBox* Ui_RebindWidget::programKrModeBox [inherited]

Definition at line 129 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_programKrSIBox_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.94 QCheckBox* Ui_RebindWidget::programKrSIBox [inherited]

Definition at line 128 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), Ui_RebindWidget::retranslateUi(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.95 QWidget* Ui_RebindWidget::programTab [inherited]

Definition at line 110 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.96 QLabel* Ui_RebindWidget::progTipLabel [inherited]

Definition at line 131 of file ui_rebindwidget.h.

Referenced by RebindWidget::RebindWidget(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.97 QPlainTextEdit* Ui_RebindWidget::pteMacroBox [inherited]

Definition at line 136 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::convertMacroBox(), RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_pteMacroBox_textChanged(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.98 QPlainTextEdit* Ui_RebindWidget::pteMacroComment [inherited]

Definition at line 137 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), Ui_RebindWidget::retranslateUi(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.99 QPlainTextEdit* Ui_RebindWidget::pteMacroText [inherited]

Definition at line 138 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_btnStartMacro_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.100 QPushButton* Ui_RebindWidget::resetButton [inherited]

Definition at line 153 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_btnStopMacro_clicked(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.101 QTabWidget* Ui_RebindWidget::tabWidget [inherited]

Definition at line 39 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::retranslateUi(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.102 QComboBox* Ui_RebindWidget::typingBox [inherited]

Definition at line 43 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_typingBox_currentIndexChanged(), RebindWidget::on_typingButton_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBind(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.103 QRadioButton* Ui_RebindWidget::typingButton [inherited]

Definition at line 48 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_typingBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.104 QPushButton* Ui_RebindWidget::unbindButton [inherited]

Definition at line 152 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_btnStopMacro_clicked(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

12.81.3.105 QVBoxLayout* Ui_RebindWidget::verticalLayout [inherited]

Definition at line 38 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.106 QVBoxLayout* Ui_RebindWidget::verticalLayout_2 [inherited]

Definition at line 140 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.107 QSpacerItem* Ui_RebindWidget::verticalSpacer [inherited]

Definition at line 112 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.108 QSpacerItem* Ui_RebindWidget::verticalSpacer_10 [inherited]

Definition at line 45 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.109 QSpacerItem* Ui_RebindWidget::verticalSpacer_11 [inherited]

Definition at line 83 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.110 QSpacerItem* Ui_RebindWidget::verticalSpacer_2 [inherited]

Definition at line 63 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.111 QSpacerItem* Ui_RebindWidget::verticalSpacer_3 [inherited]

Definition at line 46 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.112 QSpacerItem* Ui_RebindWidget::verticalSpacer_4 [inherited]

Definition at line 52 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.113 QSpacerItem* Ui_RebindWidget::verticalSpacer_5 [inherited]

Definition at line 101 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.114 QSpacerItem* Ui_RebindWidget::verticalSpacer_6 [inherited]

Definition at line 99 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.115 QSpacerItem* Ui_RebindWidget::verticalSpacer_7 [inherited]

Definition at line 98 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.116 QSpacerItem* Ui_RebindWidget::verticalSpacer_8 [inherited]

Definition at line 64 of file ui_rebindwidget.h.

Referenced by Ui_RebindWidget::setupUi().

12.81.3.117 QComboBox* Ui_RebindWidget::wheelBox [inherited]

Definition at line 71 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_wheelBox_currentIndexChanged(), RebindWidget::on_wheelButton_clicked(), Ui_RebindWidget::retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and Ui_RebindWidget::setupUi().

12.81.3.118 QRadioButton* Ui_RebindWidget::wheelButton [inherited]

Definition at line 75 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_wheelBox_currentIndexChanged(), Ui_RebindWidget::retranslateUi(), and Ui_RebindWidget::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_rebindwidget.h

12.82 RListWidget Class Reference

```
#include <src/ckb/rlistwidget.h>
```

Inheritance diagram for RListWidget:

Collaboration diagram for RListWidget:

Signals

- void orderChanged ()

Public Member Functions

- RListWidget (QWidget ∗parent=0)

Private Slots

- void timerTick ()
- void enter (QListWidgetItem ∗item)
- void change (QListWidgetItem ∗item)

Private Member Functions

- void rescanItems ()

Private Attributes

- QVariant currentData
- QList< QVariant > previousItems
- QVariant dragged
- QTimer reorderTimer

Static Private Attributes

- static const int DATA_ROLE = Qt::UserRole + 100

12.82.1 Detailed Description

Definition at line 9 of file rlistwidget.h.

12.82.2 Constructor & Destructor Documentation

12.82.2.1 RListWidget::RListWidget (QWidget ∗ *parent* = 0) [explicit]

Definition at line 4 of file rlistwidget.cpp.

References change(), enter(), reorderTimer, and timerTick().

```
4                                       :
5     QListWidget(parent)
6 {
7     setDragDropMode(QAbstractItemView::InternalMove);
8     setMovement(QListView::Snap);
9
10     reorderTimer.setSingleShot(true);
11     reorderTimer.setInterval(100);
12     connect(&reorderTimer, SIGNAL(timeout()), this, SLOT(timerTick()));
13
14     connect(this, SIGNAL(itemEntered(QListWidgetItem*)), this, SLOT(enter(QListWidgetItem*)));
15     connect(this, SIGNAL(itemChanged(QListWidgetItem*)), this, SLOT(change(QListWidgetItem*)));
16 }
```

Here is the call graph for this function:

12.82.3 Member Function Documentation

12.82.3.1 void RListWidget::change (QListWidgetItem * *item*) [private], [slot]

Definition at line 54 of file rlistwidget.cpp.

References reorderTimer.

Referenced by RListWidget().

```
54                                                  {
55     reorderTimer.stop();
56     reorderTimer.start();
57 }
```

Here is the caller graph for this function:

12.82.3.2 void RListWidget::enter (QListWidgetItem * *item*) [private], [slot]

Definition at line 47 of file rlistwidget.cpp.

References DATA_ROLE, dragged, and rescanItems().

Referenced by RListWidget().

```
47                                                  {
48     rescanItems();
49     // Check for drag+drop setup
50     if(item)
51         dragged = item->data(DATA_ROLE);
52 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.82.3.3 void RListWidget::orderChanged ( ) [signal]

Definition at line 141 of file moc_rlistwidget.cpp.

Referenced by timerTick().

```
{
    QMetaObject::activate(this, &staticMetaObject, 0, Q_NULLPTR);
}
```

Here is the caller graph for this function:

12.82.3.4 void RListWidget::rescanItems ( ) [private]

Definition at line 59 of file rlistwidget.cpp.

References DATA_ROLE, and previousItems.

Referenced by enter().

```
                            {
    QList<QVariant> newItems;
    int c = count();
    for(int i = 0; i < c; i++){
        QVariant data = this->item(i)->data(DATA_ROLE);
        if(data.isNull()){
```

```
            // Generate the ID for this item if it doesn't already exist
            data = QUuid::createUuid();
            this->item(i)->setData(DATA_ROLE, data);
        }
        newItems.append(data);
    }
    previousItems = newItems;
}
```

Here is the caller graph for this function:

12.82.3.5 void RListWidget::timerTick ( ) [private],[slot]

Definition at line 18 of file rlistwidget.cpp.

References DATA_ROLE, dragged, orderChanged(), and previousItems.

Referenced by RListWidget().

```
18                              {
19      bool reordered = false;
20      QListWidgetItem* reselect = 0;
21      QList<QVariant> newItems;
22      // Scan the item list to see if they changed
23      int c = count();
24      for(int i = 0; i < c; i++){
25          QListWidgetItem* itm = item(i);
26          QVariant data = itm->data(DATA_ROLE);
27          newItems.append(data);
28          if(i >= previousItems.count() || data != previousItems[i])
29              reordered = true;
30          // Re-select the dragged item (if any)
31          if(data == dragged)
32              reselect = itm;
33      }
34      if(previousItems.length() != newItems.length())
35          return;
36      if(reordered){
37          previousItems = newItems;
38          emit orderChanged();
39          if(reselect){
40              reselect->setSelected(true);
41              setCurrentItem(reselect);
42              dragged = QVariant();
43          }
44      }
45  }
```

Here is the caller graph for this function:

12.82.4 Field Documentation

12.82.4.1 QVariant RListWidget::currentData [private]

Definition at line 24 of file rlistwidget.h.

12.82.4.2 const int RListWidget::DATA_ROLE = Qt::UserRole + 100 [static], [private]

Definition at line 29 of file rlistwidget.h.

Referenced by enter(), rescanItems(), and timerTick().

12.82.4.3 QVariant RListWidget::dragged [private]

Definition at line 26 of file rlistwidget.h.

Referenced by enter(), and timerTick().

12.82.4.4 QList<QVariant> RListWidget::previousItems [private]

Definition at line 25 of file rlistwidget.h.

Referenced by rescanItems(), and timerTick().

12.82.4.5 QTimer RListWidget::reorderTimer [private]

Definition at line 27 of file rlistwidget.h.

Referenced by change(), and RListWidget().

The documentation for this class was generated from the following files:

- src/ckb/rlistwidget.h
- src/ckb/release/moc_rlistwidget.cpp
- src/ckb/rlistwidget.cpp

12.83 SettingsWidget Class Reference

```
#include <src/ckb/settingswidget.h>
```

Inheritance diagram for SettingsWidget:

Collaboration diagram for SettingsWidget:

Public Member Functions

- SettingsWidget (QWidget *parent=0)
- ~SettingsWidget ()
- void setVersion (const QString &version)
- void setStatus (const QString &text)
- void pollUpdates ()

Private Slots

- void on_pushButton_clicked ()
- void on_capsBox_activated (int index)
- void on_shiftBox_activated (int index)
- void on_ctrlBox_activated (int index)
- void on_altBox_activated (int index)
- void on_winBox_activated (int index)
- void on_autoFWBox_clicked (bool checked)
- void on_loginItemBox_clicked (bool checked)
- void on_layoutBox_activated (int index)
- void showLayoutDialog ()
- void on_extraButton_clicked ()

Private Member Functions

- void updateModifiers ()

Private Attributes

- Ui::SettingsWidget * ui
- ExtraSettingsWidget * extra

Friends

- class MainWindow

12.83.1 Detailed Description

Definition at line 11 of file settingswidget.h.

12.83.2 Constructor & Destructor Documentation

12.83.2.1 SettingsWidget::SettingsWidget (QWidget * *parent* = 0) [explicit]

Definition at line 15 of file settingswidget.cpp.

References Ui_SettingsWidget::altBox, Ui_SettingsWidget::autoFWBox, AutoRun::available(), Ui_SettingsWidget::capsBox, Ui_SettingsWidget::ctrlBox, AutoRun::enable(), extra, KeyMap::getLayout(), KbBind::globalRemap(), AutoRun::isEnabled(), Kb::layout(), Ui_SettingsWidget::layoutBox, KeyMap::layoutNames(), KbBind::loadGlobalRemap(), KeyMap::locale(), Ui_SettingsWidget::loginItemBox, modKeys, modNames, KeyMap::NO_LAYOUT, AutoRun::once(), CkbSettings::remove(), Ui_SettingsWidget::setupUi(), CkbSettings::setValue(), Ui_SettingsWidget::shiftBox, showLayoutDialog(), ui, updateModifiers(), CkbSettings::value(), and Ui_SettingsWidget::winBox.

```
15                                                  :
16     QWidget(parent),
17     ui(new Ui::SettingsWidget)
18 {
19     ui->setupUi(this);
20     CkbSettings settings("Program");
21
22     // Read keyboard layout
23     ui->layoutBox->addItems(KeyMap::layoutNames());
24     KeyMap::Layout layout = KeyMap::getLayout(settings.value("KbdLayout").
      toString());
25     if(layout == KeyMap::NO_LAYOUT){
26         // If the layout hasn't been set yet, show a dialog to let the user choose it
27         layout = KeyMap::locale();
28         QTimer::singleShot(1000, this, SLOT(showLayoutDialog()));   // Run the function
      after a delay as the dialog may not appear correctly otherwise
29         settings.setValue("KbdLayout", KeyMap::getLayout(layout));
30     }
31     Kb::layout(layout);
32     ui->layoutBox->setCurrentIndex((int)layout);
33
34     // Load modifier remap
35     KbBind::loadGlobalRemap();
36     if(modKeys.isEmpty()){
37         modKeys << "caps" << "lshift" << "lctrl" << "lalt" << "lwin";
38 #ifdef Q_OS_MACX
39         modNames << "Caps Lock" << "Shift" << "Control ()" << "Option ()" << "Command ()";
40 #else
41         modNames << "Caps Lock" << "Shift" << "Control" << "Alt" << "Super";
42 #endif
43     }
44     foreach(const QString& name, modNames){
45         ui->capsBox->addItem(name);
46         ui->shiftBox->addItem(name);
47         ui->ctrlBox->addItem(name);
48         ui->altBox->addItem(name);
49         ui->winBox->addItem(name);
50     }
51
52     int idx = modKeys.indexOf(KbBind::globalRemap("caps"));
53     if(idx >= 0)
54         ui->capsBox->setCurrentIndex(idx);
55     idx = modKeys.indexOf(KbBind::globalRemap("lshift"));
56     if(idx >= 0)
57         ui->shiftBox->setCurrentIndex(idx);
58     idx = modKeys.indexOf(KbBind::globalRemap("lctrl"));
59     if(idx >= 0)
60         ui->ctrlBox->setCurrentIndex(idx);
61     idx = modKeys.indexOf(KbBind::globalRemap("lwin"));
62     if(idx >= 0)
63         ui->winBox->setCurrentIndex(idx);
64     idx = modKeys.indexOf(KbBind::globalRemap("lalt"));
65     if(idx >= 0)
66         ui->altBox->setCurrentIndex(idx);
```

```
#ifdef Q_OS_MACX
    if(settings.value("osxCmdSwap").toBool()){
        // ckb <0.0.41
        settings.remove("osxCmdSwap");
        ui->ctrlBox->setCurrentIndex(modKeys.indexOf("lwin"));
        ui->winBox->setCurrentIndex(modKeys.indexOf("lctrl"));
        updateModifiers();
    }
#endif

    // Read auto update settings
    ui->autoFWBox->setChecked(!settings.value("DisableAutoFWCheck").toBool());

    // Read auto run settings
    if(!AutoRun::available())
        ui->loginItemBox->hide();
    else {
        if(!AutoRun::once())
            // If this is the first time running the app, enable auto run by default
            AutoRun::enable();
        ui->loginItemBox->setChecked(AutoRun::isEnabled());
    }

    // Prepare extra settings
    extra = new ExtraSettingsWidget(this);
}
```

Here is the call graph for this function:

12.83.2.2 SettingsWidget::~SettingsWidget ( )

Definition at line 94 of file settingswidget.cpp.

References ui.

```
94                                  {
95     delete ui;
96 }
```

12.83.3 Member Function Documentation

12.83.3.1 void SettingsWidget::on_altBox_activated (int *index*) [private],[slot]

Definition at line 155 of file settingswidget.cpp.

References updateModifiers().

```
155                                                 {
156     updateModifiers();
157 }
```

Here is the call graph for this function:

12.83.3.2 void SettingsWidget::on_autoFWBox_clicked (bool *checked*) [private],[slot]

Definition at line 163 of file settingswidget.cpp.

References CkbSettings::set().

```
163                                                 {
164     CkbSettings::set("Program/DisableAutoFWCheck", !checked);
165 }
```

Here is the call graph for this function:

12.83.3.3 void SettingsWidget::on_capsBox_activated (int *index*) [private],[slot]

Definition at line 143 of file settingswidget.cpp.

References updateModifiers().

```
143                                                 {
144     updateModifiers();
145 }
```

Here is the call graph for this function:

12.83.3.4 void SettingsWidget::on_ctrlBox_activated (int *index*) [private],[slot]

Definition at line 151 of file settingswidget.cpp.

References updateModifiers().

```
151                                                 {
152     updateModifiers();
153 }
```

Here is the call graph for this function:

12.83.3.5 void SettingsWidget::on_extraButton_clicked ( ) [private],[slot]

Definition at line 180 of file settingswidget.cpp.

References extra.

```
180                                             {
181     extra->exec();
182 }
```

12.83.3.6 void SettingsWidget::on_layoutBox_activated (int *index*) [private],[slot]

Definition at line 174 of file settingswidget.cpp.

References KeyMap::getLayout(), Kb::layout(), and CkbSettings::set().

Referenced by showLayoutDialog().

```
174                                                 {
175     KeyMap::Layout layout = (KeyMap::Layout)index;
176     CkbSettings::set("Program/KbdLayout", KeyMap::getLayout(layout));
177     Kb::layout(layout);
178 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.83.3.7 void SettingsWidget::on_loginItemBox_clicked (bool *checked*) [private],[slot]

Definition at line 167 of file settingswidget.cpp.

References AutoRun::disable(), and AutoRun::enable().

```
167                                                     {
168     if(checked)
169         AutoRun::enable();
170     else
171         AutoRun::disable();
172 }
```

Here is the call graph for this function:

12.83.3.8 void SettingsWidget::on_pushButton_clicked ( ) [private],[slot]

Definition at line 139 of file settingswidget.cpp.

```
139                                         {
140     qApp->quit();
141 }
```

12.83.3.9 void SettingsWidget::on_shiftBox_activated (int *index*) [private],[slot]

Definition at line 147 of file settingswidget.cpp.

References updateModifiers().

```
147                                                 {
148     updateModifiers();
149 }
```

Here is the call graph for this function:

12.83.3.10 void SettingsWidget::on_winBox_activated (int *index*) [private],[slot]

Definition at line 159 of file settingswidget.cpp.

References updateModifiers().

```
159                                                 {
160     updateModifiers();
161 }
```

Here is the call graph for this function:

12.83.3.11 void SettingsWidget::pollUpdates ( )

Definition at line 106 of file settingswidget.cpp.

References extra, and ExtraSettingsWidget::pollUpdates().

Referenced by MainWindow::timerTick().

```
106                                 {
107     extra->pollUpdates();
108 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.83.3.12 void SettingsWidget::setStatus (const QString & *text*)

Definition at line 110 of file settingswidget.cpp.

References Ui_SettingsWidget::devicesLabel, and ui.

Referenced by MainWindow::updateVersion().

```
{
    ui->devicesLabel->setText(text);
}
```

Here is the caller graph for this function:

12.83.3.13 void SettingsWidget::setVersion (const QString & *version*)

Definition at line 114 of file settingswidget.cpp.

References ui, and Ui_SettingsWidget::versionLabel.

Referenced by MainWindow::MainWindow().

```
{
    ui->versionLabel->setText(version);
}
```

Here is the caller graph for this function:

12.83.3.14 void SettingsWidget::showLayoutDialog ( ) [private],[slot]

Definition at line 98 of file settingswidget.cpp.

References Ui_SettingsWidget::layoutBox, on_layoutBox_activated(), LayoutDialog::selected(), and ui.

Referenced by SettingsWidget().

```
{
    LayoutDialog dialog(this);
     dialog.exec();
     // Set selected layout
     ui->layoutBox->setCurrentIndex((int)dialog.selected());
     on_layoutBox_activated((int)dialog.selected());         // Call activated()
    signal manually to trigger save
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.83.3.15 void SettingsWidget::updateModifiers ( ) [private]

Definition at line 124 of file settingswidget.cpp.

References Ui_SettingsWidget::altBox, Ui_SettingsWidget::capsBox, Ui_SettingsWidget::ctrlBox, modKeys, right(), KbBind::saveGlobalRemap(), KbBind::setGlobalRemap(), Ui_SettingsWidget::shiftBox, ui, and Ui_SettingsWidget::winBox.

Referenced by on_altBox_activated(), on_capsBox_activated(), on_ctrlBox_activated(), on_shiftBox_activated(), on_winBox_activated(), and SettingsWidget().

```
{
    QHash<QString, QString> newMods;
    newMods["caps"] = modKeys[ui->capsBox->currentIndex()];
    newMods["lshift"] = modKeys[ui->shiftBox->currentIndex()];
    newMods["rshift"] = right(modKeys[ui->shiftBox->currentIndex()]);
    newMods["lctrl"] = modKeys[ui->ctrlBox->currentIndex()];
    newMods["rctrl"] = right(modKeys[ui->ctrlBox->currentIndex()]);
    newMods["lalt"] = modKeys[ui->altBox->currentIndex()];
    newMods["ralt"] = right(modKeys[ui->altBox->currentIndex()]);
    newMods["lwin"] = modKeys[ui->winBox->currentIndex()];
    newMods["rwin"] = right(modKeys[ui->winBox->currentIndex()]);
    KbBind::setGlobalRemap(newMods);
    KbBind::saveGlobalRemap();
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.83.4 Friends And Related Function Documentation

12.83.4.1 friend class MainWindow [friend]

Definition at line 44 of file settingswidget.h.

12.83.5 Field Documentation

12.83.5.1 ExtraSettingsWidget* SettingsWidget::extra [private]

Definition at line 46 of file settingswidget.h.

Referenced by on_extraButton_clicked(), pollUpdates(), and SettingsWidget().

12.83.5.2 Ui::SettingsWidget* SettingsWidget::ui [private]

Definition at line 43 of file settingswidget.h.

Referenced by setStatus(), SettingsWidget(), setVersion(), showLayoutDialog(), updateModifiers(), and ~SettingsWidget().

The documentation for this class was generated from the following files:

- src/ckb/settingswidget.h
- src/ckb/settingswidget.cpp

12.84 Ui::SettingsWidget Class Reference

```
#include <src/ckb/ui_settingswidget.h>
```

Inheritance diagram for Ui::SettingsWidget:

Collaboration diagram for Ui::SettingsWidget:

Public Member Functions

- void setupUi (QWidget *SettingsWidget)
- void retranslateUi (QWidget *SettingsWidget)

Data Fields

- QGridLayout * gridLayout
- QLabel * label_2
- QLabel * label
- QLabel * label_6
- QGridLayout * gridLayout_5
- QSpacerItem * horizontalSpacer_7
- QLabel * devicesLabel
- QLabel * label_5
- QComboBox * layoutBox
- QSpacerItem * verticalSpacer_10
- QHBoxLayout * horizontalLayout_2
- QLabel * label_3
- QSpacerItem * horizontalSpacer
- QPushButton * pushButton
- QSpacerItem * verticalSpacer
- QSpacerItem * verticalSpacer_8
- QCheckBox * loginItemBox
- QSpacerItem * verticalSpacer_6
- QCheckBox * autoFWBox
- QFrame * line_2
- QLabel * label_8
- QGridLayout * gridLayout_3
- QLabel * shiftLabel
- QLabel * capsLabel

- QSpacerItem * horizontalSpacer_10
- QComboBox * capsBox
- QLabel * ctrlLabel
- QSpacerItem * horizontalSpacer_9
- QComboBox * ctrlBox
- QComboBox * shiftBox
- QLabel * winLabel
- QComboBox * winBox
- QComboBox * altBox
- QLabel * altLabel
- QFrame * line
- QSpacerItem * verticalSpacer_3
- QSpacerItem * verticalSpacer_5
- QFrame * line_3
- QSpacerItem * verticalSpacer_4
- QSpacerItem * verticalSpacer_2
- QLabel * versionLabel
- QHBoxLayout * horizontalLayout
- QPushButton * extraButton
- QSpacerItem * horizontalSpacer_2
- QSpacerItem * verticalSpacer_7

12.84.1 Detailed Description

Definition at line 378 of file ui_settingswidget.h.

12.84.2 Member Function Documentation

12.84.2.1 void Ui_SettingsWidget::retranslateUi (QWidget * *SettingsWidget*) [inline],[inherited]

Definition at line 347 of file ui_settingswidget.h.

References Ui_SettingsWidget::altLabel, Ui_SettingsWidget::autoFWBox, Ui_SettingsWidget::capsLabel, Ui_SettingsWidget::ctrlLabel, Ui_SettingsWidget::devicesLabel, Ui_SettingsWidget::extraButton, Ui_SettingsWidget::label, Ui_SettingsWidget::label_2, Ui_SettingsWidget::label_3, Ui_SettingsWidget::label_5, Ui_SettingsWidget::label_6, Ui_SettingsWidget::label_8, Ui_SettingsWidget::loginItemBox, Ui_SettingsWidget::pushButton, Ui_SettingsWidget::shiftLabel, Ui_SettingsWidget::versionLabel, and Ui_SettingsWidget::winLabel.

Referenced by Ui_SettingsWidget::setupUi().

```
348     {
349         SettingsWidget->setWindowTitle(QApplication::translate("SettingsWidget", "Form", Q_NULLPTR));
350         label_2->setText(QApplication::translate("SettingsWidget", "\302\251 2014-2016 <a href=\"
      https://github.com/ccMSC/\" style=\"text-decoration:none;\">ccMSC</a>.<br/>\302\251 2017 <a href=\"
      https://github.com/mattanger/ckb-next/graphs/contributors\" style=\"text-decoration:none;\">The ckb-next development
       team</a>.", Q_NULLPTR));
351         label->setText(QApplication::translate("SettingsWidget", "Modifier keys", Q_NULLPTR));
352         label_6->setText(QApplication::translate("SettingsWidget", "Application", Q_NULLPTR));
353         devicesLabel->setText(QApplication::translate("SettingsWidget", "No devices connected",
       Q_NULLPTR));
354         label_5->setText(QApplication::translate("SettingsWidget", "Keyboard layout:", Q_NULLPTR));
355         label_3->setText(QApplication::translate("SettingsWidget", "<a href=\"
      https://github.com/mattanger/ckb-next\" style=\"text-decoration:none;\">https://github.com/mattanger/ckb-next</a>", Q_NU
356         pushButton->setText(QApplication::translate("SettingsWidget", "Quit", Q_NULLPTR));
357 #ifndef QT_NO_TOOLTIP
358         loginItemBox->setToolTip(QApplication::translate("SettingsWidget", "ckb-next will be
       started when you log in to your computer.", Q_NULLPTR));
359 #endif // QT_NO_TOOLTIP
360         loginItemBox->setText(QApplication::translate("SettingsWidget", "Start ckb-next at
       login", Q_NULLPTR));
361 #ifndef QT_NO_TOOLTIP
362         autoFWBox->setToolTip(QApplication::translate("SettingsWidget", "You will be notified when
       new firmware versions are available. You'll have the option to install them immediately or wait until
       later.", Q_NULLPTR));
```

```
#endif // QT_NO_TOOLTIP
        autoFWBox->setText(QApplication::translate("SettingsWidget", "Check for new firmware automatically", Q_NULLPTR));
        label_8->setText(QApplication::translate("SettingsWidget", "These will override the keyboard profile. See \"Binding\" tab for more settings.", Q_NULLPTR));
        shiftLabel->setText(QApplication::translate("SettingsWidget", "Shift:", Q_NULLPTR));
        capsLabel->setText(QApplication::translate("SettingsWidget", "Caps Lock:", Q_NULLPTR));
        ctrlLabel->setText(QApplication::translate("SettingsWidget", "Ctrl:", Q_NULLPTR));
        winLabel->setText(QApplication::translate("SettingsWidget", "Windows:", Q_NULLPTR));
        altLabel->setText(QApplication::translate("SettingsWidget", "Alt:", Q_NULLPTR));
        versionLabel->setText(QApplication::translate("SettingsWidget", "ckb-next", Q_NULLPTR));
        extraButton->setText(QApplication::translate("SettingsWidget", "More settings", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.84.2.2 void Ui_SettingsWidget::setupUi (QWidget * *SettingsWidget*) [inline],[inherited]

Definition at line 78 of file ui_settingswidget.h.

References Ui_SettingsWidget::altBox, Ui_SettingsWidget::altLabel, Ui_SettingsWidget::autoFWBox, Ui_SettingsWidget::capsBox, Ui_SettingsWidget::capsLabel, Ui_SettingsWidget::ctrlBox, Ui_SettingsWidget::ctrlLabel, Ui_SettingsWidget::devicesLabel, Ui_SettingsWidget::extraButton, Ui_SettingsWidget::gridLayout, Ui_SettingsWidget::gridLayout_3, Ui_SettingsWidget::gridLayout_5, Ui_SettingsWidget::horizontalLayout, Ui_SettingsWidget::horizontalLayout_2, Ui_SettingsWidget::horizontalSpacer, Ui_SettingsWidget::horizontalSpacer_10, Ui_SettingsWidget::horizontalSpacer_2, Ui_SettingsWidget::horizontalSpacer_7, Ui_SettingsWidget::horizontalSpacer_9, Ui_SettingsWidget::label, Ui_SettingsWidget::label_2, Ui_SettingsWidget::label_3, Ui_SettingsWidget::label_5, Ui_SettingsWidget::label_6, Ui_SettingsWidget::label_8, Ui_SettingsWidget::layoutBox, Ui_SettingsWidget::line, Ui_SettingsWidget::line_2, Ui_SettingsWidget::line_3, Ui_SettingsWidget::loginItemBox, Ui_SettingsWidget::pushButton, Ui_SettingsWidget::retranslateUi(), Ui_SettingsWidget::shiftBox, Ui_SettingsWidget::shiftLabel, Ui_SettingsWidget::versionLabel, Ui_SettingsWidget::verticalSpacer, Ui_SettingsWidget::verticalSpacer_10, Ui_SettingsWidget::verticalSpacer_2, Ui_SettingsWidget::verticalSpacer_3, Ui_SettingsWidget::verticalSpacer_4, Ui_SettingsWidget::verticalSpacer_5, Ui_SettingsWidget::verticalSpacer_6, Ui_SettingsWidget::verticalSpacer_7, Ui_SettingsWidget::verticalSpacer_8, Ui_SettingsWidget::winBox, and Ui_SettingsWidget::winLabel.

Referenced by SettingsWidget::SettingsWidget().

```
    {
        if (SettingsWidget->objectName().isEmpty())
            SettingsWidget->setObjectName(QStringLiteral("SettingsWidget"));
        SettingsWidget->resize(827, 654);
        gridLayout = new QGridLayout(SettingsWidget);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        label_2 = new QLabel(SettingsWidget);
        label_2->setObjectName(QStringLiteral("label_2"));
        label_2->setOpenExternalLinks(true);
        label_2->setAlignment(Qt::AlignLeading|Qt::AlignLeft|Qt::AlignVCenter);

        gridLayout->addWidget(label_2, 20, 0, 1, 2);

        label = new QLabel(SettingsWidget);
        label->setObjectName(QStringLiteral("label"));
        QFont font;
        font.setBold(true);
        font.setWeight(75);
        label->setFont(font);

        gridLayout->addWidget(label, 6, 0, 1, 2);

```

```
        label_6 = new QLabel(SettingsWidget);
        label_6->setObjectName(QStringLiteral("label_6"));
        label_6->setFont(font);

        gridLayout->addWidget(label_6, 12, 0, 1, 2);

        gridLayout_5 = new QGridLayout();
        gridLayout_5->setObjectName(QStringLiteral("gridLayout_5"));
        horizontalSpacer_7 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_5->addItem(horizontalSpacer_7, 2, 2, 1, 1);

        devicesLabel = new QLabel(SettingsWidget);
        devicesLabel->setObjectName(QStringLiteral("devicesLabel"));

        gridLayout_5->addWidget(devicesLabel, 0, 0, 1, 3);

        label_5 = new QLabel(SettingsWidget);
        label_5->setObjectName(QStringLiteral("label_5"));

        gridLayout_5->addWidget(label_5, 2, 0, 1, 1);

        layoutBox = new QComboBox(SettingsWidget);
        layoutBox->setObjectName(QStringLiteral("layoutBox"));

        gridLayout_5->addWidget(layoutBox, 2, 1, 1, 1);

        verticalSpacer_10 = new QSpacerItem(20, 6, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout_5->addItem(verticalSpacer_10, 1, 0, 1, 1);


        gridLayout->addLayout(gridLayout_5, 4, 1, 1, 1);

        horizontalLayout_2 = new QHBoxLayout();
        horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
        label_3 = new QLabel(SettingsWidget);
        label_3->setObjectName(QStringLiteral("label_3"));
        label_3->setOpenExternalLinks(true);

        horizontalLayout_2->addWidget(label_3);

        horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer);

        pushButton = new QPushButton(SettingsWidget);
        pushButton->setObjectName(QStringLiteral("pushButton"));
        pushButton->setFlat(false);

        horizontalLayout_2->addWidget(pushButton);


        gridLayout->addLayout(horizontalLayout_2, 21, 0, 1, 2);

        verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout->addItem(verticalSpacer, 19, 0, 1, 2);

        verticalSpacer_8 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_8, 16, 0, 1, 1);

        loginItemBox = new QCheckBox(SettingsWidget);
        loginItemBox->setObjectName(QStringLiteral("loginItemBox"));

        gridLayout->addWidget(loginItemBox, 16, 1, 1, 1);

        verticalSpacer_6 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_6, 15, 0, 1, 1);

        autoFWBox = new QCheckBox(SettingsWidget);
        autoFWBox->setObjectName(QStringLiteral("autoFWBox"));
        autoFWBox->setChecked(true);

        gridLayout->addWidget(autoFWBox, 15, 1, 1, 1);

        line_2 = new QFrame(SettingsWidget);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
```

```
        line_2->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_2, 13, 0, 1, 2);

        label_8 = new QLabel(SettingsWidget);
        label_8->setObjectName(QStringLiteral("label_8"));
        QFont font1;
        font1.setItalic(true);
        label_8->setFont(font1);

        gridLayout->addWidget(label_8, 8, 1, 1, 1);

        gridLayout_3 = new QGridLayout();
        gridLayout_3->setObjectName(QStringLiteral("gridLayout_3"));
        shiftLabel = new QLabel(SettingsWidget);
        shiftLabel->setObjectName(QStringLiteral("shiftLabel"));
        QSizePolicy sizePolicy(QSizePolicy::Expanding, QSizePolicy::Preferred);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(shiftLabel->sizePolicy().hasHeightForWidth());
        shiftLabel->setSizePolicy(sizePolicy);
        shiftLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_3->addWidget(shiftLabel, 0, 3, 1, 1);

        capsLabel = new QLabel(SettingsWidget);
        capsLabel->setObjectName(QStringLiteral("capsLabel"));
        capsLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_3->addWidget(capsLabel, 0, 1, 1, 1);

        horizontalSpacer_10 = new QSpacerItem(0, 0, QSizePolicy::Fixed,
QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_10, 0, 0, 1, 1);

        capsBox = new QComboBox(SettingsWidget);
        capsBox->setObjectName(QStringLiteral("capsBox"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Fixed);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(capsBox->sizePolicy().hasHeightForWidth());
        capsBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(capsBox, 0, 2, 1, 1);

        ctrlLabel = new QLabel(SettingsWidget);
        ctrlLabel->setObjectName(QStringLiteral("ctrlLabel"));
        ctrlLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_3->addWidget(ctrlLabel, 1, 1, 1, 1);

        horizontalSpacer_9 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_9, 1, 7, 1, 1);

        ctrlBox = new QComboBox(SettingsWidget);
        ctrlBox->setObjectName(QStringLiteral("ctrlBox"));

        gridLayout_3->addWidget(ctrlBox, 1, 2, 1, 1);

        shiftBox = new QComboBox(SettingsWidget);
        shiftBox->setObjectName(QStringLiteral("shiftBox"));
        sizePolicy1.setHeightForWidth(shiftBox->sizePolicy().hasHeightForWidth());
        shiftBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(shiftBox, 0, 4, 1, 1);

        winLabel = new QLabel(SettingsWidget);
        winLabel->setObjectName(QStringLiteral("winLabel"));
        sizePolicy.setHeightForWidth(winLabel->sizePolicy().hasHeightForWidth());
        winLabel->setSizePolicy(sizePolicy);
        winLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_3->addWidget(winLabel, 1, 3, 1, 1);

        winBox = new QComboBox(SettingsWidget);
        winBox->setObjectName(QStringLiteral("winBox"));
        sizePolicy1.setHeightForWidth(winBox->sizePolicy().hasHeightForWidth());
        winBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(winBox, 1, 4, 1, 1);

        altBox = new QComboBox(SettingsWidget);
        altBox->setObjectName(QStringLiteral("altBox"));
        sizePolicy1.setHeightForWidth(altBox->sizePolicy().hasHeightForWidth());
```

```
        altBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(altBox, 1, 6, 1, 1);

        altLabel = new QLabel(SettingsWidget);
        altLabel->setObjectName(QStringLiteral("altLabel"));
        sizePolicy.setHeightForWidth(altLabel->sizePolicy().hasHeightForWidth());
        altLabel->setSizePolicy(sizePolicy);
        altLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_3->addWidget(altLabel, 1, 5, 1, 1);


        gridLayout->addLayout(gridLayout_3, 10, 1, 1, 1);

        line = new QFrame(SettingsWidget);
        line->setObjectName(QStringLiteral("line"));
        line->setFrameShape(QFrame::HLine);
        line->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line, 1, 0, 1, 2);

        verticalSpacer_3 = new QSpacerItem(0, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_3, 2, 1, 1, 1);

        verticalSpacer_5 = new QSpacerItem(20, 12, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_5, 11, 1, 1, 1);

        line_3 = new QFrame(SettingsWidget);
        line_3->setObjectName(QStringLiteral("line_3"));
        QSizePolicy sizePolicy2(QSizePolicy::Minimum, QSizePolicy::Fixed);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(0);
        sizePolicy2.setHeightForWidth(line_3->sizePolicy().hasHeightForWidth());
        line_3->setSizePolicy(sizePolicy2);
        line_3->setFrameShape(QFrame::HLine);
        line_3->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_3, 7, 0, 1, 2);

        verticalSpacer_4 = new QSpacerItem(20, 6, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_4, 9, 1, 1, 1);

        verticalSpacer_2 = new QSpacerItem(20, 12, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_2, 5, 1, 1, 1);

        versionLabel = new QLabel(SettingsWidget);
        versionLabel->setObjectName(QStringLiteral("versionLabel"));
        versionLabel->setFont(font);

        gridLayout->addWidget(versionLabel, 0, 0, 1, 2);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        extraButton = new QPushButton(SettingsWidget);
        extraButton->setObjectName(QStringLiteral("extraButton"));

        horizontalLayout->addWidget(extraButton);

        horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout->addItem(horizontalSpacer_2);


        gridLayout->addLayout(horizontalLayout, 17, 1, 1, 1);

        verticalSpacer_7 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_7, 17, 0, 1, 1);


        retranslateUi(SettingsWidget);

        QMetaObject::connectSlotsByName(SettingsWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.84.3 Field Documentation

12.84.3.1 QComboBox∗ Ui_SettingsWidget::altBox [inherited]

Definition at line 64 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), Ui_SettingsWidget::setupUi(), and SettingsWidget::updateModifiers().

12.84.3.2 QLabel∗ Ui_SettingsWidget::altLabel [inherited]

Definition at line 65 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.3 QCheckBox∗ Ui_SettingsWidget::autoFWBox [inherited]

Definition at line 50 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), SettingsWidget::SettingsWidget(), and Ui_SettingsWidget::setupUi().

12.84.3.4 QComboBox∗ Ui_SettingsWidget::capsBox [inherited]

Definition at line 57 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), Ui_SettingsWidget::setupUi(), and SettingsWidget::updateModifiers().

12.84.3.5 QLabel* Ui_SettingsWidget::capsLabel [inherited]

Definition at line 55 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.6 QComboBox* Ui_SettingsWidget::ctrlBox [inherited]

Definition at line 60 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), Ui_SettingsWidget::setupUi(), and SettingsWidget::updateModifiers().

12.84.3.7 QLabel* Ui_SettingsWidget::ctrlLabel [inherited]

Definition at line 58 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.8 QLabel* Ui_SettingsWidget::devicesLabel [inherited]

Definition at line 38 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), SettingsWidget::setStatus(), and Ui_SettingsWidget::setupUi().

12.84.3.9 QPushButton* Ui_SettingsWidget::extraButton [inherited]

Definition at line 74 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.10 QGridLayout* Ui_SettingsWidget::gridLayout [inherited]

Definition at line 32 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.11 QGridLayout* Ui_SettingsWidget::gridLayout_3 [inherited]

Definition at line 53 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.12 QGridLayout* Ui_SettingsWidget::gridLayout_5 [inherited]

Definition at line 36 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.13 QHBoxLayout* Ui_SettingsWidget::horizontalLayout [inherited]

Definition at line 73 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.14 QHBoxLayout* Ui_SettingsWidget::horizontalLayout_2 [inherited]

Definition at line 42 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.15 QSpacerItem* Ui_SettingsWidget::horizontalSpacer [inherited]

Definition at line 44 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.16 QSpacerItem* Ui_SettingsWidget::horizontalSpacer_10 [inherited]

Definition at line 56 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.17 QSpacerItem* Ui_SettingsWidget::horizontalSpacer_2 [inherited]

Definition at line 75 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.18 QSpacerItem* Ui_SettingsWidget::horizontalSpacer_7 [inherited]

Definition at line 37 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.19 QSpacerItem* Ui_SettingsWidget::horizontalSpacer_9 [inherited]

Definition at line 59 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.20 QLabel* Ui_SettingsWidget::label [inherited]

Definition at line 34 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.21 QLabel* Ui_SettingsWidget::label_2 [inherited]

Definition at line 33 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.22 QLabel* Ui_SettingsWidget::label_3 [inherited]

Definition at line 43 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.23 QLabel* Ui_SettingsWidget::label_5 [inherited]

Definition at line 39 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.24 QLabel* Ui_SettingsWidget::label_6 [inherited]

Definition at line 35 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.25 QLabel* Ui_SettingsWidget::label_8 [inherited]

Definition at line 52 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.26 QComboBox* Ui_SettingsWidget::layoutBox [inherited]

Definition at line 40 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), Ui_SettingsWidget::setupUi(), and SettingsWidget::showLayout-Dialog().

12.84.3.27 QFrame* Ui_SettingsWidget::line [inherited]

Definition at line 66 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.28 QFrame* Ui_SettingsWidget::line_2 [inherited]

Definition at line 51 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.29 QFrame* Ui_SettingsWidget::line_3 [inherited]

Definition at line 69 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.30 QCheckBox* Ui_SettingsWidget::loginItemBox [inherited]

Definition at line 48 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), SettingsWidget::SettingsWidget(), and Ui_SettingsWidget-::setupUi().

12.84.3.31 QPushButton* Ui_SettingsWidget::pushButton [inherited]

Definition at line 45 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.32 QComboBox* Ui_SettingsWidget::shiftBox [inherited]

Definition at line 61 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), Ui_SettingsWidget::setupUi(), and SettingsWidget::updateModifiers().

12.84.3.33 QLabel* Ui_SettingsWidget::shiftLabel [inherited]

Definition at line 54 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

12.84.3.34 QLabel* Ui_SettingsWidget::versionLabel [inherited]

Definition at line 72 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), Ui_SettingsWidget::setupUi(), and SettingsWidget::setVersion().

12.84.3.35 QSpacerItem* Ui_SettingsWidget::verticalSpacer [inherited]

Definition at line 46 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.36 QSpacerItem* Ui_SettingsWidget::verticalSpacer_10 [inherited]

Definition at line 41 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.37 QSpacerItem* Ui_SettingsWidget::verticalSpacer_2 [inherited]

Definition at line 71 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.38 QSpacerItem* Ui_SettingsWidget::verticalSpacer_3 [inherited]

Definition at line 67 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.39 QSpacerItem* Ui_SettingsWidget::verticalSpacer_4 [inherited]

Definition at line 70 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.40 QSpacerItem* Ui_SettingsWidget::verticalSpacer_5 [inherited]

Definition at line 68 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.41 QSpacerItem* Ui_SettingsWidget::verticalSpacer_6 [inherited]

Definition at line 49 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.42 QSpacerItem* Ui_SettingsWidget::verticalSpacer_7 [inherited]

Definition at line 76 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.43 QSpacerItem* Ui_SettingsWidget::verticalSpacer_8 [inherited]

Definition at line 47 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::setupUi().

12.84.3.44 QComboBox* Ui_SettingsWidget::winBox [inherited]

Definition at line 63 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), Ui_SettingsWidget::setupUi(), and SettingsWidget::updateModifiers().

12.84.3.45 QLabel* Ui_SettingsWidget::winLabel [inherited]

Definition at line 62 of file ui_settingswidget.h.

Referenced by Ui_SettingsWidget::retranslateUi(), and Ui_SettingsWidget::setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_settingswidget.h

12.85 SGroup Class Reference

```
#include <src/ckb/ckbsettings.h>
```

Collaboration diagram for SGroup:

Public Member Functions

- SGroup (CkbSettings &settings, const QString &prefix)
- ~SGroup ()

Private Attributes

- CkbSettings & _settings

12.85.1 Detailed Description

Definition at line 57 of file ckbsettings.h.

12.85.2 Constructor & Destructor Documentation

12.85.2.1 SGroup::SGroup (CkbSettings & *settings*, const QString & *prefix*) [inline]

Definition at line 60 of file ckbsettings.h.

References CkbSettings::beginGroup().

```
60 : _settings(settings) { settings.beginGroup(prefix); }
```

Here is the call graph for this function:

12.85.2.2 SGroup::~SGroup ( ) [inline]

Definition at line 61 of file ckbsettings.h.

References _settings, and CkbSettings::endGroup().

```
61 { _settings.endGroup(); }
```

Here is the call graph for this function:

12.85.3 Field Documentation

12.85.3.1 CkbSettings& SGroup::_settings [private]

Definition at line 64 of file ckbsettings.h.

Referenced by ~SGroup().

The documentation for this class was generated from the following file:

- src/ckb/ckbsettings.h

12.86 Ui_AnimAddDialog Class Reference

```
#include <src/ckb/ui_animadddialog.h>
```

Inheritance diagram for Ui_AnimAddDialog:

Collaboration diagram for Ui_AnimAddDialog:

Public Member Functions

- void setupUi (QDialog *AnimAddDialog)
- void retranslateUi (QDialog *AnimAddDialog)

Data Fields

- QGridLayout * gridLayout
- QHBoxLayout * horizontalLayout
- QDialogButtonBox * buttonBox
- QSpacerItem * horizontalSpacer_2
- QComboBox * animBox
- QLabel * label_2
- QSpacerItem * verticalSpacer_2
- QLabel * label
- QSpacerItem * verticalSpacer_3
- QComboBox * presetBox
- QSpacerItem * horizontalSpacer
- QCheckBox * previewBox

12.86.1 Detailed Description

Definition at line 28 of file ui_animadddialog.h.

12.86.2 Member Function Documentation

12.86.2.1 void Ui_AnimAddDialog::retranslateUi (QDialog * *AnimAddDialog*) [inline]

Definition at line 135 of file ui_animadddialog.h.

References label, label_2, and previewBox.

Referenced by setupUi().

```
136     {
137         AnimAddDialog->setWindowTitle(QApplication::translate("AnimAddDialog", "Add Animation", Q_NULLPTR))
    ;
138         label_2->setText(QApplication::translate("AnimAddDialog", "Preset:", Q_NULLPTR));
139         label->setText(QApplication::translate("AnimAddDialog", "Animation:", Q_NULLPTR));
140         previewBox->setText(QApplication::translate("AnimAddDialog", "Show preview", Q_NULLPTR));
141     } // retranslateUi
```

Here is the caller graph for this function:

12.86.2.2 void Ui_AnimAddDialog::setupUi (QDialog * *AnimAddDialog*) [inline]

Definition at line 44 of file ui_animadddialog.h.

References animBox, buttonBox, gridLayout, horizontalLayout, horizontalSpacer, horizontalSpacer_2, label, label_2, presetBox, previewBox, retranslateUi(), verticalSpacer_2, and verticalSpacer_3.

Referenced by AnimAddDialog::AnimAddDialog().

```
45     {
46         if (AnimAddDialog->objectName().isEmpty())
47             AnimAddDialog->setObjectName(QStringLiteral("AnimAddDialog"));
48         AnimAddDialog->resize(350, 205);
```

```
        QSizePolicy sizePolicy(QSizePolicy::Fixed, QSizePolicy::Fixed);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(AnimAddDialog->sizePolicy().hasHeightForWidth());
        AnimAddDialog->setSizePolicy(sizePolicy);
        gridLayout = new QGridLayout(AnimAddDialog);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        buttonBox = new QDialogButtonBox(AnimAddDialog);
        buttonBox->setObjectName(QStringLiteral("buttonBox"));
        buttonBox->setOrientation(Qt::Horizontal);
        buttonBox->setStandardButtons(QDialogButtonBox::Cancel|QDialogButtonBox::Ok);
        buttonBox->setCenterButtons(false);

        horizontalLayout->addWidget(buttonBox);


        gridLayout->addLayout(horizontalLayout, 5, 0, 1, 4);

        horizontalSpacer_2 = new QSpacerItem(50, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_2, 1, 3, 1, 1);

        animBox = new QComboBox(AnimAddDialog);
        animBox->setObjectName(QStringLiteral("animBox"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Fixed);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(animBox->sizePolicy().hasHeightForWidth());
        animBox->setSizePolicy(sizePolicy1);

        gridLayout->addWidget(animBox, 1, 2, 1, 1);

        label_2 = new QLabel(AnimAddDialog);
        label_2->setObjectName(QStringLiteral("label_2"));
        QSizePolicy sizePolicy2(QSizePolicy::Preferred, QSizePolicy::Preferred);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(0);
        sizePolicy2.setHeightForWidth(label_2->sizePolicy().hasHeightForWidth());
        label_2->setSizePolicy(sizePolicy2);
        label_2->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout->addWidget(label_2, 2, 1, 1, 1);

        verticalSpacer_2 = new QSpacerItem(20, 0, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout->addItem(verticalSpacer_2, 4, 2, 1, 1);

        label = new QLabel(AnimAddDialog);
        label->setObjectName(QStringLiteral("label"));
        sizePolicy2.setHeightForWidth(label->sizePolicy().hasHeightForWidth());
        label->setSizePolicy(sizePolicy2);
        label->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout->addWidget(label, 1, 1, 1, 1);

        verticalSpacer_3 = new QSpacerItem(20, 0, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout->addItem(verticalSpacer_3, 0, 2, 1, 1);

        presetBox = new QComboBox(AnimAddDialog);
        presetBox->setObjectName(QStringLiteral("presetBox"));
        sizePolicy1.setHeightForWidth(presetBox->sizePolicy().hasHeightForWidth());
        presetBox->setSizePolicy(sizePolicy1);

        gridLayout->addWidget(presetBox, 2, 2, 1, 1);

        horizontalSpacer = new QSpacerItem(50, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer, 1, 0, 1, 1);

        previewBox = new QCheckBox(AnimAddDialog);
        previewBox->setObjectName(QStringLiteral("previewBox"));
        previewBox->setChecked(true);

        gridLayout->addWidget(previewBox, 3, 2, 1, 1);


        retranslateUi(AnimAddDialog);
        QObject::connect(buttonBox, SIGNAL(accepted()), AnimAddDialog, SLOT(accept()));
        QObject::connect(buttonBox, SIGNAL(rejected()), AnimAddDialog, SLOT(reject()));

```

```
        QMetaObject::connectSlotsByName(AnimAddDialog);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.86.3 Field Documentation

12.86.3.1 QComboBox* Ui_AnimAddDialog::animBox

Definition at line 35 of file ui_animadddialog.h.

Referenced by AnimAddDialog::AnimAddDialog(), AnimAddDialog::chosenScript(), and setupUi().

12.86.3.2 QDialogButtonBox* Ui_AnimAddDialog::buttonBox

Definition at line 33 of file ui_animadddialog.h.

Referenced by setupUi().

12.86.3.3 QGridLayout* Ui_AnimAddDialog::gridLayout

Definition at line 31 of file ui_animadddialog.h.

Referenced by setupUi().

12.86.3.4 QHBoxLayout* Ui_AnimAddDialog::horizontalLayout

Definition at line 32 of file ui_animadddialog.h.

Referenced by setupUi().

12.86.3.5 QSpacerItem* Ui_AnimAddDialog::horizontalSpacer

Definition at line 41 of file ui_animadddialog.h.

Referenced by setupUi().

12.86.3.6 QSpacerItem* Ui_AnimAddDialog::horizontalSpacer_2

Definition at line 34 of file ui_animadddialog.h.

Referenced by setupUi().

12.86.3.7 QLabel* Ui_AnimAddDialog::label

Definition at line 38 of file ui_animadddialog.h.

Referenced by retranslateUi(), and setupUi().

12.86.3.8 QLabel* Ui_AnimAddDialog::label_2

Definition at line 36 of file ui_animadddialog.h.

Referenced by retranslateUi(), and setupUi().

12.86.3.9 QComboBox* Ui_AnimAddDialog::presetBox

Definition at line 40 of file ui_animadddialog.h.

Referenced by AnimAddDialog::chosenPreset(), AnimAddDialog::on_animBox_activated(), AnimAddDialog::on_previewBox_clicked(), and setupUi().

12.86.3.10 QCheckBox* Ui_AnimAddDialog::previewBox

Definition at line 42 of file ui_animadddialog.h.

Referenced by retranslateUi(), and setupUi().

12.86.3.11 QSpacerItem* Ui_AnimAddDialog::verticalSpacer_2

Definition at line 37 of file ui_animadddialog.h.

Referenced by setupUi().

12.86.3.12 QSpacerItem* Ui_AnimAddDialog::verticalSpacer_3

Definition at line 39 of file ui_animadddialog.h.

Referenced by setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_animadddialog.h

12.87 Ui_AnimSettingDialog Class Reference

```
#include <src/ckb/ui_animsettingdialog.h>
```

Inheritance diagram for Ui_AnimSettingDialog:

Collaboration diagram for Ui_AnimSettingDialog:

Public Member Functions

- void setupUi (QDialog *AnimSettingDialog)
- void retranslateUi (QDialog *AnimSettingDialog)

Data Fields

- QGridLayout * gridLayout
- QDialogButtonBox * buttonBox
- QTabWidget * tabWidget
- QWidget * settingTab
- QGridLayout * settingsGrid
- QLabel * label_2
- QSpacerItem * horizontalSpacer_3
- QLineEdit * animName
- QWidget * timeTab
- QGridLayout * timeGrid
- QSpacerItem * horizontalSpacer_5
- QLabel * kpRepeatLabel
- QLabel * repeatLabel
- QDoubleSpinBox * repeatBox
- QLabel * repeatLabel_2
- QFrame * line
- QLabel * kpRepeatLabel_2
- QLabel * label_4
- QLabel * label_8
- QDoubleSpinBox * kpDelayBox
- QLabel * label_13
- QLabel * label_12
- QDoubleSpinBox * delayBox
- QCheckBox * kpModeStopBox
- QLabel * label_10
- QSpacerItem * verticalSpacer_3
- QSpacerItem * horizontalSpacer_4
- QCheckBox * kpReleaseBox
- QLabel * label_6
- QDoubleSpinBox * kpRepeatBox
- QSpacerItem * verticalSpacer_2
- QFrame * line_2
- QSpacerItem * horizontalSpacer_6
- QWidget * infoTab
- QGridLayout * gridLayout_2
- QLabel * sNameLabel
- QLabel * label_7
- QLabel * label_11
- QLabel * sAuthorLabel
- QLabel * label_9
- QLabel * label_5
- QLabel * sYearLabel
- QLabel * label_3
- QSpacerItem * horizontalSpacer
- QSpacerItem * horizontalSpacer_2
- QLabel * sVerLabel
- QLabel * sLicenseLabel
- QLabel * label
- QSpacerItem * verticalSpacer
- QLabel * sDescLabel

12.87.1 Detailed Description

Definition at line 31 of file ui_animsettingdialog.h.

12.87.2 Member Function Documentation

12.87.2.1 void Ui_AnimSettingDialog::retranslateUi (QDialog * *AnimSettingDialog*) [inline]

Definition at line 349 of file ui_animsettingdialog.h.

References infoTab, kpModeStopBox, kpReleaseBox, kpRepeatLabel, kpRepeatLabel_2, label, label_10, label_11, label_12, label_13, label_2, label_3, label_4, label_5, label_6, label_7, label_8, label_9, repeatLabel, repeatLabel_2, sAuthorLabel, sDescLabel, settingTab, sLicenseLabel, sNameLabel, sVerLabel, sYearLabel, tabWidget, and timeTab.

Referenced by setupUi().

```
350     {
351         AnimSettingDialog->setWindowTitle(QApplication::translate("AnimSettingDialog", "Dialog", Q_NULLPTR)
    );
352         label_2->setText(QApplication::translate("AnimSettingDialog", "Name:", Q_NULLPTR));
353         tabWidget->setTabText(tabWidget->indexOf(settingTab),
    QApplication::translate("AnimSettingDialog", "Settings", Q_NULLPTR));
354         kpRepeatLabel->setText(QApplication::translate("AnimSettingDialog", "Repeat every:",
    Q_NULLPTR));
355         repeatLabel->setText(QApplication::translate("AnimSettingDialog", "Repeat every:",
    Q_NULLPTR));
356         repeatLabel_2->setText(QApplication::translate("AnimSettingDialog", "seconds",
    Q_NULLPTR));
357         kpRepeatLabel_2->setText(QApplication::translate("AnimSettingDialog", "seconds",
    Q_NULLPTR));
358         label_4->setText(QApplication::translate("AnimSettingDialog", "<b>On mode start</b>",
    Q_NULLPTR));
359         label_8->setText(QApplication::translate("AnimSettingDialog", "seconds", Q_NULLPTR));
360         label_13->setText(QApplication::translate("AnimSettingDialog", "seconds", Q_NULLPTR));
361         label_12->setText(QApplication::translate("AnimSettingDialog", "Start delay:", Q_NULLPTR));
362         kpModeStopBox->setText(QApplication::translate("AnimSettingDialog", "Stop on key press
    ", Q_NULLPTR));
363         label_10->setText(QApplication::translate("AnimSettingDialog", "Start delay:", Q_NULLPTR));
364         kpReleaseBox->setText(QApplication::translate("AnimSettingDialog", "Stop on key release
    ", Q_NULLPTR));
365         label_6->setText(QApplication::translate("AnimSettingDialog", "<b>On key press</b>",
    Q_NULLPTR));
366         tabWidget->setTabText(tabWidget->indexOf(timeTab), QApplication::translate
    ("AnimSettingDialog", "Timing", Q_NULLPTR));
367         sNameLabel->setText(QApplication::translate("AnimSettingDialog", "Name", Q_NULLPTR));
368         label_7->setText(QApplication::translate("AnimSettingDialog", "Year:", Q_NULLPTR));
369         label_11->setText(QApplication::translate("AnimSettingDialog", "Description:", Q_NULLPTR));
370         sAuthorLabel->setText(QApplication::translate("AnimSettingDialog", "Author", Q_NULLPTR)
    );
371         label_9->setText(QApplication::translate("AnimSettingDialog", "License:", Q_NULLPTR));
372         label_5->setText(QApplication::translate("AnimSettingDialog", "Version:", Q_NULLPTR));
373         sYearLabel->setText(QApplication::translate("AnimSettingDialog", "Year", Q_NULLPTR));
374         label_3->setText(QApplication::translate("AnimSettingDialog", "Author:", Q_NULLPTR));
375         sVerLabel->setText(QApplication::translate("AnimSettingDialog", "Version", Q_NULLPTR));
376         sLicenseLabel->setText(QApplication::translate("AnimSettingDialog", "License",
    Q_NULLPTR));
377         label->setText(QApplication::translate("AnimSettingDialog", "Script name:", Q_NULLPTR));
378         sDescLabel->setText(QApplication::translate("AnimSettingDialog", "Description", Q_NULLPTR
    ));
379         tabWidget->setTabText(tabWidget->indexOf(infoTab), QApplication::translate
    ("AnimSettingDialog", "About", Q_NULLPTR));
380     } // retranslateUi
```

Here is the caller graph for this function:

12.87.2.2 void Ui_AnimSettingDialog::setupUi (QDialog * *AnimSettingDialog*) [inline]

Definition at line 85 of file ui_animsettingdialog.h.

References animName, buttonBox, delayBox, gridLayout, gridLayout_2, horizontalSpacer, horizontalSpacer_2, horizontalSpacer_3, horizontalSpacer_4, horizontalSpacer_5, horizontalSpacer_6, infoTab, kpDelayBox, kpModeStopBox, kpReleaseBox, kpRepeatBox, kpRepeatLabel, kpRepeatLabel_2, label, label_10, label_11, label_12, label_13, label_2, label_3, label_4, label_5, label_6, label_7, label_8, label_9, line, line_2, repeatBox, repeatLabel, repeatLabel_2, retranslateUi(), sAuthorLabel, sDescLabel, settingsGrid, settingTab, sLicenseLabel, sNameLabel, sVerLabel, sYearLabel, tabWidget, timeGrid, timeTab, verticalSpacer, verticalSpacer_2, and verticalSpacer_3.

Referenced by AnimSettingDialog::AnimSettingDialog().

```
86     {
87         if (AnimSettingDialog->objectName().isEmpty())
88             AnimSettingDialog->setObjectName(QStringLiteral("AnimSettingDialog"));
89         AnimSettingDialog->resize(480, 457);
90         AnimSettingDialog->setMinimumSize(QSize(480, 0));
91         AnimSettingDialog->setFocusPolicy(Qt::ClickFocus);
92         gridLayout = new QGridLayout(AnimSettingDialog);
93         gridLayout->setObjectName(QStringLiteral("gridLayout"));
94         buttonBox = new QDialogButtonBox(AnimSettingDialog);
95         buttonBox->setObjectName(QStringLiteral("buttonBox"));
96         buttonBox->setOrientation(Qt::Horizontal);
97         buttonBox->setStandardButtons(QDialogButtonBox::Cancel|QDialogButtonBox::Ok);
98
99         gridLayout->addWidget(buttonBox, 2, 0, 1, 1);
100
101         tabWidget = new QTabWidget(AnimSettingDialog);
102         tabWidget->setObjectName(QStringLiteral("tabWidget"));
103         settingTab = new QWidget();
104         settingTab->setObjectName(QStringLiteral("settingTab"));
105         settingsGrid = new QGridLayout(settingTab);
106         settingsGrid->setSpacing(12);
107         settingsGrid->setObjectName(QStringLiteral("settingsGrid"));
108         settingsGrid->setContentsMargins(12, 12, 12, 12);
109         label_2 = new QLabel(settingTab);
110         label_2->setObjectName(QStringLiteral("label_2"));
111
112         settingsGrid->addWidget(label_2, 0, 1, 1, 1);
113
114         horizontalSpacer_3 = new QSpacerItem(5, 0, QSizePolicy::Fixed,
    QSizePolicy::Minimum);
115
116         settingsGrid->addItem(horizontalSpacer_3, 0, 2, 1, 1);
117
118         animName = new QLineEdit(settingTab);
119         animName->setObjectName(QStringLiteral("animName"));
120
121         settingsGrid->addWidget(animName, 0, 3, 1, 3);
122
123         tabWidget->addTab(settingTab, QString());
124         timeTab = new QWidget();
125         timeTab->setObjectName(QStringLiteral("timeTab"));
126         timeGrid = new QGridLayout(timeTab);
127         timeGrid->setSpacing(12);
128         timeGrid->setObjectName(QStringLiteral("timeGrid"));
129         timeGrid->setContentsMargins(12, 12, 12, 12);
130         horizontalSpacer_5 = new QSpacerItem(15, 0, QSizePolicy::Fixed,
    QSizePolicy::Minimum);
131
132         timeGrid->addItem(horizontalSpacer_5, 3, 2, 1, 1);
133
134         kpRepeatLabel = new QLabel(timeTab);
135         kpRepeatLabel->setObjectName(QStringLiteral("kpRepeatLabel"));
136
137         timeGrid->addWidget(kpRepeatLabel, 11, 1, 1, 1);
138
139         repeatLabel = new QLabel(timeTab);
140         repeatLabel->setObjectName(QStringLiteral("repeatLabel"));
141
142         timeGrid->addWidget(repeatLabel, 3, 1, 1, 1);
143
144         repeatBox = new QDoubleSpinBox(timeTab);
145         repeatBox->setObjectName(QStringLiteral("repeatBox"));
146         repeatBox->setDecimals(1);
147         repeatBox->setMinimum(0.1);
148         repeatBox->setMaximum(86400);
149
150         timeGrid->addWidget(repeatBox, 3, 3, 1, 1);
151
152         repeatLabel_2 = new QLabel(timeTab);
153         repeatLabel_2->setObjectName(QStringLiteral("repeatLabel_2"));
```

```
        timeGrid->addWidget(repeatLabel_2, 3, 4, 1, 1);

        line = new QFrame(timeTab);
        line->setObjectName(QStringLiteral("line"));
        line->setFrameShape(QFrame::HLine);
        line->setFrameShadow(QFrame::Sunken);

        timeGrid->addWidget(line, 1, 0, 1, 6);

        kpRepeatLabel_2 = new QLabel(timeTab);
        kpRepeatLabel_2->setObjectName(QStringLiteral("kpRepeatLabel_2"));

        timeGrid->addWidget(kpRepeatLabel_2, 11, 4, 1, 1);

        label_4 = new QLabel(timeTab);
        label_4->setObjectName(QStringLiteral("label_4"));

        timeGrid->addWidget(label_4, 0, 0, 1, 6);

        label_8 = new QLabel(timeTab);
        label_8->setObjectName(QStringLiteral("label_8"));

        timeGrid->addWidget(label_8, 2, 4, 1, 1);

        kpDelayBox = new QDoubleSpinBox(timeTab);
        kpDelayBox->setObjectName(QStringLiteral("kpDelayBox"));
        kpDelayBox->setDecimals(1);
        kpDelayBox->setMaximum(86400);

        timeGrid->addWidget(kpDelayBox, 10, 3, 1, 1);

        label_13 = new QLabel(timeTab);
        label_13->setObjectName(QStringLiteral("label_13"));

        timeGrid->addWidget(label_13, 10, 4, 1, 1);

        label_12 = new QLabel(timeTab);
        label_12->setObjectName(QStringLiteral("label_12"));

        timeGrid->addWidget(label_12, 10, 1, 1, 1);

        delayBox = new QDoubleSpinBox(timeTab);
        delayBox->setObjectName(QStringLiteral("delayBox"));
        delayBox->setDecimals(1);
        delayBox->setMaximum(86400);

        timeGrid->addWidget(delayBox, 2, 3, 1, 1);

        kpModeStopBox = new QCheckBox(timeTab);
        kpModeStopBox->setObjectName(QStringLiteral("kpModeStopBox"));

        timeGrid->addWidget(kpModeStopBox, 5, 1, 1, 3);

        label_10 = new QLabel(timeTab);
        label_10->setObjectName(QStringLiteral("label_10"));

        timeGrid->addWidget(label_10, 2, 1, 1, 1);

        verticalSpacer_3 = new QSpacerItem(0, 10, QSizePolicy::Minimum, QSizePolicy::Fixed)
;

        timeGrid->addItem(verticalSpacer_3, 7, 1, 1, 1);

        horizontalSpacer_4 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
QSizePolicy::Minimum);

        timeGrid->addItem(horizontalSpacer_4, 2, 5, 1, 1);

        kpReleaseBox = new QCheckBox(timeTab);
        kpReleaseBox->setObjectName(QStringLiteral("kpReleaseBox"));

        timeGrid->addWidget(kpReleaseBox, 14, 1, 1, 3);

        label_6 = new QLabel(timeTab);
        label_6->setObjectName(QStringLiteral("label_6"));

        timeGrid->addWidget(label_6, 8, 0, 1, 6);

        kpRepeatBox = new QDoubleSpinBox(timeTab);
        kpRepeatBox->setObjectName(QStringLiteral("kpRepeatBox"));
        kpRepeatBox->setDecimals(1);
        kpRepeatBox->setMinimum(0.1);
        kpRepeatBox->setMaximum(86400);

        timeGrid->addWidget(kpRepeatBox, 11, 3, 1, 1);

```

```
        verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        timeGrid->addItem(verticalSpacer_2, 15, 1, 1, 1);

        line_2 = new QFrame(timeTab);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
        line_2->setFrameShadow(QFrame::Sunken);

        timeGrid->addWidget(line_2, 9, 0, 1, 6);

        horizontalSpacer_6 = new QSpacerItem(0, 0, QSizePolicy::Fixed, QSizePolicy::Minimum);

        timeGrid->addItem(horizontalSpacer_6, 12, 2, 1, 1);

        tabWidget->addTab(timeTab, QString());
        infoTab = new QWidget();
        infoTab->setObjectName(QStringLiteral("infoTab"));
        gridLayout_2 = new QGridLayout(infoTab);
        gridLayout_2->setSpacing(12);
        gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
        gridLayout_2->setContentsMargins(12, 12, 12, 12);
        sNameLabel = new QLabel(infoTab);
        sNameLabel->setObjectName(QStringLiteral("sNameLabel"));

        gridLayout_2->addWidget(sNameLabel, 0, 2, 1, 1);

        label_7 = new QLabel(infoTab);
        label_7->setObjectName(QStringLiteral("label_7"));

        gridLayout_2->addWidget(label_7, 3, 0, 1, 1);

        label_11 = new QLabel(infoTab);
        label_11->setObjectName(QStringLiteral("label_11"));

        gridLayout_2->addWidget(label_11, 5, 0, 1, 1);

        sAuthorLabel = new QLabel(infoTab);
        sAuthorLabel->setObjectName(QStringLiteral("sAuthorLabel"));

        gridLayout_2->addWidget(sAuthorLabel, 2, 2, 1, 1);

        label_9 = new QLabel(infoTab);
        label_9->setObjectName(QStringLiteral("label_9"));

        gridLayout_2->addWidget(label_9, 4, 0, 1, 1);

        label_5 = new QLabel(infoTab);
        label_5->setObjectName(QStringLiteral("label_5"));

        gridLayout_2->addWidget(label_5, 1, 0, 1, 1);

        sYearLabel = new QLabel(infoTab);
        sYearLabel->setObjectName(QStringLiteral("sYearLabel"));

        gridLayout_2->addWidget(sYearLabel, 3, 2, 1, 1);

        label_3 = new QLabel(infoTab);
        label_3->setObjectName(QStringLiteral("label_3"));

        gridLayout_2->addWidget(label_3, 2, 0, 1, 1);

        horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer, 0, 3, 1, 1);

        horizontalSpacer_2 = new QSpacerItem(20, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_2, 0, 1, 1, 1);

        sVerLabel = new QLabel(infoTab);
        sVerLabel->setObjectName(QStringLiteral("sVerLabel"));

        gridLayout_2->addWidget(sVerLabel, 1, 2, 1, 1);

        sLicenseLabel = new QLabel(infoTab);
        sLicenseLabel->setObjectName(QStringLiteral("sLicenseLabel"));

        gridLayout_2->addWidget(sLicenseLabel, 4, 2, 1, 1);

        label = new QLabel(infoTab);
        label->setObjectName(QStringLiteral("label"));

```

```
        gridLayout_2->addWidget(label, 0, 0, 1, 1);

        verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding
    );

        gridLayout_2->addItem(verticalSpacer, 6, 0, 1, 1);

        sDescLabel = new QLabel(infoTab);
        sDescLabel->setObjectName(QStringLiteral("sDescLabel"));
        sDescLabel->setAlignment(Qt::AlignLeading|Qt::AlignLeft|Qt::AlignTop);

        gridLayout_2->addWidget(sDescLabel, 5, 2, 2, 2);

        tabWidget->addTab(infoTab, QString());

        gridLayout->addWidget(tabWidget, 0, 0, 1, 1);


        retranslateUi(AnimSettingDialog);
        QObject::connect(buttonBox, SIGNAL(accepted()), AnimSettingDialog, SLOT(accept()));
        QObject::connect(buttonBox, SIGNAL(rejected()), AnimSettingDialog, SLOT(reject()));

        tabWidget->setCurrentIndex(0);


        QMetaObject::connectSlotsByName(AnimSettingDialog);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.87.3 Field Documentation

12.87.3.1 QLineEdit* Ui_AnimSettingDialog::animName

Definition at line 41 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), AnimSettingDialog::name(), and setupUi().

12.87.3.2 QDialogButtonBox* Ui_AnimSettingDialog::buttonBox

Definition at line 35 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.3 QDoubleSpinBox* Ui_AnimSettingDialog::delayBox

Definition at line 56 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and setupUi().

12.87.3.4 QGridLayout* Ui_AnimSettingDialog::gridLayout

Definition at line 34 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.5 QGridLayout* Ui_AnimSettingDialog::gridLayout_2

Definition at line 68 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.6 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer

Definition at line 77 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.7 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer_2

Definition at line 78 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.8 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer_3

Definition at line 40 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.9 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer_4

Definition at line 60 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.10 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer_5

Definition at line 44 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.11 QSpacerItem* Ui_AnimSettingDialog::horizontalSpacer_6

Definition at line 66 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.12 QWidget* Ui_AnimSettingDialog::infoTab

Definition at line 67 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.13 QDoubleSpinBox* Ui_AnimSettingDialog::kpDelayBox

Definition at line 53 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and setupUi().

12.87.3.14 QCheckBox* Ui_AnimSettingDialog::kpModeStopBox

Definition at line 57 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.15 QCheckBox* Ui_AnimSettingDialog::kpReleaseBox

Definition at line 61 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.16 QDoubleSpinBox* Ui_AnimSettingDialog::kpRepeatBox

Definition at line 63 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and setupUi().

12.87.3.17 QLabel* Ui_AnimSettingDialog::kpRepeatLabel

Definition at line 45 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.18 QLabel* Ui_AnimSettingDialog::kpRepeatLabel_2

Definition at line 50 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.19 QLabel* Ui_AnimSettingDialog::label

Definition at line 81 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.20 QLabel* Ui_AnimSettingDialog::label_10

Definition at line 58 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.21 QLabel* Ui_AnimSettingDialog::label_11

Definition at line 71 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.22 QLabel* Ui_AnimSettingDialog::label_12

Definition at line 55 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.23 QLabel* Ui_AnimSettingDialog::label_13

Definition at line 54 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.24 QLabel* Ui_AnimSettingDialog::label_2

Definition at line 39 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.25 QLabel* Ui_AnimSettingDialog::label_3

Definition at line 76 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.26 QLabel* Ui_AnimSettingDialog::label_4

Definition at line 51 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.27 QLabel* Ui_AnimSettingDialog::label_5

Definition at line 74 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.28 QLabel* Ui_AnimSettingDialog::label_6

Definition at line 62 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.29 QLabel* Ui_AnimSettingDialog::label_7

Definition at line 70 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.30 QLabel* Ui_AnimSettingDialog::label_8

Definition at line 52 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.31 QLabel* Ui_AnimSettingDialog::label_9

Definition at line 73 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.32 QFrame* Ui_AnimSettingDialog::line

Definition at line 49 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.33 QFrame* Ui_AnimSettingDialog::line_2

Definition at line 65 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.34 QDoubleSpinBox* Ui_AnimSettingDialog::repeatBox

Definition at line 47 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and setupUi().

12.87.3.35 QLabel* Ui_AnimSettingDialog::repeatLabel

Definition at line 46 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.36 QLabel* Ui_AnimSettingDialog::repeatLabel_2

Definition at line 48 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.37 QLabel* Ui_AnimSettingDialog::sAuthorLabel

Definition at line 72 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.38 QLabel* Ui_AnimSettingDialog::sDescLabel

Definition at line 83 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.39 QGridLayout* Ui_AnimSettingDialog::settingsGrid

Definition at line 38 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and setupUi().

12.87.3.40 QWidget* Ui_AnimSettingDialog::settingTab

Definition at line 37 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.41 QLabel* Ui_AnimSettingDialog::sLicenseLabel

Definition at line 80 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.42 QLabel* Ui_AnimSettingDialog::sNameLabel

Definition at line 69 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.43 QLabel* Ui_AnimSettingDialog::sVerLabel

Definition at line 79 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.44 QLabel* Ui_AnimSettingDialog::sYearLabel

Definition at line 75 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), retranslateUi(), and setupUi().

12.87.3.45 QTabWidget* Ui_AnimSettingDialog::tabWidget

Definition at line 36 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.46 QGridLayout* Ui_AnimSettingDialog::timeGrid

Definition at line 43 of file ui_animsettingdialog.h.

Referenced by AnimSettingDialog::AnimSettingDialog(), and setupUi().

12.87.3.47 QWidget* Ui_AnimSettingDialog::timeTab

Definition at line 42 of file ui_animsettingdialog.h.

Referenced by retranslateUi(), and setupUi().

12.87.3.48 QSpacerItem* Ui_AnimSettingDialog::verticalSpacer

Definition at line 82 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.49 QSpacerItem* Ui_AnimSettingDialog::verticalSpacer_2

Definition at line 64 of file ui_animsettingdialog.h.

Referenced by setupUi().

12.87.3.50 QSpacerItem* Ui_AnimSettingDialog::verticalSpacer_3

Definition at line 59 of file ui_animsettingdialog.h.

Referenced by setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_animsettingdialog.h

12.88 Ui_ExtraSettingsWidget Class Reference

```
#include <src/ckb/ui_extrasettingswidget.h>
```

Inheritance diagram for Ui_ExtraSettingsWidget:

Collaboration diagram for Ui_ExtraSettingsWidget:

Public Member Functions

- void setupUi (QDialog *ExtraSettingsWidget)
- void retranslateUi (QDialog *ExtraSettingsWidget)

Data Fields

- QGridLayout * gridLayout
- QSpacerItem * horizontalSpacer_2
- QSpacerItem * verticalSpacer
- QSpacerItem * verticalSpacer_3
- QSpacerItem * verticalSpacer_2
- QLabel * fpsWarnLabel
- QSpacerItem * horizontalSpacer_3
- QLabel * label_3
- QSpinBox * fpsBox
- QSpacerItem * verticalSpacer_4
- QSpacerItem * verticalSpacer_9
- QLabel * label_6
- QSpacerItem * verticalSpacer_6
- QSpacerItem * verticalSpacer_5
- QCheckBox * sAccelBox
- QSpacerItem * verticalSpacer_7
- QSpacerItem * verticalSpacer_8
- QSpacerItem * verticalSpacer_10
- QSpacerItem * verticalSpacer_11
- QSpacerItem * horizontalSpacer
- QFrame * line_2
- QHBoxLayout * horizontalLayout
- QLabel * animPathLabel
- QLabel * animCountLabel
- QPushButton * animScanButton
- QCheckBox * brightnessBox
- QCheckBox * trayBox
- QLabel * label
- QFrame * line
- QLabel * label_5
- QFrame * line_3
- QLabel * label_2
- QCheckBox * ditherBox
- QCheckBox * delayBox
- QLabel * osxLabel
- QFrame * osxLine
- QCheckBox * mAccelBox
- QWidget * sSpeedWidget
- QHBoxLayout * horizontalLayout_2
- QLabel * label_10
- QSpinBox * sSpeedBox
- QLabel * label_11
- QDialogButtonBox * buttonBox

12.88.1 Detailed Description

Definition at line 31 of file ui_extrasettingswidget.h.

12.88.2 Member Function Documentation

12.88.2.1 void Ui_ExtraSettingsWidget::retranslateUi (QDialog * *ExtraSettingsWidget*) [inline]

Definition at line 322 of file ui_extrasettingswidget.h.

References animCountLabel, animPathLabel, animScanButton, brightnessBox, delayBox, ditherBox, fpsWarnLabel, label, label_10, label_11, label_2, label_3, label_5, label_6, mAccelBox, osxLabel, sAccelBox, and trayBox.

Referenced by setupUi().

```
    {
        ExtraSettingsWidget->setWindowTitle(QApplication::translate("ExtraSettingsWidget", "Application Settings", Q_NULLPTR));
        fpsWarnLabel->setText(QApplication::translate("ExtraSettingsWidget", "Warning: high frame rates may cause stability issues", Q_NULLPTR));
        label_3->setText(QApplication::translate("ExtraSettingsWidget", "Frame rate (FPS):", Q_NULLPTR));
        label_6->setText(QApplication::translate("ExtraSettingsWidget", "Location:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        sAccelBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "Try this if you're having problems with the scroll wheel.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        sAccelBox->setText(QApplication::translate("ExtraSettingsWidget", "Disable scroll acceleration", Q_NULLPTR));
        animPathLabel->setText(QApplication::translate("ExtraSettingsWidget", "/path/to/animations", Q_NULLPTR));
        animCountLabel->setText(QApplication::translate("ExtraSettingsWidget", "0 animations found", Q_NULLPTR));
        animScanButton->setText(QApplication::translate("ExtraSettingsWidget", "Re-scan", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        brightnessBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "By default, the same brightness level will be applied to all profiles and all devices. Enable this to store it with the lighting mode instead.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        brightnessBox->setText(QApplication::translate("ExtraSettingsWidget", "Set brightness per-mode", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        trayBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "The tray icon will not be displayed. The application will still run in the background; re-launch the app to see the GUI again.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        trayBox->setText(QApplication::translate("ExtraSettingsWidget", "Hide tray icon", Q_NULLPTR));
        label->setText(QApplication::translate("ExtraSettingsWidget", "Behavior", Q_NULLPTR));
        label_5->setText(QApplication::translate("ExtraSettingsWidget", "Animation scripts", Q_NULLPTR));
        label_2->setText(QApplication::translate("ExtraSettingsWidget", "Hardware", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        ditherBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "May improve appearance on some keyboards.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        ditherBox->setText(QApplication::translate("ExtraSettingsWidget", "Use spatial dithering to simulate extra color resolution", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        delayBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "When using macros with strings longer than 25 chars, some OS may lose characters (e.g. Mint 17.2). Select to prevent that bug.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        delayBox->setText(QApplication::translate("ExtraSettingsWidget", "Use delay for very long macros", Q_NULLPTR));
        osxLabel->setText(QApplication::translate("ExtraSettingsWidget", "OS X tweaks", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        mAccelBox->setToolTip(QApplication::translate("ExtraSettingsWidget", "Try this if you're having problems with mouse movement.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        mAccelBox->setText(QApplication::translate("ExtraSettingsWidget", "Disable mouse acceleration", Q_NULLPTR));
        label_10->setText(QApplication::translate("ExtraSettingsWidget", "Scroll", Q_NULLPTR));
        label_11->setText(QApplication::translate("ExtraSettingsWidget", "line(s) at a time", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.88.2.2 void Ui_ExtraSettingsWidget::setupUi (QDialog * *ExtraSettingsWidget*) [inline]

Definition at line 78 of file ui_extrasettingswidget.h.

References animCountLabel, animPathLabel, animScanButton, brightnessBox, buttonBox, delayBox, ditherBox, fpsBox, fpsWarnLabel, gridLayout, horizontalLayout, horizontalLayout_2, horizontalSpacer, horizontalSpacer_2, horizontalSpacer_3, label, label_10, label_11, label_2, label_3, label_5, label_6, line, line_2, line_3, mAccelBox, osxLabel, osxLine, retranslateUi(), sAccelBox, sSpeedBox, sSpeedWidget, trayBox, verticalSpacer, verticalSpacer_10, verticalSpacer_11, verticalSpacer_2, verticalSpacer_3, verticalSpacer_4, verticalSpacer_5, verticalSpacer_6, verticalSpacer_7, verticalSpacer_8, and verticalSpacer_9.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget().

```
79     {
80         if (ExtraSettingsWidget->objectName().isEmpty())
81             ExtraSettingsWidget->setObjectName(QStringLiteral("ExtraSettingsWidget"));
82         ExtraSettingsWidget->resize(650, 515);
83         gridLayout = new QGridLayout(ExtraSettingsWidget);
84         gridLayout->setObjectName(QStringLiteral("gridLayout"));
85         horizontalSpacer_2 = new QSpacerItem(30, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);
86
87         gridLayout->addItem(horizontalSpacer_2, 12, 2, 1, 1);
88
89         verticalSpacer = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);
90
91         gridLayout->addItem(verticalSpacer, 2, 0, 1, 1);
92
93         verticalSpacer_3 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed)
    ;
94
95         gridLayout->addItem(verticalSpacer_3, 3, 0, 1, 1);
96
97         verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
    QSizePolicy::Expanding);
98
99         gridLayout->addItem(verticalSpacer_2, 19, 5, 1, 1);
100
101         fpsWarnLabel = new QLabel(ExtraSettingsWidget);
102         fpsWarnLabel->setObjectName(QStringLiteral("fpsWarnLabel"));
103         QSizePolicy sizePolicy(QSizePolicy::Expanding, QSizePolicy::Preferred);
104         sizePolicy.setHorizontalStretch(0);
105         sizePolicy.setVerticalStretch(0);
106         sizePolicy.setHeightForWidth(fpsWarnLabel->sizePolicy().hasHeightForWidth());
107         fpsWarnLabel->setSizePolicy(sizePolicy);
108
109         gridLayout->addWidget(fpsWarnLabel, 12, 5, 1, 1);
110
111         horizontalSpacer_3 = new QSpacerItem(10, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);
112
113         gridLayout->addItem(horizontalSpacer_3, 12, 4, 1, 1);
114
115         label_3 = new QLabel(ExtraSettingsWidget);
116         label_3->setObjectName(QStringLiteral("label_3"));
117
118         gridLayout->addWidget(label_3, 12, 1, 1, 1);
119
120         fpsBox = new QSpinBox(ExtraSettingsWidget);
121         fpsBox->setObjectName(QStringLiteral("fpsBox"));
122         fpsBox->setMinimum(5);
123         fpsBox->setMaximum(60);
124         fpsBox->setValue(30);
125
```

```
        gridLayout->addWidget(fpsBox, 12, 3, 1, 1);

        verticalSpacer_4 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_4, 7, 0, 1, 1);

        verticalSpacer_9 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_9, 12, 0, 1, 1);

        label_6 = new QLabel(ExtraSettingsWidget);
        label_6->setObjectName(QStringLiteral("label_6"));

        gridLayout->addWidget(label_6, 7, 1, 1, 1);

        verticalSpacer_6 = new QSpacerItem(20, 10, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_6, 8, 1, 1, 1);

        verticalSpacer_5 = new QSpacerItem(20, 10, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_5, 4, 1, 1, 1);

        sAccelBox = new QCheckBox(ExtraSettingsWidget);
        sAccelBox->setObjectName(QStringLiteral("sAccelBox"));

        gridLayout->addWidget(sAccelBox, 18, 1, 1, 4);

        verticalSpacer_7 = new QSpacerItem(20, 10, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_7, 14, 1, 1, 1);

        verticalSpacer_8 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_8, 13, 0, 1, 1);

        verticalSpacer_10 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_10, 17, 0, 1, 1);

        verticalSpacer_11 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_11, 18, 0, 1, 1);

        horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer, 12, 6, 1, 1);

        line_2 = new QFrame(ExtraSettingsWidget);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
        line_2->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_2, 10, 0, 1, 7);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        animPathLabel = new QLabel(ExtraSettingsWidget);
        animPathLabel->setObjectName(QStringLiteral("animPathLabel"));

        horizontalLayout->addWidget(animPathLabel);

        animCountLabel = new QLabel(ExtraSettingsWidget);
        animCountLabel->setObjectName(QStringLiteral("animCountLabel"));
        sizePolicy.setHeightForWidth(animCountLabel->sizePolicy().hasHeightForWidth());
        animCountLabel->setSizePolicy(sizePolicy);
        animCountLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        horizontalLayout->addWidget(animCountLabel);

        animScanButton = new QPushButton(ExtraSettingsWidget);
        animScanButton->setObjectName(QStringLiteral("animScanButton"));

        horizontalLayout->addWidget(animScanButton);


        gridLayout->addLayout(horizontalLayout, 7, 3, 1, 4);

```

```
        brightnessBox = new QCheckBox(ExtraSettingsWidget);
        brightnessBox->setObjectName(QStringLiteral("brightnessBox"));

        gridLayout->addWidget(brightnessBox, 3, 1, 1, 6);

        trayBox = new QCheckBox(ExtraSettingsWidget);
        trayBox->setObjectName(QStringLiteral("trayBox"));

        gridLayout->addWidget(trayBox, 2, 1, 1, 6);

        label = new QLabel(ExtraSettingsWidget);
        label->setObjectName(QStringLiteral("label"));
        QFont font;
        font.setBold(true);
        font.setWeight(75);
        label->setFont(font);

        gridLayout->addWidget(label, 0, 0, 1, 7);

        line = new QFrame(ExtraSettingsWidget);
        line->setObjectName(QStringLiteral("line"));
        line->setFrameShape(QFrame::HLine);
        line->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line, 1, 0, 1, 7);

        label_5 = new QLabel(ExtraSettingsWidget);
        label_5->setObjectName(QStringLiteral("label_5"));
        label_5->setFont(font);

        gridLayout->addWidget(label_5, 5, 0, 1, 7);

        line_3 = new QFrame(ExtraSettingsWidget);
        line_3->setObjectName(QStringLiteral("line_3"));
        line_3->setFrameShape(QFrame::HLine);
        line_3->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_3, 6, 0, 1, 7);

        label_2 = new QLabel(ExtraSettingsWidget);
        label_2->setObjectName(QStringLiteral("label_2"));
        label_2->setFont(font);

        gridLayout->addWidget(label_2, 9, 0, 1, 7);

        ditherBox = new QCheckBox(ExtraSettingsWidget);
        ditherBox->setObjectName(QStringLiteral("ditherBox"));

        gridLayout->addWidget(ditherBox, 13, 1, 1, 6);

        delayBox = new QCheckBox(ExtraSettingsWidget);
        delayBox->setObjectName(QStringLiteral("delayBox"));

        gridLayout->addWidget(delayBox, 14, 1, 1, 6);

        osxLabel = new QLabel(ExtraSettingsWidget);
        osxLabel->setObjectName(QStringLiteral("osxLabel"));
        osxLabel->setFont(font);

        gridLayout->addWidget(osxLabel, 15, 0, 1, 7);

        osxLine = new QFrame(ExtraSettingsWidget);
        osxLine->setObjectName(QStringLiteral("osxLine"));
        osxLine->setFrameShape(QFrame::HLine);
        osxLine->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(osxLine, 16, 0, 1, 7);

        mAccelBox = new QCheckBox(ExtraSettingsWidget);
        mAccelBox->setObjectName(QStringLiteral("mAccelBox"));

        gridLayout->addWidget(mAccelBox, 17, 1, 1, 6);

        sSpeedWidget = new QWidget(ExtraSettingsWidget);
        sSpeedWidget->setObjectName(QStringLiteral("sSpeedWidget"));
        sizePolicy.setHeightForWidth(sSpeedWidget->sizePolicy().hasHeightForWidth());
        sSpeedWidget->setSizePolicy(sizePolicy);
        horizontalLayout_2 = new QHBoxLayout(sSpeedWidget);
        horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
        horizontalLayout_2->setContentsMargins(0, 0, 0, 0);
        label_10 = new QLabel(sSpeedWidget);
        label_10->setObjectName(QStringLiteral("label_10"));

        horizontalLayout_2->addWidget(label_10);

        sSpeedBox = new QSpinBox(sSpeedWidget);
        sSpeedBox->setObjectName(QStringLiteral("sSpeedBox"));
```

```
        sSpeedBox->setMinimum(1);
        sSpeedBox->setMaximum(10);
        sSpeedBox->setValue(3);

        horizontalLayout_2->addWidget(sSpeedBox);

        label_11 = new QLabel(sSpeedWidget);
        label_11->setObjectName(QStringLiteral("label_11"));
        sizePolicy.setHeightForWidth(label_11->sizePolicy().hasHeightForWidth());
        label_11->setSizePolicy(sizePolicy);

        horizontalLayout_2->addWidget(label_11);


        gridLayout->addWidget(sSpeedWidget, 18, 5, 1, 2);

        buttonBox = new QDialogButtonBox(ExtraSettingsWidget);
        buttonBox->setObjectName(QStringLiteral("buttonBox"));
        buttonBox->setOrientation(Qt::Horizontal);
        buttonBox->setStandardButtons(QDialogButtonBox::Ok);

        gridLayout->addWidget(buttonBox, 20, 0, 1, 7);


        retranslateUi(ExtraSettingsWidget);
        QObject::connect(buttonBox, SIGNAL(accepted()), ExtraSettingsWidget, SLOT(accept()));
        QObject::connect(buttonBox, SIGNAL(rejected()), ExtraSettingsWidget, SLOT(reject()));

        QMetaObject::connectSlotsByName(ExtraSettingsWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.88.3 Field Documentation

12.88.3.1 QLabel* Ui_ExtraSettingsWidget::animCountLabel

Definition at line 57 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::on_animScanButton_clicked(), retranslateUi(), and setupUi().

12.88.3.2 QLabel∗ Ui_ExtraSettingsWidget::animPathLabel

Definition at line 56 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), retranslateUi(), and setupUi().

12.88.3.3 QPushButton∗ Ui_ExtraSettingsWidget::animScanButton

Definition at line 58 of file ui_extrasettingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.88.3.4 QCheckBox∗ Ui_ExtraSettingsWidget::brightnessBox

Definition at line 59 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), retranslateUi(), and setupUi().

12.88.3.5 QDialogButtonBox∗ Ui_ExtraSettingsWidget::buttonBox

Definition at line 76 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.6 QCheckBox∗ Ui_ExtraSettingsWidget::delayBox

Definition at line 67 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), retranslateUi(), and setupUi().

12.88.3.7 QCheckBox∗ Ui_ExtraSettingsWidget::ditherBox

Definition at line 66 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), retranslateUi(), and setupUi().

12.88.3.8 QSpinBox∗ Ui_ExtraSettingsWidget::fpsBox

Definition at line 42 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), and setupUi().

12.88.3.9 QLabel∗ Ui_ExtraSettingsWidget::fpsWarnLabel

Definition at line 39 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), ExtraSettingsWidget::on_fpsBox_valueChanged(), retranslateUi(), and setupUi().

12.88.3.10 QGridLayout∗ Ui_ExtraSettingsWidget::gridLayout

Definition at line 34 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.11 QHBoxLayout* Ui_ExtraSettingsWidget::horizontalLayout

Definition at line 55 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.12 QHBoxLayout* Ui_ExtraSettingsWidget::horizontalLayout_2

Definition at line 72 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.13 QSpacerItem* Ui_ExtraSettingsWidget::horizontalSpacer

Definition at line 53 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.14 QSpacerItem* Ui_ExtraSettingsWidget::horizontalSpacer_2

Definition at line 35 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.15 QSpacerItem* Ui_ExtraSettingsWidget::horizontalSpacer_3

Definition at line 40 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.16 QLabel* Ui_ExtraSettingsWidget::label

Definition at line 61 of file ui_extrasettingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.88.3.17 QLabel* Ui_ExtraSettingsWidget::label_10

Definition at line 73 of file ui_extrasettingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.88.3.18 QLabel* Ui_ExtraSettingsWidget::label_11

Definition at line 75 of file ui_extrasettingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.88.3.19 QLabel* Ui_ExtraSettingsWidget::label_2

Definition at line 65 of file ui_extrasettingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.88.3.20 QLabel* Ui_ExtraSettingsWidget::label_3

Definition at line 41 of file ui_extrasettingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.88.3.21 QLabel* Ui_ExtraSettingsWidget::label_5

Definition at line 63 of file ui_extrasettingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.88.3.22 QLabel* Ui_ExtraSettingsWidget::label_6

Definition at line 45 of file ui_extrasettingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.88.3.23 QFrame* Ui_ExtraSettingsWidget::line

Definition at line 62 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.24 QFrame* Ui_ExtraSettingsWidget::line_2

Definition at line 54 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.25 QFrame* Ui_ExtraSettingsWidget::line_3

Definition at line 64 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.26 QCheckBox* Ui_ExtraSettingsWidget::mAccelBox

Definition at line 70 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), retranslateUi(), and setupUi().

12.88.3.27 QLabel* Ui_ExtraSettingsWidget::osxLabel

Definition at line 68 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), retranslateUi(), and setupUi().

12.88.3.28 QFrame* Ui_ExtraSettingsWidget::osxLine

Definition at line 69 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), and setupUi().

12.88.3.29 QCheckBox* Ui_ExtraSettingsWidget::sAccelBox

Definition at line 48 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), ExtraSettingsWidget::on_sSpeedBox_valueChanged(), retranslateUi(), and setupUi().

12.88.3.30 QSpinBox* Ui_ExtraSettingsWidget::sSpeedBox

Definition at line 74 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), ExtraSettingsWidget::on_sAccelBox_clicked(), and setupUi().

12.88.3.31 QWidget* Ui_ExtraSettingsWidget::sSpeedWidget

Definition at line 71 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), ExtraSettingsWidget::on_sAccelBox_clicked(), and setupUi().

12.88.3.32 QCheckBox* Ui_ExtraSettingsWidget::trayBox

Definition at line 60 of file ui_extrasettingswidget.h.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), retranslateUi(), and setupUi().

12.88.3.33 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer

Definition at line 36 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.34 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_10

Definition at line 51 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.35 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_11

Definition at line 52 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.36 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_2

Definition at line 38 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.37 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_3

Definition at line 37 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.38 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_4

Definition at line 43 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.39 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_5

Definition at line 47 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.40 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_6

Definition at line 46 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.41 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_7

Definition at line 49 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.42 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_8

Definition at line 50 of file ui_extrasettingswidget.h.

Referenced by setupUi().

12.88.3.43 QSpacerItem* Ui_ExtraSettingsWidget::verticalSpacer_9

Definition at line 44 of file ui_extrasettingswidget.h.

Referenced by setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_extrasettingswidget.h

12.89 Ui_FwUpgradeDialog Class Reference

```
#include <src/ckb/ui_fwupgradedialog.h>
```

Inheritance diagram for Ui_FwUpgradeDialog:

Collaboration diagram for Ui_FwUpgradeDialog:

Public Member Functions

- void setupUi (QDialog *FwUpgradeDialog)
- void retranslateUi (QDialog *FwUpgradeDialog)

Data Fields

- QGridLayout * gridLayout_2
- QSpacerItem * horizontalSpacer
- QGridLayout * gridLayout
- QSpacerItem * horizontalSpacer_3
- QLabel * label_4
- QSpacerItem * horizontalSpacer_4
- QLabel * label_2
- QLabel * curLabel
- QLabel * newLabel
- QLabel * statusLabel
- QSpacerItem * horizontalSpacer_2
- QLabel * devLabel
- QProgressBar * progressBar
- QPushButton * actionButton
- QPushButton * cancelButton

12.89.1 Detailed Description

Definition at line 26 of file ui_fwupgradedialog.h.

12.89.2 Member Function Documentation

12.89.2.1 void Ui_FwUpgradeDialog::retranslateUi (QDialog * *FwUpgradeDialog*) [inline]

Definition at line 155 of file ui_fwupgradedialog.h.

References actionButton, cancelButton, curLabel, devLabel, label_2, label_4, newLabel, and statusLabel.

Referenced by setupUi().

```
    {
        FwUpgradeDialog->setWindowTitle(QApplication::translate("FwUpgradeDialog", "Firmware update", Q_NULLPTR));
        label_4->setText(QApplication::translate("FwUpgradeDialog", "New:", Q_NULLPTR));
        label_2->setText(QApplication::translate("FwUpgradeDialog", "Current:", Q_NULLPTR));
        curLabel->setText(QApplication::translate("FwUpgradeDialog", "0.00", Q_NULLPTR));
        newLabel->setText(QApplication::translate("FwUpgradeDialog", "0.00", Q_NULLPTR));
        statusLabel->setText(QApplication::translate("FwUpgradeDialog", "Downloading new firmware, please wait...", Q_NULLPTR));
        devLabel->setText(QApplication::translate("FwUpgradeDialog", "Device", Q_NULLPTR));
        actionButton->setText(QApplication::translate("FwUpgradeDialog", "Start", Q_NULLPTR));
        cancelButton->setText(QApplication::translate("FwUpgradeDialog", "Cancel", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.89.2.2 void Ui_FwUpgradeDialog::setupUi (QDialog * *FwUpgradeDialog*) [inline]

Definition at line 45 of file ui_fwupgradedialog.h.

References actionButton, cancelButton, curLabel, devLabel, gridLayout, gridLayout_2, horizontalSpacer, horizontalSpacer_2, horizontalSpacer_3, horizontalSpacer_4, label_2, label_4, newLabel, progressBar, retranslateUi(), and statusLabel.

Referenced by FwUpgradeDialog::FwUpgradeDialog().

```
46     {
47         if (FwUpgradeDialog->objectName().isEmpty())
48             FwUpgradeDialog->setObjectName(QStringLiteral("FwUpgradeDialog"));
49         FwUpgradeDialog->resize(420, 240);
50         QSizePolicy sizePolicy(QSizePolicy::Fixed, QSizePolicy::Fixed);
51         sizePolicy.setHorizontalStretch(0);
52         sizePolicy.setVerticalStretch(0);
53         sizePolicy.setHeightForWidth(FwUpgradeDialog->sizePolicy().hasHeightForWidth());
54         FwUpgradeDialog->setSizePolicy(sizePolicy);
55         gridLayout_2 = new QGridLayout(FwUpgradeDialog);
56         gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
57         horizontalSpacer = new QSpacerItem(127, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
58
59         gridLayout_2->addItem(horizontalSpacer, 1, 0, 1, 1);
60
61         gridLayout = new QGridLayout();
62         gridLayout->setObjectName(QStringLiteral("gridLayout"));
63         horizontalSpacer_3 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
64
65         gridLayout->addItem(horizontalSpacer_3, 1, 0, 1, 1);
66
67         label_4 = new QLabel(FwUpgradeDialog);
68         label_4->setObjectName(QStringLiteral("label_4"));
69         QFont font;
70         font.setBold(true);
71         font.setWeight(75);
72         label_4->setFont(font);
73
74         gridLayout->addWidget(label_4, 1, 4, 1, 1);
75
76         horizontalSpacer_4 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
77
78         gridLayout->addItem(horizontalSpacer_4, 1, 6, 1, 1);
79
80         label_2 = new QLabel(FwUpgradeDialog);
81         label_2->setObjectName(QStringLiteral("label_2"));
82         label_2->setFont(font);
83
84         gridLayout->addWidget(label_2, 1, 1, 1, 1);
85
86         curLabel = new QLabel(FwUpgradeDialog);
87         curLabel->setObjectName(QStringLiteral("curLabel"));
88
89         gridLayout->addWidget(curLabel, 1, 2, 1, 1);
90
91         newLabel = new QLabel(FwUpgradeDialog);
92         newLabel->setObjectName(QStringLiteral("newLabel"));
93
94         gridLayout->addWidget(newLabel, 1, 5, 1, 1);
95
96         statusLabel = new QLabel(FwUpgradeDialog);
97         statusLabel->setObjectName(QStringLiteral("statusLabel"));
98         QSizePolicy sizePolicy1(QSizePolicy::Preferred, QSizePolicy::Expanding);
99         sizePolicy1.setHorizontalStretch(0);
100         sizePolicy1.setVerticalStretch(0);
101         sizePolicy1.setHeightForWidth(statusLabel->sizePolicy().hasHeightForWidth());
102         statusLabel->setSizePolicy(sizePolicy1);
103         statusLabel->setAlignment(Qt::AlignCenter);
104         statusLabel->setWordWrap(true);
105
106         gridLayout->addWidget(statusLabel, 2, 0, 1, 7);
107
108         horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
109
110         gridLayout->addItem(horizontalSpacer_2, 1, 3, 1, 1);
111
112         devLabel = new QLabel(FwUpgradeDialog);
113         devLabel->setObjectName(QStringLiteral("devLabel"));
114         QSizePolicy sizePolicy2(QSizePolicy::Preferred, QSizePolicy::Minimum);
115         sizePolicy2.setHorizontalStretch(0);
```

```
        sizePolicy2.setVerticalStretch(0);
        sizePolicy2.setHeightForWidth(devLabel->sizePolicy().hasHeightForWidth());
        devLabel->setSizePolicy(sizePolicy2);
        devLabel->setFont(font);
        devLabel->setAlignment(Qt::AlignCenter);

        gridLayout->addWidget(devLabel, 0, 0, 1, 7);

        progressBar = new QProgressBar(FwUpgradeDialog);
        progressBar->setObjectName(QStringLiteral("progressBar"));
        progressBar->setMaximum(0);
        progressBar->setValue(0);

        gridLayout->addWidget(progressBar, 3, 0, 1, 7);


        gridLayout_2->addLayout(gridLayout, 0, 0, 1, 3);

        actionButton = new QPushButton(FwUpgradeDialog);
        actionButton->setObjectName(QStringLiteral("actionButton"));
        actionButton->setEnabled(false);

        gridLayout_2->addWidget(actionButton, 1, 2, 1, 1);

        cancelButton = new QPushButton(FwUpgradeDialog);
        cancelButton->setObjectName(QStringLiteral("cancelButton"));
        cancelButton->setEnabled(false);

        gridLayout_2->addWidget(cancelButton, 1, 1, 1, 1);


        retranslateUi(FwUpgradeDialog);

        actionButton->setDefault(true);


        QMetaObject::connectSlotsByName(FwUpgradeDialog);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.89.3 Field Documentation

12.89.3.1 QPushButton* Ui_FwUpgradeDialog::actionButton

Definition at line 42 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::exec(), FwUpgradeDialog::fwUpdateFinished(), FwUpgradeDialog::on_actionButton_clicked(), retranslateUi(), and setupUi().

12.89.3.2 QPushButton* Ui_FwUpgradeDialog::cancelButton

Definition at line 43 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::exec(), FwUpgradeDialog::on_actionButton_clicked(), retranslateUi(), and setupUi().

12.89.3.3 QLabel* Ui_FwUpgradeDialog::curLabel

Definition at line 36 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::FwUpgradeDialog(), retranslateUi(), and setupUi().

12.89.3.4 QLabel* Ui_FwUpgradeDialog::devLabel

Definition at line 40 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::FwUpgradeDialog(), retranslateUi(), and setupUi().

12.89.3.5 QGridLayout* Ui_FwUpgradeDialog::gridLayout

Definition at line 31 of file ui_fwupgradedialog.h.

Referenced by setupUi().

12.89.3.6 QGridLayout* Ui_FwUpgradeDialog::gridLayout_2

Definition at line 29 of file ui_fwupgradedialog.h.

Referenced by setupUi().

12.89.3.7 QSpacerItem* Ui_FwUpgradeDialog::horizontalSpacer

Definition at line 30 of file ui_fwupgradedialog.h.

Referenced by setupUi().

12.89.3.8 QSpacerItem* Ui_FwUpgradeDialog::horizontalSpacer_2

Definition at line 39 of file ui_fwupgradedialog.h.

Referenced by setupUi().

12.89.3.9 QSpacerItem* Ui_FwUpgradeDialog::horizontalSpacer_3

Definition at line 32 of file ui_fwupgradedialog.h.

Referenced by setupUi().

12.89.3.10 QSpacerItem* Ui_FwUpgradeDialog::horizontalSpacer_4

Definition at line 34 of file ui_fwupgradedialog.h.

Referenced by setupUi().

12.89.3.11 QLabel* Ui_FwUpgradeDialog::label_2

Definition at line 35 of file ui_fwupgradedialog.h.

Referenced by retranslateUi(), and setupUi().

12.89.3.12 QLabel* Ui_FwUpgradeDialog::label_4

Definition at line 33 of file ui_fwupgradedialog.h.

Referenced by retranslateUi(), and setupUi().

12.89.3.13 QLabel* Ui_FwUpgradeDialog::newLabel

Definition at line 37 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::exec(), FwUpgradeDialog::FwUpgradeDialog(), retranslateUi(), and setupUi().

12.89.3.14 QProgressBar* Ui_FwUpgradeDialog::progressBar

Definition at line 41 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::exec(), FwUpgradeDialog::fwUpdateFinished(), FwUpgradeDialog::fwUpdateProgress(), FwUpgradeDialog::on_actionButton_clicked(), and setupUi().

12.89.3.15 QLabel* Ui_FwUpgradeDialog::statusLabel

Definition at line 38 of file ui_fwupgradedialog.h.

Referenced by FwUpgradeDialog::exec(), FwUpgradeDialog::fwUpdateFinished(), FwUpgradeDialog::on_actionButton_clicked(), retranslateUi(), and setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_fwupgradedialog.h

12.90 Ui_GradientDialog Class Reference

```
#include <src/ckb/ui_gradientdialog.h>
```

Inheritance diagram for Ui_GradientDialog:

Collaboration diagram for Ui_GradientDialog:

Public Member Functions

- void setupUi (QDialog *GradientDialog)
- void retranslateUi (QDialog *GradientDialog)

Data Fields

- QGridLayout * gridLayout
- QSpacerItem * verticalSpacer
- QSpacerItem * verticalSpacer_2
- GradientDialogWidget * widget
- QDialogButtonBox * buttonBox
- QGroupBox * stopBox
- QGridLayout * gridLayout_2
- QHBoxLayout * horizontalLayout_2
- ColorButton * stopColor
- QSpinBox * stopOpacity
- QSpacerItem * horizontalSpacer_2
- QLabel * label
- QHBoxLayout * horizontalLayout
- QSpinBox * stopPos
- QSpacerItem * horizontalSpacer
- QLabel * label_2
- QSpacerItem * horizontalSpacer_3
- QGroupBox * groupBox_2
- QGridLayout * gridLayout_3
- QListWidget * presetList
- QLineEdit * presetName
- QPushButton * presetSave
- QPushButton * presetDelete

12.90.1 Detailed Description

Definition at line 33 of file ui_gradientdialog.h.

12.90.2 Member Function Documentation

12.90.2.1 void Ui_GradientDialog::retranslateUi (QDialog * *GradientDialog*) [inline]

Definition at line 207 of file ui_gradientdialog.h.

References groupBox_2, label, label_2, presetDelete, presetName, presetSave, stopBox, stopColor, stopOpacity, and stopPos.

Referenced by setupUi().

```
208     {
209         GradientDialog->setWindowTitle(QApplication::translate("GradientDialog", "Pick Gradient", Q_NULLPTR
    ));
210         stopBox->setTitle(QApplication::translate("GradientDialog", "Point X of Y", Q_NULLPTR));
211         stopColor->setText(QApplication::translate("GradientDialog", "Pick Color...", Q_NULLPTR));
212         stopOpacity->setSuffix(QApplication::translate("GradientDialog", "%", Q_NULLPTR));
213         label->setText(QApplication::translate("GradientDialog", "Position:", Q_NULLPTR));
214         stopPos->setSuffix(QApplication::translate("GradientDialog", "%", Q_NULLPTR));
215         label_2->setText(QApplication::translate("GradientDialog", "Color:", Q_NULLPTR));
216         groupBox_2->setTitle(QApplication::translate("GradientDialog", "Presets", Q_NULLPTR));
217         presetName->setPlaceholderText(QApplication::translate("GradientDialog", "Name",
    Q_NULLPTR));
218         presetSave->setText(QApplication::translate("GradientDialog", "Save", Q_NULLPTR));
219         presetDelete->setText(QApplication::translate("GradientDialog", "Delete", Q_NULLPTR));
220     } // retranslateUi
```

Here is the caller graph for this function:

12.90.2.2 void Ui_GradientDialog::setupUi (QDialog * *GradientDialog*) [inline]

Definition at line 60 of file ui_gradientdialog.h.

References buttonBox, gridLayout, gridLayout_2, gridLayout_3, groupBox_2, horizontalLayout, horizontalLayout_2, horizontalSpacer, horizontalSpacer_2, horizontalSpacer_3, label, label_2, presetDelete, presetList, presetName, presetSave, retranslateUi(), stopBox, stopColor, stopOpacity, stopPos, verticalSpacer, verticalSpacer_2, and widget.

Referenced by GradientDialog::GradientDialog().

```
61     {
62         if (GradientDialog->objectName().isEmpty())
63             GradientDialog->setObjectName(QStringLiteral("GradientDialog"));
64         GradientDialog->resize(400, 440);
65         GradientDialog->setMinimumSize(QSize(400, 440));
66         GradientDialog->setMaximumSize(QSize(400, 440));
67         GradientDialog->setFocusPolicy(Qt::ClickFocus);
68         gridLayout = new QGridLayout(GradientDialog);
69         gridLayout->setObjectName(QStringLiteral("gridLayout"));
70         verticalSpacer = new QSpacerItem(0, 0, QSizePolicy::Minimum, QSizePolicy::Expanding);
71
72         gridLayout->addItem(verticalSpacer, 1, 0, 1, 1);
73
74         verticalSpacer_2 = new QSpacerItem(0, 15, QSizePolicy::Minimum, QSizePolicy::Fixed)
    ;
75
76         gridLayout->addItem(verticalSpacer_2, 3, 0, 1, 1);
77
78         widget = new GradientDialogWidget(GradientDialog);
79         widget->setObjectName(QStringLiteral("widget"));
80         QSizePolicy sizePolicy(QSizePolicy::Preferred, QSizePolicy::Fixed);
81         sizePolicy.setHorizontalStretch(0);
82         sizePolicy.setVerticalStretch(0);
83         sizePolicy.setHeightForWidth(widget->sizePolicy().hasHeightForWidth());
84         widget->setSizePolicy(sizePolicy);
85         widget->setMinimumSize(QSize(0, 74));
86         widget->setMaximumSize(QSize(16777215, 74));
87
88         gridLayout->addWidget(widget, 2, 0, 1, 1);
89
90         buttonBox = new QDialogButtonBox(GradientDialog);
91         buttonBox->setObjectName(QStringLiteral("buttonBox"));
92         buttonBox->setOrientation(Qt::Horizontal);
93         buttonBox->setStandardButtons(QDialogButtonBox::Cancel|QDialogButtonBox::Ok);
94
95         gridLayout->addWidget(buttonBox, 5, 0, 1, 1);
96
97         stopBox = new QGroupBox(GradientDialog);
98         stopBox->setObjectName(QStringLiteral("stopBox"));
99         sizePolicy.setHeightForWidth(stopBox->sizePolicy().hasHeightForWidth());
100         stopBox->setSizePolicy(sizePolicy);
101         gridLayout_2 = new QGridLayout(stopBox);
102         gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
103         horizontalLayout_2 = new QHBoxLayout();
104         horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
105         stopColor = new ColorButton(stopBox);
106         stopColor->setObjectName(QStringLiteral("stopColor"));
107
108         horizontalLayout_2->addWidget(stopColor);
109
110         stopOpacity = new QSpinBox(stopBox);
111         stopOpacity->setObjectName(QStringLiteral("stopOpacity"));
112         stopOpacity->setMaximum(100);
113
```

```
        horizontalLayout_2->addWidget(stopOpacity);

        horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer_2);


        gridLayout_2->addLayout(horizontalLayout_2, 1, 2, 1, 1);

        label = new QLabel(stopBox);
        label->setObjectName(QStringLiteral("label"));

        gridLayout_2->addWidget(label, 0, 0, 1, 1);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        stopPos = new QSpinBox(stopBox);
        stopPos->setObjectName(QStringLiteral("stopPos"));
        stopPos->setMaximum(100);

        horizontalLayout->addWidget(stopPos);

        horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout->addItem(horizontalSpacer);


        gridLayout_2->addLayout(horizontalLayout, 0, 2, 1, 1);

        label_2 = new QLabel(stopBox);
        label_2->setObjectName(QStringLiteral("label_2"));

        gridLayout_2->addWidget(label_2, 1, 0, 1, 1);

        horizontalSpacer_3 = new QSpacerItem(10, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_3, 0, 1, 1, 1);


        gridLayout->addWidget(stopBox, 4, 0, 1, 1);

        groupBox_2 = new QGroupBox(GradientDialog);
        groupBox_2->setObjectName(QStringLiteral("groupBox_2"));
        sizePolicy.setHeightForWidth(groupBox_2->sizePolicy().hasHeightForWidth());
        groupBox_2->setSizePolicy(sizePolicy);
        gridLayout_3 = new QGridLayout(groupBox_2);
        gridLayout_3->setObjectName(QStringLiteral("gridLayout_3"));
        presetList = new QListWidget(groupBox_2);
        presetList->setObjectName(QStringLiteral("presetList"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Preferred);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(presetList->sizePolicy().hasHeightForWidth());
        presetList->setSizePolicy(sizePolicy1);
        presetList->setFrameShadow(QFrame::Plain);
        presetList->setHorizontalScrollBarPolicy(Qt::ScrollBarAlwaysOn);
        presetList->setIconSize(QSize(64, 64));
        presetList->setHorizontalScrollMode(QAbstractItemView::ScrollPerPixel);
        presetList->setFlow(QListView::TopToBottom);
        presetList->setViewMode(QListView::IconMode);
        presetList->setUniformItemSizes(true);

        gridLayout_3->addWidget(presetList, 0, 0, 3, 1);

        presetName = new QLineEdit(groupBox_2);
        presetName->setObjectName(QStringLiteral("presetName"));
        presetName->setMaxLength(30);

        gridLayout_3->addWidget(presetName, 0, 1, 1, 1);

        presetSave = new QPushButton(groupBox_2);
        presetSave->setObjectName(QStringLiteral("presetSave"));
        presetSave->setAutoDefault(false);

        gridLayout_3->addWidget(presetSave, 1, 1, 1, 1);

        presetDelete = new QPushButton(groupBox_2);
        presetDelete->setObjectName(QStringLiteral("presetDelete"));
        presetDelete->setAutoDefault(false);

        gridLayout_3->addWidget(presetDelete, 2, 1, 1, 1);


        gridLayout->addWidget(groupBox_2, 0, 0, 1, 1);
```

```
        retranslateUi(GradientDialog);
        QObject::connect(buttonBox, SIGNAL(accepted()), GradientDialog, SLOT(accept()));
        QObject::connect(buttonBox, SIGNAL(rejected()), GradientDialog, SLOT(reject()));

        QMetaObject::connectSlotsByName(GradientDialog);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.90.3 Field Documentation

12.90.3.1 QDialogButtonBox* Ui_GradientDialog::buttonBox

Definition at line 40 of file ui_gradientdialog.h.

Referenced by setupUi().

12.90.3.2 QGridLayout* Ui_GradientDialog::gridLayout

Definition at line 36 of file ui_gradientdialog.h.

Referenced by setupUi().

12.90.3.3 QGridLayout* Ui_GradientDialog::gridLayout_2

Definition at line 42 of file ui_gradientdialog.h.

Referenced by setupUi().

12.90.3.4 QGridLayout* Ui_GradientDialog::gridLayout_3

Definition at line 54 of file ui_gradientdialog.h.

Referenced by setupUi().

12.90.3.5 QGroupBox* Ui_GradientDialog::groupBox_2

Definition at line 53 of file ui_gradientdialog.h.

Referenced by retranslateUi(), and setupUi().

12.90.3.6 QHBoxLayout* Ui_GradientDialog::horizontalLayout

Definition at line 48 of file ui_gradientdialog.h.

Referenced by setupUi().

12.90.3.7 QHBoxLayout* Ui_GradientDialog::horizontalLayout_2

Definition at line 43 of file ui_gradientdialog.h.

Referenced by setupUi().

12.90.3.8 QSpacerItem* Ui_GradientDialog::horizontalSpacer

Definition at line 50 of file ui_gradientdialog.h.

Referenced by setupUi().

12.90.3.9 QSpacerItem* Ui_GradientDialog::horizontalSpacer_2

Definition at line 46 of file ui_gradientdialog.h.

Referenced by setupUi().

12.90.3.10 QSpacerItem* Ui_GradientDialog::horizontalSpacer_3

Definition at line 52 of file ui_gradientdialog.h.

Referenced by setupUi().

12.90.3.11 QLabel* Ui_GradientDialog::label

Definition at line 47 of file ui_gradientdialog.h.

Referenced by retranslateUi(), and setupUi().

12.90.3.12 QLabel* Ui_GradientDialog::label_2

Definition at line 51 of file ui_gradientdialog.h.

Referenced by retranslateUi(), and setupUi().

12.90.3.13 QPushButton* Ui_GradientDialog::presetDelete

Definition at line 58 of file ui_gradientdialog.h.

Referenced by GradientDialog::getGradient(), GradientDialog::on_presetDelete_clicked(), GradientDialog::on_presetSave_clicked(), retranslateUi(), GradientDialog::setPreset(), and setupUi().

12.90.3.14 QListWidget* Ui_GradientDialog::presetList

Definition at line 55 of file ui_gradientdialog.h.

Referenced by GradientDialog::setPreset(), setupUi(), and GradientDialog::updatePresets().

12.90.3.15 QLineEdit* Ui_GradientDialog::presetName

Definition at line 56 of file ui_gradientdialog.h.

Referenced by GradientDialog::on_presetSave_clicked(), retranslateUi(), GradientDialog::setPreset(), and setupUi().

12.90.3.16 QPushButton* Ui_GradientDialog::presetSave

Definition at line 57 of file ui_gradientdialog.h.

Referenced by GradientDialog::getGradient(), GradientDialog::on_presetDelete_clicked(), GradientDialog::on_presetSave_clicked(), retranslateUi(), GradientDialog::setPreset(), and setupUi().

12.90.3.17 QGroupBox* Ui_GradientDialog::stopBox

Definition at line 41 of file ui_gradientdialog.h.

Referenced by GradientDialog::currentChanged(), retranslateUi(), and setupUi().

12.90.3.18 ColorButton* Ui_GradientDialog::stopColor

Definition at line 44 of file ui_gradientdialog.h.

Referenced by GradientDialog::currentChanged(), GradientDialog::GradientDialog(), GradientDialog::on_stopOpacity_valueChanged(), retranslateUi(), and setupUi().

12.90.3.19 QSpinBox* Ui_GradientDialog::stopOpacity

Definition at line 45 of file ui_gradientdialog.h.

Referenced by GradientDialog::colorChanged(), GradientDialog::currentChanged(), retranslateUi(), and setupUi().

12.90.3.20 QSpinBox* Ui_GradientDialog::stopPos

Definition at line 49 of file ui_gradientdialog.h.

Referenced by GradientDialog::currentChanged(), GradientDialog::on_stopPos_valueChanged(), retranslateUi(), and setupUi().

12.90.3.21 QSpacerItem* Ui_GradientDialog::verticalSpacer

Definition at line 37 of file ui_gradientdialog.h.

Referenced by setupUi().

12.90.3.22 QSpacerItem* Ui_GradientDialog::verticalSpacer_2

Definition at line 38 of file ui_gradientdialog.h.

Referenced by setupUi().

12.90.3.23 GradientDialogWidget* Ui_GradientDialog::widget

Definition at line 39 of file ui_gradientdialog.h.

Referenced by GradientDialog::colorChanged(), GradientDialog::currentChanged(), GradientDialog::getGradient(), GradientDialog::GradientDialog(), GradientDialog::on_presetSave_clicked(), GradientDialog::on_stopPos_valueChanged(), GradientDialog::setPreset(), and setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_gradientdialog.h

12.91 Ui_KbAnimWidget Class Reference

```
#include <src/ckb/ui_kbanimwidget.h>
```

Inheritance diagram for Ui_KbAnimWidget:

Collaboration diagram for Ui_KbAnimWidget:

Public Member Functions

- void setupUi (QWidget ∗KbAnimWidget)
- void retranslateUi (QWidget ∗KbAnimWidget)

Data Fields

- QGridLayout ∗ gridLayout
- QStackedWidget ∗ selectionStack
- QWidget ∗ noSelPage
- QGridLayout ∗ gridLayout_2
- QLabel ∗ noAnimLabel
- QSpacerItem ∗ verticalSpacer
- QWidget ∗ animPage
- QVBoxLayout ∗ verticalLayout
- QHBoxLayout ∗ horizontalLayout
- QLabel ∗ aNameLabel
- QLabel ∗ aVerLabel
- QSpacerItem ∗ horizontalSpacer
- QLabel ∗ aCopyLabel
- QSpacerItem ∗ verticalSpacer_3
- QGridLayout ∗ gridLayout_3
- QLineEdit ∗ nameBox
- QDoubleSpinBox ∗ opacityBox
- QComboBox ∗ blendBox
- QLabel ∗ label_6
- QSpacerItem ∗ horizontalSpacer_4
- QSpacerItem ∗ horizontalSpacer_2
- QLabel ∗ label_5
- QSpacerItem ∗ horizontalSpacer_3
- QLabel ∗ label_7
- QPushButton ∗ keyButton
- QPushButton ∗ deleteButton
- QPushButton ∗ propertyButton
- QSpacerItem ∗ horizontalSpacer_5
- QSpacerItem ∗ verticalSpacer_2
- QWidget ∗ aMissingPage
- QGridLayout ∗ gridLayout_4
- QLabel ∗ aMissingLabel
- RListWidget ∗ animList

12.91.1 Detailed Description

Definition at line 32 of file ui_kbanimwidget.h.

12.91.2 Member Function Documentation

12.91.2.1 void Ui_KbAnimWidget::retranslateUi (QWidget * *KbAnimWidget*) [inline]

Definition at line 241 of file ui_kbanimwidget.h.

References aCopyLabel, aMissingLabel, aNameLabel, aVerLabel, blendBox, deleteButton, keyButton, label_5, label_6, label_7, noAnimLabel, opacityBox, and propertyButton.

Referenced by setupUi().

```
242     {
243         KbAnimWidget->setWindowTitle(QApplication::translate("KbAnimWidget", "Form", Q_NULLPTR));
244         noAnimLabel->setText(QApplication::translate("KbAnimWidget", "No animations in this mode
    ", Q_NULLPTR));
245         aNameLabel->setText(QApplication::translate("KbAnimWidget", "Animation name", Q_NULLPTR))
    ;
246         aVerLabel->setText(QApplication::translate("KbAnimWidget", "v0.0", Q_NULLPTR));
247         aCopyLabel->setText(QApplication::translate("KbAnimWidget", "Copyright \302\251",
    Q_NULLPTR));
248         opacityBox->setSuffix(QApplication::translate("KbAnimWidget", "%", Q_NULLPTR));
249         blendBox->clear();
250         blendBox->insertItems(0, QStringList()
251          << QApplication::translate("KbAnimWidget", "Normal", Q_NULLPTR)
252          << QApplication::translate("KbAnimWidget", "Add", Q_NULLPTR)
253          << QApplication::translate("KbAnimWidget", "Subtract", Q_NULLPTR)
254          << QApplication::translate("KbAnimWidget", "Multiply", Q_NULLPTR)
255          << QApplication::translate("KbAnimWidget", "Divide", Q_NULLPTR)
256         );
257         label_6->setText(QApplication::translate("KbAnimWidget", "Blend mode:", Q_NULLPTR));
258         label_5->setText(QApplication::translate("KbAnimWidget", "Opacity:", Q_NULLPTR));
259         label_7->setText(QApplication::translate("KbAnimWidget", "Name:", Q_NULLPTR));
260         keyButton->setText(QApplication::translate("KbAnimWidget", "Set keys", Q_NULLPTR));
261         deleteButton->setText(QApplication::translate("KbAnimWidget", "Delete animation",
    Q_NULLPTR));
262         propertyButton->setText(QApplication::translate("KbAnimWidget", "Edit properties",
    Q_NULLPTR));
263         aMissingLabel->setText(QApplication::translate("KbAnimWidget", "Mising animation",
    Q_NULLPTR));
264     } // retranslateUi
```

Here is the caller graph for this function:

12.91.2.2 void Ui_KbAnimWidget::setupUi (QWidget * *KbAnimWidget*) [inline]

Definition at line 69 of file ui_kbanimwidget.h.

References aCopyLabel, aMissingLabel, aMissingPage, aNameLabel, animList, animPage, aVerLabel, blendBox, deleteButton, gridLayout, gridLayout_2, gridLayout_3, gridLayout_4, horizontalLayout, horizontalSpacer, horizontalSpacer_2, horizontalSpacer_3, horizontalSpacer_4, horizontalSpacer_5, keyButton, label_5, label_6, label_7, nameBox, noAnimLabel, noSelPage, opacityBox, propertyButton, retranslateUi(), selectionStack, verticalLayout, verticalSpacer, verticalSpacer_2, and verticalSpacer_3.

Referenced by KbAnimWidget::KbAnimWidget().

```
70     {
```

```
        if (KbAnimWidget->objectName().isEmpty())
            KbAnimWidget->setObjectName(QStringLiteral("KbAnimWidget"));
        KbAnimWidget->resize(613, 300);
        gridLayout = new QGridLayout(KbAnimWidget);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        gridLayout->setContentsMargins(0, 0, 0, 0);
        selectionStack = new QStackedWidget(KbAnimWidget);
        selectionStack->setObjectName(QStringLiteral("selectionStack"));
        noSelPage = new QWidget();
        noSelPage->setObjectName(QStringLiteral("noSelPage"));
        gridLayout_2 = new QGridLayout(noSelPage);
        gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
        gridLayout_2->setContentsMargins(6, 6, 6, 6);
        noAnimLabel = new QLabel(noSelPage);
        noAnimLabel->setObjectName(QStringLiteral("noAnimLabel"));

        gridLayout_2->addWidget(noAnimLabel, 0, 0, 1, 1);

        verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout_2->addItem(verticalSpacer, 1, 0, 1, 1);

        selectionStack->addWidget(noSelPage);
        animPage = new QWidget();
        animPage->setObjectName(QStringLiteral("animPage"));
        verticalLayout = new QVBoxLayout(animPage);
        verticalLayout->setObjectName(QStringLiteral("verticalLayout"));
        verticalLayout->setContentsMargins(6, 0, 0, 0);
        horizontalLayout = new QHBoxLayout();
         horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
         aNameLabel = new QLabel(animPage);
         aNameLabel->setObjectName(QStringLiteral("aNameLabel"));
         QFont font;
         font.setBold(true);
         font.setWeight(75);
         aNameLabel->setFont(font);

         horizontalLayout->addWidget(aNameLabel);

         aVerLabel = new QLabel(animPage);
         aVerLabel->setObjectName(QStringLiteral("aVerLabel"));

         horizontalLayout->addWidget(aVerLabel);

         horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

         horizontalLayout->addItem(horizontalSpacer);

         aCopyLabel = new QLabel(animPage);
         aCopyLabel->setObjectName(QStringLiteral("aCopyLabel"));

         horizontalLayout->addWidget(aCopyLabel);


         verticalLayout->addLayout(horizontalLayout);

         verticalSpacer_3 = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

         verticalLayout->addItem(verticalSpacer_3);

         gridLayout_3 = new QGridLayout();
         gridLayout_3->setObjectName(QStringLiteral("gridLayout_3"));
         nameBox = new QLineEdit(animPage);
         nameBox->setObjectName(QStringLiteral("nameBox"));
         QSizePolicy sizePolicy(QSizePolicy::Fixed, QSizePolicy::Fixed);
         sizePolicy.setHorizontalStretch(0);
         sizePolicy.setVerticalStretch(0);
         sizePolicy.setHeightForWidth(nameBox->sizePolicy().hasHeightForWidth());
         nameBox->setSizePolicy(sizePolicy);
         nameBox->setMinimumSize(QSize(150, 0));
         nameBox->setMaximumSize(QSize(150, 16777215));

         gridLayout_3->addWidget(nameBox, 0, 3, 1, 2);

         opacityBox = new QDoubleSpinBox(animPage);
         opacityBox->setObjectName(QStringLiteral("opacityBox"));
         opacityBox->setDecimals(1);
         opacityBox->setValue(100);

         gridLayout_3->addWidget(opacityBox, 1, 3, 1, 1);

         blendBox = new QComboBox(animPage);
         blendBox->setObjectName(QStringLiteral("blendBox"));

```

```
        gridLayout_3->addWidget(blendBox, 2, 3, 1, 2);

        label_6 = new QLabel(animPage);
        label_6->setObjectName(QStringLiteral("label_6"));

        gridLayout_3->addWidget(label_6, 2, 1, 1, 1);

        horizontalSpacer_4 = new QSpacerItem(0, 0, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_4, 0, 0, 1, 1);

        horizontalSpacer_2 = new QSpacerItem(30, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_2, 0, 2, 1, 1);

        label_5 = new QLabel(animPage);
        label_5->setObjectName(QStringLiteral("label_5"));

        gridLayout_3->addWidget(label_5, 1, 1, 1, 1);

        horizontalSpacer_3 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_3, 0, 5, 1, 1);

        label_7 = new QLabel(animPage);
        label_7->setObjectName(QStringLiteral("label_7"));

        gridLayout_3->addWidget(label_7, 0, 1, 1, 1);

        keyButton = new QPushButton(animPage);
        keyButton->setObjectName(QStringLiteral("keyButton"));

        gridLayout_3->addWidget(keyButton, 1, 6, 1, 1);

        deleteButton = new QPushButton(animPage);
        deleteButton->setObjectName(QStringLiteral("deleteButton"));

        gridLayout_3->addWidget(deleteButton, 2, 6, 1, 1);

        propertyButton = new QPushButton(animPage);
        propertyButton->setObjectName(QStringLiteral("propertyButton"));

        gridLayout_3->addWidget(propertyButton, 0, 6, 1, 1);

        horizontalSpacer_5 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_5, 1, 4, 1, 1);


        verticalLayout->addLayout(gridLayout_3);

        verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        verticalLayout->addItem(verticalSpacer_2);

        selectionStack->addWidget(animPage);
        aMissingPage = new QWidget();
        aMissingPage->setObjectName(QStringLiteral("aMissingPage"));
        gridLayout_4 = new QGridLayout(aMissingPage);
        gridLayout_4->setObjectName(QStringLiteral("gridLayout_4"));
        aMissingLabel = new QLabel(aMissingPage);
        aMissingLabel->setObjectName(QStringLiteral("aMissingLabel"));
        aMissingLabel->setFont(font);

        gridLayout_4->addWidget(aMissingLabel, 0, 0, 1, 1);

        selectionStack->addWidget(aMissingPage);

        gridLayout->addWidget(selectionStack, 0, 2, 2, 1);

        animList = new RListWidget(KbAnimWidget);
        animList->setObjectName(QStringLiteral("animList"));
        animList->setMaximumSize(QSize(130, 16777215));
        animList->setContextMenuPolicy(Qt::CustomContextMenu);
        animList->setFrameShadow(QFrame::Plain);
        animList->setDragDropMode(QAbstractItemView::InternalMove);
        animList->setMovement(QListView::Snap);

        gridLayout->addWidget(animList, 0, 0, 2, 1);


        retranslateUi(KbAnimWidget);
```

```

        QMetaObject::connectSlotsByName(KbAnimWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.91.3 Field Documentation

12.91.3.1 QLabel* Ui_KbAnimWidget::aCopyLabel

Definition at line 47 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), KbAnimWidget::setCurrent(), and setupUi().

12.91.3.2 QLabel* Ui_KbAnimWidget::aMissingLabel

Definition at line 66 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), KbAnimWidget::setCurrent(), and setupUi().

12.91.3.3 QWidget* Ui_KbAnimWidget::aMissingPage

Definition at line 64 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.4 QLabel* Ui_KbAnimWidget::aNameLabel

Definition at line 44 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), KbAnimWidget::setCurrent(), and setupUi().

12.91.3.5 RListWidget* Ui_KbAnimWidget::animList

Definition at line 67 of file ui_kbanimwidget.h.

Referenced by KbAnimWidget::addAnim(), KbAnimWidget::clearSelection(), KbAnimWidget::duplicateAnim(), KbAnimWidget::KbAnimWidget(), KbAnimWidget::on_animList_customContextMenuRequested(), KbAnimWidget::on_deleteButton_clicked(), KbAnimWidget::on_nameBox_textEdited(), KbAnimWidget::refreshList(), KbAnimWidget::reorderAnims(), and setupUi().

12.91.3.6 QWidget* Ui_KbAnimWidget::animPage

Definition at line 41 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.7 QLabel* Ui_KbAnimWidget::aVerLabel

Definition at line 45 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), KbAnimWidget::setCurrent(), and setupUi().

12.91.3.8 QComboBox* Ui_KbAnimWidget::blendBox

Definition at line 52 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), KbAnimWidget::setCurrent(), and setupUi().

12.91.3.9 QPushButton* Ui_KbAnimWidget::deleteButton

Definition at line 60 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), and setupUi().

12.91.3.10 QGridLayout* Ui_KbAnimWidget::gridLayout

Definition at line 35 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.11 QGridLayout* Ui_KbAnimWidget::gridLayout_2

Definition at line 38 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.12 QGridLayout* Ui_KbAnimWidget::gridLayout_3

Definition at line 49 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.13 QGridLayout* Ui_KbAnimWidget::gridLayout_4

Definition at line 65 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.14 QHBoxLayout* Ui_KbAnimWidget::horizontalLayout

Definition at line 43 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.15 QSpacerItem* Ui_KbAnimWidget::horizontalSpacer

Definition at line 46 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.16 QSpacerItem* Ui_KbAnimWidget::horizontalSpacer_2

Definition at line 55 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.17 QSpacerItem* Ui_KbAnimWidget::horizontalSpacer_3

Definition at line 57 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.18 QSpacerItem* Ui_KbAnimWidget::horizontalSpacer_4

Definition at line 54 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.19 QSpacerItem* Ui_KbAnimWidget::horizontalSpacer_5

Definition at line 62 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.20 QPushButton* Ui_KbAnimWidget::keyButton

Definition at line 59 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), KbAnimWidget::setSelectedKeys(), and setupUi().

12.91.3.21 QLabel* Ui_KbAnimWidget::label_5

Definition at line 56 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), and setupUi().

12.91.3.22 QLabel* Ui_KbAnimWidget::label_6

Definition at line 53 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), and setupUi().

12.91.3.23 QLabel* Ui_KbAnimWidget::label_7

Definition at line 58 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), and setupUi().

12.91.3.24 QLineEdit* Ui_KbAnimWidget::nameBox

Definition at line 50 of file ui_kbanimwidget.h.

Referenced by KbAnimWidget::on_animList_itemChanged(), KbAnimWidget::on_propertyButton_clicked(), KbAnimWidget::setCurrent(), and setupUi().

12.91.3.25 QLabel* Ui_KbAnimWidget::noAnimLabel

Definition at line 39 of file ui_kbanimwidget.h.

Referenced by KbAnimWidget::addAnim(), KbAnimWidget::duplicateAnim(), KbAnimWidget::on_deleteButton_clicked(), KbAnimWidget::refreshList(), retranslateUi(), and setupUi().

12.91.3.26 QWidget* Ui_KbAnimWidget::noSelPage

Definition at line 37 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.27 QDoubleSpinBox* Ui_KbAnimWidget::opacityBox

Definition at line 51 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), KbAnimWidget::setCurrent(), and setupUi().

12.91.3.28 QPushButton* Ui_KbAnimWidget::propertyButton

Definition at line 61 of file ui_kbanimwidget.h.

Referenced by retranslateUi(), and setupUi().

12.91.3.29 QStackedWidget* Ui_KbAnimWidget::selectionStack

Definition at line 36 of file ui_kbanimwidget.h.

Referenced by KbAnimWidget::setCurrent(), and setupUi().

12.91.3.30 QVBoxLayout* Ui_KbAnimWidget::verticalLayout

Definition at line 42 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.31 QSpacerItem* Ui_KbAnimWidget::verticalSpacer

Definition at line 40 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.32 QSpacerItem* Ui_KbAnimWidget::verticalSpacer_2

Definition at line 63 of file ui_kbanimwidget.h.

Referenced by setupUi().

12.91.3.33 QSpacerItem* Ui_KbAnimWidget::verticalSpacer_3

Definition at line 48 of file ui_kbanimwidget.h.

Referenced by setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kbanimwidget.h

12.92 Ui_KbBindWidget Class Reference

```
#include <src/ckb/ui_kbbindwidget.h>
```

Inheritance diagram for Ui_KbBindWidget:

Collaboration diagram for Ui_KbBindWidget:

Public Member Functions

- void setupUi (QWidget *KbBindWidget)
- void retranslateUi (QWidget *KbBindWidget)

Data Fields

- QVBoxLayout * verticalLayout
- QLabel * label
- QFrame * line
- QGridLayout * gridLayout
- QSpacerItem * horizontalSpacer_2
- KeyWidget * keyWidget
- QSpacerItem * horizontalSpacer
- QHBoxLayout * horizontalLayout_2
- QPushButton * copyButton
- QLabel * selectLabel
- QPushButton * resetButton
- QSpacerItem * verticalSpacer
- QLabel * label_2
- QFrame * line_2
- QWidget * widget
- QGridLayout * gridLayout_2
- RebindWidget * rbWidget

12.92.1 Detailed Description

Definition at line 30 of file ui_kbbindwidget.h.

12.92.2 Member Function Documentation

12.92.2.1 void Ui_KbBindWidget::retranslateUi (QWidget * *KbBindWidget*) [inline]

Definition at line 193 of file ui_kbbindwidget.h.

References copyButton, label, label_2, resetButton, and selectLabel.

Referenced by setupUi().

```
194     {
195         KbBindWidget->setWindowTitle(QApplication::translate("KbBindWidget", "Form", Q_NULLPTR));
196         label->setText(QApplication::translate("KbBindWidget", "Keys", Q_NULLPTR));
197         copyButton->setText(QApplication::translate("KbBindWidget", "Copy to mode...", Q_NULLPTR)
    );
198         selectLabel->setText(QApplication::translate("KbBindWidget", "Click to select keys",
    Q_NULLPTR));
199         resetButton->setText(QApplication::translate("KbBindWidget", "Reset", Q_NULLPTR));
200         label_2->setText(QApplication::translate("KbBindWidget", "Binding", Q_NULLPTR));
201     } // retranslateUi
```

Here is the caller graph for this function:

12.92.2.2 void Ui_KbBindWidget::setupUi (QWidget * *KbBindWidget*) [inline]

Definition at line 51 of file ui_kbbindwidget.h.

References copyButton, gridLayout, gridLayout_2, horizontalLayout_2, horizontalSpacer, horizontalSpacer_2, keyWidget, label, label_2, line, line_2, rbWidget, resetButton, retranslateUi(), selectLabel, verticalLayout, verticalSpacer, and widget.

Referenced by KbBindWidget::KbBindWidget().

```
52     {
53         if (KbBindWidget->objectName().isEmpty())
54             KbBindWidget->setObjectName(QStringLiteral("KbBindWidget"));
55         KbBindWidget->resize(581, 473);
56         verticalLayout = new QVBoxLayout(KbBindWidget);
57         verticalLayout->setObjectName(QStringLiteral("verticalLayout"));
58         verticalLayout->setContentsMargins(0, 0, 0, -1);
59         label = new QLabel(KbBindWidget);
60         label->setObjectName(QStringLiteral("label"));
61         QFont font;
62         font.setBold(true);
63         font.setWeight(75);
64         label->setFont(font);
65
66         verticalLayout->addWidget(label);
67
68         line = new QFrame(KbBindWidget);
69         line->setObjectName(QStringLiteral("line"));
70         line->setFrameShape(QFrame::HLine);
71         line->setFrameShadow(QFrame::Sunken);
72
73         verticalLayout->addWidget(line);
74
75         gridLayout = new QGridLayout();
76         gridLayout->setObjectName(QStringLiteral("gridLayout"));
77         horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
78
79         gridLayout->addItem(horizontalSpacer_2, 0, 4, 1, 1);
80
81         keyWidget = new KeyWidget(KbBindWidget);
82         keyWidget->setObjectName(QStringLiteral("keyWidget"));
```

```
        QSizePolicy sizePolicy(QSizePolicy::Preferred, QSizePolicy::Preferred);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(keyWidget->sizePolicy().hasHeightForWidth());
        keyWidget->setSizePolicy(sizePolicy);

        gridLayout->addWidget(keyWidget, 0, 1, 1, 3);

        horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer, 0, 0, 1, 1);

        horizontalLayout_2 = new QHBoxLayout();
        horizontalLayout_2->setSpacing(0);
        horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
        copyButton = new QPushButton(KbBindWidget);
        copyButton->setObjectName(QStringLiteral("copyButton"));
         QSizePolicy sizePolicy1(QSizePolicy::Fixed, QSizePolicy::Fixed);
         sizePolicy1.setHorizontalStretch(0);
         sizePolicy1.setVerticalStretch(0);
         sizePolicy1.setHeightForWidth(copyButton->sizePolicy().hasHeightForWidth());
         copyButton->setSizePolicy(sizePolicy1);
         copyButton->setMinimumSize(QSize(140, 0));
         copyButton->setMaximumSize(QSize(140, 16777215));

         horizontalLayout_2->addWidget(copyButton);

         selectLabel = new QLabel(KbBindWidget);
         selectLabel->setObjectName(QStringLiteral("selectLabel"));
         QSizePolicy sizePolicy2(QSizePolicy::Expanding, QSizePolicy::Preferred);
         sizePolicy2.setHorizontalStretch(0);
         sizePolicy2.setVerticalStretch(0);
         sizePolicy2.setHeightForWidth(selectLabel->sizePolicy().hasHeightForWidth());
         selectLabel->setSizePolicy(sizePolicy2);
         selectLabel->setAlignment(Qt::AlignCenter);

         horizontalLayout_2->addWidget(selectLabel);

         resetButton = new QPushButton(KbBindWidget);
         resetButton->setObjectName(QStringLiteral("resetButton"));
         QSizePolicy sizePolicy3(QSizePolicy::Expanding, QSizePolicy::Fixed);
         sizePolicy3.setHorizontalStretch(0);
         sizePolicy3.setVerticalStretch(0);
         sizePolicy3.setHeightForWidth(resetButton->sizePolicy().hasHeightForWidth());
         resetButton->setSizePolicy(sizePolicy3);
         resetButton->setMinimumSize(QSize(140, 0));
         resetButton->setMaximumSize(QSize(140, 16777215));

         horizontalLayout_2->addWidget(resetButton);


         gridLayout->addLayout(horizontalLayout_2, 1, 1, 1, 3);


         verticalLayout->addLayout(gridLayout);

         verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

         verticalLayout->addItem(verticalSpacer);

         label_2 = new QLabel(KbBindWidget);
         label_2->setObjectName(QStringLiteral("label_2"));
         label_2->setFont(font);

         verticalLayout->addWidget(label_2);

         line_2 = new QFrame(KbBindWidget);
         line_2->setObjectName(QStringLiteral("line_2"));
         line_2->setFrameShape(QFrame::HLine);
         line_2->setFrameShadow(QFrame::Sunken);

         verticalLayout->addWidget(line_2);

         widget = new QWidget(KbBindWidget);
         widget->setObjectName(QStringLiteral("widget"));
         QSizePolicy sizePolicy4(QSizePolicy::Preferred, QSizePolicy::Fixed);
         sizePolicy4.setHorizontalStretch(0);
         sizePolicy4.setVerticalStretch(0);
         sizePolicy4.setHeightForWidth(widget->sizePolicy().hasHeightForWidth());
         widget->setSizePolicy(sizePolicy4);
         widget->setMinimumSize(QSize(0, 280));
         widget->setMaximumSize(QSize(16777215, 280));
         gridLayout_2 = new QGridLayout(widget);
         gridLayout_2->setSpacing(0);
         gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
```

```
        gridLayout_2->setContentsMargins(0, 0, 0, 0);
        rbWidget = new RebindWidget(widget);
        rbWidget->setObjectName(QStringLiteral("rbWidget"));
        QSizePolicy sizePolicy5(QSizePolicy::Expanding, QSizePolicy::Expanding);
        sizePolicy5.setHorizontalStretch(0);
        sizePolicy5.setVerticalStretch(0);
        sizePolicy5.setHeightForWidth(rbWidget->sizePolicy().hasHeightForWidth());
        rbWidget->setSizePolicy(sizePolicy5);

        gridLayout_2->addWidget(rbWidget, 0, 0, 1, 1);


        verticalLayout->addWidget(widget);

        label->raise();
        line->raise();
        label_2->raise();
        line_2->raise();
        widget->raise();

        retranslateUi(KbBindWidget);

        QMetaObject::connectSlotsByName(KbBindWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.92.3 Field Documentation

12.92.3.1 QPushButton* Ui_KbBindWidget::copyButton

Definition at line 41 of file ui_kbbindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.92.3.2 QGridLayout* Ui_KbBindWidget::gridLayout

Definition at line 36 of file ui_kbbindwidget.h.

Referenced by setupUi().

12.92.3.3 QGridLayout* Ui_KbBindWidget::gridLayout_2

Definition at line 48 of file ui_kbbindwidget.h.

Referenced by setupUi().

12.92.3.4 QHBoxLayout* Ui_KbBindWidget::horizontalLayout_2

Definition at line 40 of file ui_kbbindwidget.h.

Referenced by setupUi().

12.92.3.5 QSpacerItem* Ui_KbBindWidget::horizontalSpacer

Definition at line 39 of file ui_kbbindwidget.h.

Referenced by setupUi().

12.92.3.6 QSpacerItem* Ui_KbBindWidget::horizontalSpacer_2

Definition at line 37 of file ui_kbbindwidget.h.

Referenced by setupUi().

12.92.3.7 KeyWidget* Ui_KbBindWidget::keyWidget

Definition at line 38 of file ui_kbbindwidget.h.

Referenced by KbBindWidget::KbBindWidget(), KbBindWidget::newLayout(), KbBindWidget::setBind(), setupUi(), and KbBindWidget::updateBind().

12.92.3.8 QLabel* Ui_KbBindWidget::label

Definition at line 34 of file ui_kbbindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.92.3.9 QLabel* Ui_KbBindWidget::label_2

Definition at line 45 of file ui_kbbindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.92.3.10 QFrame* Ui_KbBindWidget::line

Definition at line 35 of file ui_kbbindwidget.h.

Referenced by setupUi().

12.92.3.11 QFrame* Ui_KbBindWidget::line_2

Definition at line 46 of file ui_kbbindwidget.h.

Referenced by setupUi().

12.92.3.12 RebindWidget* Ui_KbBindWidget::rbWidget

Definition at line 49 of file ui_kbbindwidget.h.

Referenced by KbBindWidget::newLayout(), KbBindWidget::newSelection(), KbBindWidget::setBind(), setupUi(), and KbBindWidget::updateBind().

12.92.3.13 QPushButton* Ui_KbBindWidget::resetButton

Definition at line 43 of file ui_kbbindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.92.3.14 QLabel* Ui_KbBindWidget::selectLabel

Definition at line 42 of file ui_kbbindwidget.h.

Referenced by retranslateUi(), setupUi(), and KbBindWidget::updateSelDisplay().

12.92.3.15 QVBoxLayout* Ui_KbBindWidget::verticalLayout

Definition at line 33 of file ui_kbbindwidget.h.

Referenced by setupUi().

12.92.3.16 QSpacerItem* Ui_KbBindWidget::verticalSpacer

Definition at line 44 of file ui_kbbindwidget.h.

Referenced by setupUi().

12.92.3.17 QWidget* Ui_KbBindWidget::widget

Definition at line 47 of file ui_kbbindwidget.h.

Referenced by setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kbbindwidget.h

12.93 Ui_KbLightWidget Class Reference

```
#include <src/ckb/ui_kblightwidget.h>
```

Inheritance diagram for Ui_KbLightWidget:

Collaboration diagram for Ui_KbLightWidget:

Public Member Functions

- void setupUi (QWidget *KbLightWidget)
- void retranslateUi (QWidget *KbLightWidget)

Data Fields

- QVBoxLayout * verticalLayout
- QHBoxLayout * horizontalLayout_3
- QLabel * label_3
- QCheckBox * showAnimBox
- QFrame * line_2
- QHBoxLayout * horizontalLayout_2
- QSpacerItem * horizontalSpacer_5
- QGridLayout * gridLayout
- KeyWidget * keyWidget
- QHBoxLayout * horizontalLayout
- ColorButton * bgButton
- QLabel * selLabel
- QPushButton * animButton
- QSpacerItem * horizontalSpacer_6
- QSpacerItem * verticalSpacer_2
- QGridLayout * gridLayout_2
- QComboBox * brightnessBox
- QLabel * label
- QSpacerItem * horizontalSpacer_3
- QSpacerItem * horizontalSpacer_4
- QSpacerItem * verticalSpacer_3
- QLabel * label_2
- QFrame * line
- QWidget * widget
- QGridLayout * gridLayout_4
- KbAnimWidget * animWidget

12.93.1 Detailed Description

Definition at line 33 of file ui_kblightwidget.h.

12.93.2 Member Function Documentation

12.93.2.1 void Ui_KbLightWidget::retranslateUi (QWidget * *KbLightWidget*) [inline]

Definition at line 238 of file ui_kblightwidget.h.

References animButton, bgButton, brightnessBox, label, label_2, label_3, selLabel, and showAnimBox.

Referenced by setupUi().

```
    {
        KbLightWidget->setWindowTitle(QApplication::translate("KbLightWidget", "Form", Q_NULLPTR));
        label_3->setText(QApplication::translate("KbLightWidget", "Colors", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        showAnimBox->setToolTip(QApplication::translate("KbLightWidget", "If enabled, the same colors will be displayed here as on the keyboard. If disabled, the base colors will be shown.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        showAnimBox->setText(QApplication::translate("KbLightWidget", "Show animated", Q_NULLPTR));
        bgButton->setText(QApplication::translate("KbLightWidget", "Change color...", Q_NULLPTR));
        selLabel->setText(QApplication::translate("KbLightWidget", "Click to select", Q_NULLPTR));
        animButton->setText(QApplication::translate("KbLightWidget", "New animation...", Q_NULLPTR));
        brightnessBox->clear();
        brightnessBox->insertItems(0, QStringList()
         << QApplication::translate("KbLightWidget", "100%", Q_NULLPTR)
         << QApplication::translate("KbLightWidget", "67%", Q_NULLPTR)
         << QApplication::translate("KbLightWidget", "33%", Q_NULLPTR)
         << QApplication::translate("KbLightWidget", "Off", Q_NULLPTR)
```

```
        );
        label->setText(QApplication::translate("KbLightWidget", "\342\230\274", Q_NULLPTR));
        label_2->setText(QApplication::translate("KbLightWidget", "Animations", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.93.2.2 void Ui_KbLightWidget::setupUi (QWidget * *KbLightWidget*) [inline]

Definition at line 63 of file ui_kblightwidget.h.

References animButton, animWidget, bgButton, brightnessBox, gridLayout, gridLayout_2, gridLayout_4, horizontalLayout, horizontalLayout_2, horizontalLayout_3, horizontalSpacer_3, horizontalSpacer_4, horizontalSpacer_5, horizontalSpacer_6, keyWidget, label, label_2, label_3, line, line_2, retranslateUi(), selLabel, showAnimBox, verticalLayout, verticalSpacer_2, verticalSpacer_3, and widget.

Referenced by KbLightWidget::KbLightWidget().

```
    {
        if (KbLightWidget->objectName().isEmpty())
            KbLightWidget->setObjectName(QStringLiteral("KbLightWidget"));
        KbLightWidget->resize(632, 540);
        KbLightWidget->setFocusPolicy(Qt::ClickFocus);
        verticalLayout = new QVBoxLayout(KbLightWidget);
        verticalLayout->setObjectName(QStringLiteral("verticalLayout"));
        verticalLayout->setContentsMargins(0, 0, 0, -1);
        horizontalLayout_3 = new QHBoxLayout();
        horizontalLayout_3->setObjectName(QStringLiteral("horizontalLayout_3"));
        label_3 = new QLabel(KbLightWidget);
        label_3->setObjectName(QStringLiteral("label_3"));
        QSizePolicy sizePolicy(QSizePolicy::Expanding, QSizePolicy::Preferred);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(label_3->sizePolicy().hasHeightForWidth());
        label_3->setSizePolicy(sizePolicy);
        QFont font;
        font.setBold(true);
        font.setWeight(75);
        label_3->setFont(font);

        horizontalLayout_3->addWidget(label_3);

        showAnimBox = new QCheckBox(KbLightWidget);
        showAnimBox->setObjectName(QStringLiteral("showAnimBox"));
        showAnimBox->setChecked(true);

        horizontalLayout_3->addWidget(showAnimBox);


        verticalLayout->addLayout(horizontalLayout_3);

        line_2 = new QFrame(KbLightWidget);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
         line_2->setFrameShadow(QFrame::Sunken);

         verticalLayout->addWidget(line_2);

         horizontalLayout_2 = new QHBoxLayout();
         horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
         horizontalSpacer_5 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
QSizePolicy::Minimum);

         horizontalLayout_2->addItem(horizontalSpacer_5);

         gridLayout = new QGridLayout();
         gridLayout->setObjectName(QStringLiteral("gridLayout"));
         keyWidget = new KeyWidget(KbLightWidget);
```

```
        keyWidget->setObjectName(QStringLiteral("keyWidget"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Expanding);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(keyWidget->sizePolicy().hasHeightForWidth());
        keyWidget->setSizePolicy(sizePolicy1);
        keyWidget->setMinimumSize(QSize(100, 100));
        keyWidget->setFocusPolicy(Qt::ClickFocus);

        gridLayout->addWidget(keyWidget, 0, 0, 1, 3);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        bgButton = new ColorButton(KbLightWidget);
        bgButton->setObjectName(QStringLiteral("bgButton"));
        QSizePolicy sizePolicy2(QSizePolicy::Fixed, QSizePolicy::Fixed);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(0);
        sizePolicy2.setHeightForWidth(bgButton->sizePolicy().hasHeightForWidth());
        bgButton->setSizePolicy(sizePolicy2);
        bgButton->setMinimumSize(QSize(140, 0));
        bgButton->setMaximumSize(QSize(140, 16777215));

        horizontalLayout->addWidget(bgButton);

        selLabel = new QLabel(KbLightWidget);
        selLabel->setObjectName(QStringLiteral("selLabel"));
        sizePolicy.setHeightForWidth(selLabel->sizePolicy().hasHeightForWidth());
        selLabel->setSizePolicy(sizePolicy);
        selLabel->setAlignment(Qt::AlignCenter);

        horizontalLayout->addWidget(selLabel);

        animButton = new QPushButton(KbLightWidget);
        animButton->setObjectName(QStringLiteral("animButton"));
        sizePolicy2.setHeightForWidth(animButton->sizePolicy().hasHeightForWidth());
        animButton->setSizePolicy(sizePolicy2);
        animButton->setMinimumSize(QSize(140, 0));
        animButton->setMaximumSize(QSize(140, 16777215));

        horizontalLayout->addWidget(animButton);


        gridLayout->addLayout(horizontalLayout, 1, 0, 1, 3);


        horizontalLayout_2->addLayout(gridLayout);

        horizontalSpacer_6 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer_6);


        verticalLayout->addLayout(horizontalLayout_2);

        verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
QSizePolicy::Expanding);

        verticalLayout->addItem(verticalSpacer_2);

        gridLayout_2 = new QGridLayout();
        gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
        brightnessBox = new QComboBox(KbLightWidget);
        brightnessBox->setObjectName(QStringLiteral("brightnessBox"));
        sizePolicy2.setHeightForWidth(brightnessBox->sizePolicy().hasHeightForWidth());
        brightnessBox->setSizePolicy(sizePolicy2);

        gridLayout_2->addWidget(brightnessBox, 1, 3, 1, 1);

        label = new QLabel(KbLightWidget);
        label->setObjectName(QStringLiteral("label"));
        QFont font1;
        font1.setPointSize(20);
        label->setFont(font1);
        label->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_2->addWidget(label, 1, 2, 1, 1);

        horizontalSpacer_3 = new QSpacerItem(0, 0, QSizePolicy::Expanding,
QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_3, 0, 4, 1, 1);

        horizontalSpacer_4 = new QSpacerItem(0, 0, QSizePolicy::Expanding,
QSizePolicy::Minimum);

```

```
        gridLayout_2->addItem(horizontalSpacer_4, 0, 2, 1, 1);


        verticalLayout->addLayout(gridLayout_2);

        verticalSpacer_3 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
    QSizePolicy::Expanding);

        verticalLayout->addItem(verticalSpacer_3);

        label_2 = new QLabel(KbLightWidget);
        label_2->setObjectName(QStringLiteral("label_2"));
        label_2->setFont(font);

        verticalLayout->addWidget(label_2);

        line = new QFrame(KbLightWidget);
        line->setObjectName(QStringLiteral("line"));
        line->setFrameShape(QFrame::HLine);
        line->setFrameShadow(QFrame::Sunken);

        verticalLayout->addWidget(line);

        widget = new QWidget(KbLightWidget);
        widget->setObjectName(QStringLiteral("widget"));
        widget->setMinimumSize(QSize(0, 170));
        gridLayout_4 = new QGridLayout(widget);
        gridLayout_4->setObjectName(QStringLiteral("gridLayout_4"));
        gridLayout_4->setContentsMargins(-1, 0, -1, 0);
        animWidget = new KbAnimWidget(widget);
        animWidget->setObjectName(QStringLiteral("animWidget"));

        gridLayout_4->addWidget(animWidget, 0, 0, 1, 1);


        verticalLayout->addWidget(widget);


        retranslateUi(KbLightWidget);

        QMetaObject::connectSlotsByName(KbLightWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.93.3 Field Documentation

12.93.3.1 QPushButton* Ui_KbLightWidget::animButton

Definition at line 48 of file ui_kblightwidget.h.

Referenced by KbLightWidget::KbLightWidget(), retranslateUi(), and setupUi().

12.93.3.2 KbAnimWidget* Ui_KbLightWidget::animWidget

Definition at line 61 of file ui_kblightwidget.h.

Referenced by KbLightWidget::KbLightWidget(), KbLightWidget::newSelection(), KbLightWidget::on_animButton_clicked(), KbLightWidget::setLight(), and setupUi().

12.93.3.3 ColorButton* Ui_KbLightWidget::bgButton

Definition at line 46 of file ui_kblightwidget.h.

Referenced by KbLightWidget::KbLightWidget(), KbLightWidget::newSelection(), retranslateUi(), and setupUi().

12.93.3.4 QComboBox* Ui_KbLightWidget::brightnessBox

Definition at line 52 of file ui_kblightwidget.h.

Referenced by retranslateUi(), setupUi(), and KbLightWidget::updateLight().

12.93.3.5 QGridLayout* Ui_KbLightWidget::gridLayout

Definition at line 43 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.6 QGridLayout* Ui_KbLightWidget::gridLayout_2

Definition at line 51 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.7 QGridLayout* Ui_KbLightWidget::gridLayout_4

Definition at line 60 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.8 QHBoxLayout* Ui_KbLightWidget::horizontalLayout

Definition at line 45 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.9 QHBoxLayout* Ui_KbLightWidget::horizontalLayout_2

Definition at line 41 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.10 QHBoxLayout* Ui_KbLightWidget::horizontalLayout_3

Definition at line 37 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.11 QSpacerItem* Ui_KbLightWidget::horizontalSpacer_3

Definition at line 54 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.12 QSpacerItem* Ui_KbLightWidget::horizontalSpacer_4

Definition at line 55 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.13 QSpacerItem* Ui_KbLightWidget::horizontalSpacer_5

Definition at line 42 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.14 QSpacerItem* Ui_KbLightWidget::horizontalSpacer_6

Definition at line 49 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.15 KeyWidget* Ui_KbLightWidget::keyWidget

Definition at line 44 of file ui_kblightwidget.h.

Referenced by KbLightWidget::changeAnim(), KbLightWidget::changeAnimKeys(), KbLightWidget::changeColor(), KbLightWidget::KbLightWidget(), KbLightWidget::on_animButton_clicked(), KbLightWidget::on_bgButton_clicked(), KbLightWidget::on_showAnimBox_clicked(), KbLightWidget::setLight(), KbLightWidget::setMonochrome(), setupUi(), KbLightWidget::toggleSidelight(), and KbLightWidget::updateLight().

12.93.3.16 QLabel* Ui_KbLightWidget::label

Definition at line 53 of file ui_kblightwidget.h.

Referenced by retranslateUi(), and setupUi().

12.93.3.17 QLabel* Ui_KbLightWidget::label_2

Definition at line 57 of file ui_kblightwidget.h.

Referenced by retranslateUi(), and setupUi().

12.93.3.18 QLabel* Ui_KbLightWidget::label_3

Definition at line 38 of file ui_kblightwidget.h.

Referenced by retranslateUi(), and setupUi().

12.93.3.19 QFrame* Ui_KbLightWidget::line

Definition at line 58 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.20 QFrame* Ui_KbLightWidget::line_2

Definition at line 40 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.21 QLabel* Ui_KbLightWidget::selLabel

Definition at line 47 of file ui_kblightwidget.h.

Referenced by KbLightWidget::newSelection(), retranslateUi(), and setupUi().

12.93.3.22 QCheckBox* Ui_KbLightWidget::showAnimBox

Definition at line 39 of file ui_kblightwidget.h.

Referenced by KbLightWidget::KbLightWidget(), retranslateUi(), KbLightWidget::setLight(), and setupUi().

12.93.3.23 QVBoxLayout* Ui_KbLightWidget::verticalLayout

Definition at line 36 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.24 QSpacerItem* Ui_KbLightWidget::verticalSpacer_2

Definition at line 50 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.25 QSpacerItem* Ui_KbLightWidget::verticalSpacer_3

Definition at line 56 of file ui_kblightwidget.h.

Referenced by setupUi().

12.93.3.26 QWidget* Ui_KbLightWidget::widget

Definition at line 59 of file ui_kblightwidget.h.

Referenced by setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kblightwidget.h

12.94 Ui_KbProfileDialog Class Reference

```
#include <src/ckb/ui_kbprofiledialog.h>
```

Inheritance diagram for Ui_KbProfileDialog:

Collaboration diagram for Ui_KbProfileDialog:

Public Member Functions

- void setupUi (QDialog *KbProfileDialog)
- void retranslateUi (QDialog *KbProfileDialog)

Data Fields

- QGridLayout * gridLayout
- QSpacerItem * horizontalSpacer
- QSpacerItem * horizontalSpacer_2
- RListWidget * profileList
- QDialogButtonBox * buttonBox

12.94.1 Detailed Description

Definition at line 25 of file ui_kbprofiledialog.h.

12.94.2 Member Function Documentation

12.94.2.1 void Ui_KbProfileDialog::retranslateUi (QDialog * *KbProfileDialog*) [inline]

Definition at line 73 of file ui_kbprofiledialog.h.

Referenced by setupUi().

```
74     {
75         KbProfileDialog->setWindowTitle(QApplication::translate("KbProfileDialog", "Keyboard Profiles",
    Q_NULLPTR));
76     } // retranslateUi
```

Here is the caller graph for this function:

12.94.2.2 void Ui_KbProfileDialog::setupUi (QDialog * *KbProfileDialog*) [inline]

Definition at line 34 of file ui_kbprofiledialog.h.

References buttonBox, gridLayout, horizontalSpacer, horizontalSpacer_2, profileList, and retranslateUi().

Referenced by KbProfileDialog::KbProfileDialog().

```
35     {
36         if (KbProfileDialog->objectName().isEmpty())
37             KbProfileDialog->setObjectName(QStringLiteral("KbProfileDialog"));
38         KbProfileDialog->resize(400, 300);
39         KbProfileDialog->setFocusPolicy(Qt::ClickFocus);
40         gridLayout = new QGridLayout(KbProfileDialog);
41         gridLayout->setObjectName(QStringLiteral("gridLayout"));
42         horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);
43
44         gridLayout->addItem(horizontalSpacer, 0, 0, 1, 1);
```

```
        horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_2, 0, 2, 1, 1);

        profileList = new RListWidget(KbProfileDialog);
        profileList->setObjectName(QStringLiteral("profileList"));
        profileList->setContextMenuPolicy(Qt::CustomContextMenu);
        profileList->setFrameShadow(QFrame::Plain);
        profileList->setIconSize(QSize(24, 24));

        gridLayout->addWidget(profileList, 0, 1, 1, 1);

        buttonBox = new QDialogButtonBox(KbProfileDialog);
        buttonBox->setObjectName(QStringLiteral("buttonBox"));
        buttonBox->setOrientation(Qt::Horizontal);
        buttonBox->setStandardButtons(QDialogButtonBox::Ok);

        gridLayout->addWidget(buttonBox, 1, 0, 1, 3);


        retranslateUi(KbProfileDialog);
        QObject::connect(buttonBox, SIGNAL(accepted()), KbProfileDialog, SLOT(accept()));
        QObject::connect(buttonBox, SIGNAL(rejected()), KbProfileDialog, SLOT(reject()));

        QMetaObject::connectSlotsByName(KbProfileDialog);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.94.3 Field Documentation

12.94.3.1 QDialogButtonBox* Ui_KbProfileDialog::buttonBox

Definition at line 32 of file ui_kbprofiledialog.h.

Referenced by setupUi().

12.94.3.2 QGridLayout* Ui_KbProfileDialog::gridLayout

Definition at line 28 of file ui_kbprofiledialog.h.

Referenced by setupUi().

12.94.3.3 QSpacerItem* Ui_KbProfileDialog::horizontalSpacer

Definition at line 29 of file ui_kbprofiledialog.h.

Referenced by setupUi().

12.94.3.4 QSpacerItem* Ui_KbProfileDialog::horizontalSpacer_2

Definition at line 30 of file ui_kbprofiledialog.h.

Referenced by setupUi().

12.94.3.5 RListWidget* Ui_KbProfileDialog::profileList

Definition at line 31 of file ui_kbprofiledialog.h.

Referenced by KbProfileDialog::addNewProfileItem(), KbProfileDialog::KbProfileDialog(), KbProfileDialog::on_profileList_customContextMenuRequested(), KbProfileDialog::on_profileList_itemClicked(), KbProfileDialog::profileList_reordered(), KbProfileDialog::repopulate(), and setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kbprofiledialog.h

12.95 Ui_KbWidget Class Reference

```
#include <src/ckb/ui_kbwidget.h>
```

Inheritance diagram for Ui_KbWidget:

Collaboration diagram for Ui_KbWidget:

Public Member Functions

- void setupUi (QWidget *KbWidget)
- void retranslateUi (QWidget *KbWidget)

Data Fields

- QGridLayout * gridLayout
- QComboBox * profileBox
- QTabWidget * tabWidget
- QWidget * lightTab
- QGridLayout * gridLayout_2
- KbLightWidget * lightWidget
- QLabel * label_3
- QWidget * bindTab
- QGridLayout * gridLayout_5
- KbBindWidget * bindWidget
- QWidget * kPerfTab
- QGridLayout * gridLayout_4
- KPerfWidget * kPerfWidget
- QWidget * mPerfTab
- QGridLayout * gridLayout_7
- MPerfWidget * mPerfWidget
- QWidget * devTab
- QGridLayout * gridLayout_3
- QLabel * fwUpdLabel
- QSpacerItem * verticalSpacer
- QLabel * fwLabel
- QLabel * label_4
- QSpacerItem * horizontalSpacer_2
- QLabel * label_9
- QLabel * serialLabel
- QHBoxLayout * fwUpdLayout
- QPushButton * fwUpdButton
- QSpacerItem * horizontalSpacer_3
- QLabel * pollLabel2
- QLabel * pollLabel
- RListWidget * modesList
- QPushButton * hwSaveButton

12.95.1 Detailed Description

Definition at line 33 of file ui_kbwidget.h.

12.95.2 Member Function Documentation

12.95.2.1 void Ui_KbWidget::retranslateUi (QWidget * *KbWidget*) [inline]

Definition at line 268 of file ui_kbwidget.h.

References bindTab, devTab, fwLabel, fwUpdButton, fwUpdLabel, hwSaveButton, kPerfTab, label_3, label_4, label_9, lightTab, mPerfTab, pollLabel, pollLabel2, serialLabel, and tabWidget.

Referenced by setupUi().

```
    {
        KbWidget->setWindowTitle(QApplication::translate("KbWidget", "Form", Q_NULLPTR));
        label_3->setText(QApplication::translate("KbWidget", "Tip: Drag+drop items to reorder. Right-click for menu.", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(lightTab), QApplication::translate("KbWidget", "Lighting", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(bindTab), QApplication::translate("KbWidget", "Binding", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(kPerfTab), QApplication::translate("KbWidget", "Performance", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(mPerfTab), QApplication::translate("KbWidget", "Performance", Q_NULLPTR));
        fwUpdLabel->setText(QApplication::translate("KbWidget", "Status:", Q_NULLPTR));
        fwLabel->setText(QApplication::translate("KbWidget", "N/A", Q_NULLPTR));
        label_4->setText(QApplication::translate("KbWidget", "USB device ID:", Q_NULLPTR));
        label_9->setText(QApplication::translate("KbWidget", "Firmware version:", Q_NULLPTR));
        serialLabel->setText(QApplication::translate("KbWidget", "N/A", Q_NULLPTR));
        fwUpdButton->setText(QApplication::translate("KbWidget", "Check for updates", Q_NULLPTR));
        pollLabel2->setText(QApplication::translate("KbWidget", "Poll rate:", Q_NULLPTR));
        pollLabel->setText(QApplication::translate("KbWidget", "N/A", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(devTab), QApplication::translate("KbWidget", "Device", Q_NULLPTR));
        hwSaveButton->setText(QApplication::translate("KbWidget", "Save to hardware", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.95.2.2 void Ui_KbWidget::setupUi (QWidget * *KbWidget*) [inline]

Definition at line 69 of file ui_kbwidget.h.

References bindTab, bindWidget, devTab, fwLabel, fwUpdButton, fwUpdLabel, fwUpdLayout, gridLayout, gridLayout_2, gridLayout_3, gridLayout_4, gridLayout_5, gridLayout_7, horizontalSpacer_2, horizontalSpacer_3, hwSaveButton, kPerfTab, kPerfWidget, label_3, label_4, label_9, lightTab, lightWidget, modesList, mPerfTab, mPerfWidget, pollLabel, pollLabel2, profileBox, retranslateUi(), serialLabel, tabWidget, and verticalSpacer.

Referenced by KbWidget::KbWidget().

```
    {
        if (KbWidget->objectName().isEmpty())
            KbWidget->setObjectName(QStringLiteral("KbWidget"));
        KbWidget->resize(773, 539);
        gridLayout = new QGridLayout(KbWidget);
        gridLayout->setSpacing(9);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        gridLayout->setContentsMargins(9, -1, 9, 9);
        profileBox = new QComboBox(KbWidget);
        profileBox->setObjectName(QStringLiteral("profileBox"));
        QSizePolicy sizePolicy(QSizePolicy::Preferred, QSizePolicy::Fixed);
        sizePolicy.setHorizontalStretch(18);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(profileBox->sizePolicy().hasHeightForWidth());
        profileBox->setSizePolicy(sizePolicy);
        profileBox->setIconSize(QSize(24, 24));

        gridLayout->addWidget(profileBox, 0, 0, 1, 1);

        tabWidget = new QTabWidget(KbWidget);
        tabWidget->setObjectName(QStringLiteral("tabWidget"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Expanding);
        sizePolicy1.setHorizontalStretch(82);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(tabWidget->sizePolicy().hasHeightForWidth());
        tabWidget->setSizePolicy(sizePolicy1);
        lightTab = new QWidget();
```

```
        lightTab->setObjectName(QStringLiteral("lightTab"));
        gridLayout_2 = new QGridLayout(lightTab);
        gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
         gridLayout_2->setHorizontalSpacing(0);
         gridLayout_2->setVerticalSpacing(6);
         gridLayout_2->setContentsMargins(6, 6, 6, 6);
         lightWidget = new KbLightWidget(lightTab);
         lightWidget->setObjectName(QStringLiteral("lightWidget"));
         QSizePolicy sizePolicy2(QSizePolicy::Preferred, QSizePolicy::Expanding);
         sizePolicy2.setHorizontalStretch(0);
         sizePolicy2.setVerticalStretch(0);
         sizePolicy2.setHeightForWidth(lightWidget->sizePolicy().hasHeightForWidth());
         lightWidget->setSizePolicy(sizePolicy2);

         gridLayout_2->addWidget(lightWidget, 0, 0, 1, 1);

         label_3 = new QLabel(lightTab);
         label_3->setObjectName(QStringLiteral("label_3"));
         QSizePolicy sizePolicy3(QSizePolicy::Preferred, QSizePolicy::Minimum);
         sizePolicy3.setHorizontalStretch(0);
         sizePolicy3.setVerticalStretch(0);
         sizePolicy3.setHeightForWidth(label_3->sizePolicy().hasHeightForWidth());
         label_3->setSizePolicy(sizePolicy3);

         gridLayout_2->addWidget(label_3, 1, 0, 1, 1);

         tabWidget->addTab(lightTab, QString());
         bindTab = new QWidget();
         bindTab->setObjectName(QStringLiteral("bindTab"));
         gridLayout_5 = new QGridLayout(bindTab);
         gridLayout_5->setSpacing(0);
         gridLayout_5->setObjectName(QStringLiteral("gridLayout_5"));
         gridLayout_5->setContentsMargins(6, 6, 6, 6);
         bindWidget = new KbBindWidget(bindTab);
         bindWidget->setObjectName(QStringLiteral("bindWidget"));
         sizePolicy2.setHeightForWidth(bindWidget->sizePolicy().hasHeightForWidth());
         bindWidget->setSizePolicy(sizePolicy2);

         gridLayout_5->addWidget(bindWidget, 0, 0, 1, 1);

         tabWidget->addTab(bindTab, QString());
         kPerfTab = new QWidget();
         kPerfTab->setObjectName(QStringLiteral("kPerfTab"));
         gridLayout_4 = new QGridLayout(kPerfTab);
         gridLayout_4->setObjectName(QStringLiteral("gridLayout_4"));
         gridLayout_4->setContentsMargins(6, 6, 6, 6);
         kPerfWidget = new KPerfWidget(kPerfTab);
         kPerfWidget->setObjectName(QStringLiteral("kPerfWidget"));

         gridLayout_4->addWidget(kPerfWidget, 0, 0, 1, 1);

         tabWidget->addTab(kPerfTab, QString());
         mPerfTab = new QWidget();
         mPerfTab->setObjectName(QStringLiteral("mPerfTab"));
         gridLayout_7 = new QGridLayout(mPerfTab);
         gridLayout_7->setObjectName(QStringLiteral("gridLayout_7"));
         gridLayout_7->setContentsMargins(6, 6, 6, 6);
         mPerfWidget = new MPerfWidget(mPerfTab);
         mPerfWidget->setObjectName(QStringLiteral("mPerfWidget"));

         gridLayout_7->addWidget(mPerfWidget, 0, 0, 1, 1);

         tabWidget->addTab(mPerfTab, QString());
         devTab = new QWidget();
         devTab->setObjectName(QStringLiteral("devTab"));
         gridLayout_3 = new QGridLayout(devTab);
         gridLayout_3->setObjectName(QStringLiteral("gridLayout_3"));
         gridLayout_3->setContentsMargins(6, 6, 6, 6);
         fwUpdLabel = new QLabel(devTab);
         fwUpdLabel->setObjectName(QStringLiteral("fwUpdLabel"));
         fwUpdLabel->setMinimumSize(QSize(0, 34));

         gridLayout_3->addWidget(fwUpdLabel, 4, 0, 1, 1);

         verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding
    );

         gridLayout_3->addItem(verticalSpacer, 6, 2, 1, 1);

         fwLabel = new QLabel(devTab);
         fwLabel->setObjectName(QStringLiteral("fwLabel"));
         fwLabel->setCursor(QCursor(Qt::IBeamCursor));
         fwLabel->setTextInteractionFlags(Qt::LinksAccessibleByMouse|Qt::TextSelectableByMouse);

         gridLayout_3->addWidget(fwLabel, 2, 2, 1, 1);

         label_4 = new QLabel(devTab);
```

```
        label_4->setObjectName(QStringLiteral("label_4"));
        label_4->setMinimumSize(QSize(0, 34));

        gridLayout_3->addWidget(label_4, 0, 0, 1, 1);

        horizontalSpacer_2 = new QSpacerItem(40, 1, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_2, 2, 1, 1, 1);

        label_9 = new QLabel(devTab);
        label_9->setObjectName(QStringLiteral("label_9"));
        label_9->setMinimumSize(QSize(0, 34));

        gridLayout_3->addWidget(label_9, 2, 0, 1, 1);

        serialLabel = new QLabel(devTab);
        serialLabel->setObjectName(QStringLiteral("serialLabel"));
        serialLabel->setCursor(QCursor(Qt::IBeamCursor));
        serialLabel->setTextInteractionFlags(Qt::LinksAccessibleByMouse|Qt::TextSelectableByMouse);

        gridLayout_3->addWidget(serialLabel, 0, 2, 1, 1);

        fwUpdLayout = new QHBoxLayout();
        fwUpdLayout->setObjectName(QStringLiteral("fwUpdLayout"));
        fwUpdButton = new QPushButton(devTab);
        fwUpdButton->setObjectName(QStringLiteral("fwUpdButton"));

        fwUpdLayout->addWidget(fwUpdButton);

        horizontalSpacer_3 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        fwUpdLayout->addItem(horizontalSpacer_3);


        gridLayout_3->addLayout(fwUpdLayout, 4, 2, 1, 1);

        pollLabel2 = new QLabel(devTab);
        pollLabel2->setObjectName(QStringLiteral("pollLabel2"));
        pollLabel2->setMinimumSize(QSize(0, 34));

        gridLayout_3->addWidget(pollLabel2, 1, 0, 1, 1);

        pollLabel = new QLabel(devTab);
        pollLabel->setObjectName(QStringLiteral("pollLabel"));

        gridLayout_3->addWidget(pollLabel, 1, 2, 1, 1);

        tabWidget->addTab(devTab, QString());

        gridLayout->addWidget(tabWidget, 0, 1, 3, 1);

        modesList = new RListWidget(KbWidget);
        modesList->setObjectName(QStringLiteral("modesList"));
        QSizePolicy sizePolicy4(QSizePolicy::Expanding, QSizePolicy::Expanding);
        sizePolicy4.setHorizontalStretch(18);
        sizePolicy4.setVerticalStretch(0);
        sizePolicy4.setHeightForWidth(modesList->sizePolicy().hasHeightForWidth());
        modesList->setSizePolicy(sizePolicy4);
        modesList->setContextMenuPolicy(Qt::CustomContextMenu);
        modesList->setFrameShadow(QFrame::Plain);
        modesList->setDragDropMode(QAbstractItemView::InternalMove);
        modesList->setIconSize(QSize(24, 24));
        modesList->setMovement(QListView::Snap);

        gridLayout->addWidget(modesList, 1, 0, 1, 1);

        hwSaveButton = new QPushButton(KbWidget);
        hwSaveButton->setObjectName(QStringLiteral("hwSaveButton"));
        QSizePolicy sizePolicy5(QSizePolicy::Minimum, QSizePolicy::Fixed);
        sizePolicy5.setHorizontalStretch(18);
        sizePolicy5.setVerticalStretch(0);
        sizePolicy5.setHeightForWidth(hwSaveButton->sizePolicy().hasHeightForWidth());
        hwSaveButton->setSizePolicy(sizePolicy5);

        gridLayout->addWidget(hwSaveButton, 2, 0, 1, 1);


        retranslateUi(KbWidget);

        tabWidget->setCurrentIndex(0);


        QMetaObject::connectSlotsByName(KbWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.95.3 Field Documentation

12.95.3.1 QWidget* Ui_KbWidget::bindTab

Definition at line 43 of file ui_kbwidget.h.

Referenced by retranslateUi(), and setupUi().

12.95.3.2 KbBindWidget* Ui_KbWidget::bindWidget

Definition at line 45 of file ui_kbwidget.h.

Referenced by KbWidget::modeChanged(), and setupUi().

12.95.3.3 QWidget* Ui_KbWidget::devTab

Definition at line 52 of file ui_kbwidget.h.

Referenced by retranslateUi(), and setupUi().

12.95.3.4 QLabel* Ui_KbWidget::fwLabel

Definition at line 56 of file ui_kbwidget.h.

Referenced by KbWidget::devUpdate(), retranslateUi(), and setupUi().

12.95.3.5 QPushButton* Ui_KbWidget::fwUpdButton

Definition at line 62 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), KbWidget::on_fwUpdButton_clicked(), retranslateUi(), setupUi(), and KbWidget::updateFwButton().

12.95.3.6 QLabel* Ui_KbWidget::fwUpdLabel

Definition at line 54 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), retranslateUi(), and setupUi().

12.95.3.7 QHBoxLayout* Ui_KbWidget::fwUpdLayout

Definition at line 61 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), and setupUi().

12.95.3.8 QGridLayout* Ui_KbWidget::gridLayout

Definition at line 36 of file ui_kbwidget.h.

Referenced by setupUi().

12.95.3.9 QGridLayout* Ui_KbWidget::gridLayout_2

Definition at line 40 of file ui_kbwidget.h.

Referenced by setupUi().

12.95.3.10 QGridLayout* Ui_KbWidget::gridLayout_3

Definition at line 53 of file ui_kbwidget.h.

Referenced by setupUi().

12.95.3.11 QGridLayout* Ui_KbWidget::gridLayout_4

Definition at line 47 of file ui_kbwidget.h.

Referenced by setupUi().

12.95.3.12 QGridLayout* Ui_KbWidget::gridLayout_5

Definition at line 44 of file ui_kbwidget.h.

Referenced by setupUi().

12.95.3.13 QGridLayout* Ui_KbWidget::gridLayout_7

Definition at line 50 of file ui_kbwidget.h.

Referenced by setupUi().

12.95.3.14 QSpacerItem* Ui_KbWidget::horizontalSpacer_2

Definition at line 58 of file ui_kbwidget.h.

Referenced by setupUi().

12.95.3.15 QSpacerItem* Ui_KbWidget::horizontalSpacer_3

Definition at line 63 of file ui_kbwidget.h.

Referenced by setupUi().

12.95.3.16 QPushButton* Ui_KbWidget::hwSaveButton

Definition at line 67 of file ui_kbwidget.h.

Referenced by retranslateUi(), and setupUi().

12.95.3.17 QWidget* Ui_KbWidget::kPerfTab

Definition at line 46 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), retranslateUi(), and setupUi().

12.95.3.18 KPerfWidget* Ui_KbWidget::kPerfWidget

Definition at line 48 of file ui_kbwidget.h.

Referenced by KbWidget::modeChanged(), and setupUi().

12.95.3.19 QLabel* Ui_KbWidget::label_3

Definition at line 42 of file ui_kbwidget.h.

Referenced by retranslateUi(), and setupUi().

12.95.3.20 QLabel* Ui_KbWidget::label_4

Definition at line 57 of file ui_kbwidget.h.

Referenced by retranslateUi(), and setupUi().

12.95.3.21 QLabel* Ui_KbWidget::label_9

Definition at line 59 of file ui_kbwidget.h.

Referenced by retranslateUi(), and setupUi().

12.95.3.22 QWidget* Ui_KbWidget::lightTab

Definition at line 39 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), retranslateUi(), and setupUi().

12.95.3.23 KbLightWidget* Ui_KbWidget::lightWidget

Definition at line 41 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), KbWidget::modeChanged(), and setupUi().

12.95.3.24 RListWidget* Ui_KbWidget::modesList

Definition at line 66 of file ui_kbwidget.h.

Referenced by KbWidget::addNewModeItem(), KbWidget::KbWidget(), KbWidget::modeChanged(), KbWidget::modesList_reordered(), KbWidget::on_modesList_customContextMenuRequested(), KbWidget::on_modesList_itemClicked(), KbWidget::profileChanged(), and setupUi().

12.95.3.25 QWidget* Ui_KbWidget::mPerfTab

Definition at line 49 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), retranslateUi(), and setupUi().

12.95.3.26 MPerfWidget* Ui_KbWidget::mPerfWidget

Definition at line 51 of file ui_kbwidget.h.

Referenced by KbWidget::modeChanged(), and setupUi().

12.95.3.27 QLabel* Ui_KbWidget::pollLabel

Definition at line 65 of file ui_kbwidget.h.

Referenced by KbWidget::devUpdate(), KbWidget::KbWidget(), retranslateUi(), and setupUi().

12.95.3.28 QLabel* Ui_KbWidget::pollLabel2

Definition at line 64 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), retranslateUi(), and setupUi().

12.95.3.29 QComboBox* Ui_KbWidget::profileBox

Definition at line 37 of file ui_kbwidget.h.

Referenced by setupUi(), and KbWidget::updateProfileList().

12.95.3.30 QLabel* Ui_KbWidget::serialLabel

Definition at line 60 of file ui_kbwidget.h.

Referenced by KbWidget::devUpdate(), retranslateUi(), and setupUi().

12.95.3.31 QTabWidget* Ui_KbWidget::tabWidget

Definition at line 38 of file ui_kbwidget.h.

Referenced by KbWidget::KbWidget(), KbWidget::on_tabWidget_currentChanged(), retranslateUi(), setupUi(), KbWidget::showFirstTab(), and KbWidget::showLastTab().

12.95.3.32 QSpacerItem* Ui_KbWidget::verticalSpacer

Definition at line 55 of file ui_kbwidget.h.

Referenced by setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kbwidget.h

12.96 Ui_KPerfWidget Class Reference

```
#include <src/ckb/ui_kperfwidget.h>
```

Inheritance diagram for Ui_KPerfWidget:

Collaboration diagram for Ui_KPerfWidget:

Public Member Functions

- void setupUi (QWidget ∗KPerfWidget)
- void retranslateUi (QWidget ∗KPerfWidget)

Data Fields

- QGridLayout ∗ gridLayout
- QWidget ∗ k95Spacer
- QLabel ∗ label_10
- ColorButton ∗ lockColorOff
- QFrame ∗ line
- QSpacerItem ∗ horizontalSpacer_5
- QLabel ∗ k95Label2
- QLabel ∗ label_12
- ColorButton ∗ modeColorOff
- ColorButton ∗ lightColor3
- QSpacerItem ∗ horizontalSpacer
- QCheckBox ∗ lockBox
- ColorButton ∗ modeColorOn
- QCheckBox ∗ macroBox
- ColorButton ∗ numColorOn
- QComboBox ∗ numBox
- QLabel ∗ label_5
- QSpacerItem ∗ verticalSpacer_2
- ColorButton ∗ lightColor2
- QSpacerItem ∗ horizontalSpacer_7
- QLabel ∗ label_8
- QCheckBox ∗ lightBox
- ColorButton ∗ lightColor1

- QSpacerItem * verticalSpacer_4
- QLabel * label_6
- QLabel * label
- QSpacerItem * horizontalSpacer_6
- ColorButton * lockColorOn
- QLabel * label_4
- QSpacerItem * verticalSpacer
- QSpacerItem * verticalSpacer_3
- QCheckBox * modeBox
- ColorButton * capsColorOff
- ColorButton * numColorOff
- ColorButton * capsColorOn
- QFrame * line_3
- QLabel * label_22
- QComboBox * scrollBox
- QLabel * label_7
- ColorButton * scrollColorOn
- QComboBox * capsBox
- ColorButton * scrollColorOff
- QCheckBox * muteBox
- ColorButton * muteColorOn
- ColorButton * macroColorOff
- QLabel * label_3
- ColorButton * muteColorOff
- QLabel * k95Label3
- ColorButton * macroColorOn
- ColorButton * muteColorNA
- QLabel * label_19
- QFrame * k95Line
- QLabel * label_21
- QLabel * label_24
- QLabel * label_20
- QLabel * label_16
- QLabel * label_14
- QLabel * label_18
- QSpacerItem * horizontalSpacer_2
- QLabel * label_15
- QLabel * k95Label4
- QLabel * label_17
- QLabel * label_11
- QLabel * label_23
- QLabel * k95Label1
- QHBoxLayout * horizontalLayout_2
- QPushButton * copyButton
- QSpacerItem * horizontalSpacer_8
- QHBoxLayout * horizontalLayout
- QLabel * label_2
- QSpacerItem * horizontalSpacer_4
- QSpinBox * intensityBox
- QSpacerItem * horizontalSpacer_3
- QLabel * k95Label5
- QFrame * line_2
- QLabel * k95Label6

12.96.1 Detailed Description

Definition at line 31 of file ui_kperfwidget.h.

12.96.2 Member Function Documentation

12.96.2.1 void Ui_KPerfWidget::retranslateUi (QWidget * *KPerfWidget*) [inline]

Definition at line 589 of file ui_kperfwidget.h.

References capsBox, capsColorOff, capsColorOn, copyButton, intensityBox, k95Label1, k95Label2, k95Label3, k95Label4, k95Label5, k95Label6, label, label_10, label_11, label_12, label_14, label_15, label_16, label_17, label_18, label_19, label_2, label_20, label_21, label_22, label_23, label_24, label_3, label_4, label_5, label_6, label_7, label_8, lightBox, lightColor1, lightColor2, lightColor3, lockBox, lockColorOff, lockColorOn, macroBox, macroColorOff, macroColorOn, modeBox, modeColorOff, modeColorOn, muteBox, muteColorNA, muteColorOff, muteColorOn, numBox, numColorOff, numColorOn, scrollBox, scrollColorOff, and scrollColorOn.

Referenced by setupUi().

```
590     {
591         KPerfWidget->setWindowTitle(QApplication::translate("KPerfWidget", "Form", Q_NULLPTR));
592         label_10->setText(QApplication::translate("KPerfWidget", "100%", Q_NULLPTR));
593         lockColorOff->setText(QString());
594         k95Label2->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
595         label_12->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
596         modeColorOff->setText(QString());
597         lightColor3->setText(QString());
598         lockBox->setText(QApplication::translate("KPerfWidget", "Indicate Windows Lock:", Q_NULLPTR)
    );
599         modeColorOn->setText(QString());
600         macroBox->setText(QApplication::translate("KPerfWidget", "Indicate macro recording:",
    Q_NULLPTR));
601         numColorOn->setText(QString());
602         numBox->clear();
603         numBox->insertItems(0, QStringList()
604          << QApplication::translate("KPerfWidget", "Normal", Q_NULLPTR)
605          << QApplication::translate("KPerfWidget", "Always on", Q_NULLPTR)
606          << QApplication::translate("KPerfWidget", "Always off", Q_NULLPTR)
607          << QApplication::translate("KPerfWidget", "RGB indicator", Q_NULLPTR)
608          << QApplication::translate("KPerfWidget", "RGB + normal", Q_NULLPTR)
609         );
610         label_5->setText(QApplication::translate("KPerfWidget", "Num lock:", Q_NULLPTR));
611         lightColor2->setText(QString());
612         label_8->setText(QApplication::translate("KPerfWidget", "Note: many desktop environments do
     not use scroll lock. The indicator may not turn on even when enabled.", Q_NULLPTR));
613         lightBox->setText(QApplication::translate("KPerfWidget", "Indicate brightness:", Q_NULLPTR)
    );
614         lightColor1->setText(QString());
615         label_6->setText(QApplication::translate("KPerfWidget", "Caps lock:", Q_NULLPTR));
616         label->setText(QApplication::translate("KPerfWidget", "Miscellaneous", Q_NULLPTR));
617         lockColorOn->setText(QString());
618         label_4->setText(QApplication::translate("KPerfWidget", "Lock lights", Q_NULLPTR));
619         modeBox->setText(QApplication::translate("KPerfWidget", "Indicate current mode:", Q_NULLPTR)
    );
620         capsColorOff->setText(QString());
621         numColorOff->setText(QString());
622         capsColorOn->setText(QString());
623         label_22->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
624         scrollBox->clear();
625         scrollBox->insertItems(0, QStringList()
626          << QApplication::translate("KPerfWidget", "Normal", Q_NULLPTR)
627          << QApplication::translate("KPerfWidget", "Always on", Q_NULLPTR)
628          << QApplication::translate("KPerfWidget", "Always off", Q_NULLPTR)
629          << QApplication::translate("KPerfWidget", "RGB indicator", Q_NULLPTR)
630          << QApplication::translate("KPerfWidget", "RGB + normal", Q_NULLPTR)
631         );
632         label_7->setText(QApplication::translate("KPerfWidget", "Scroll lock:", Q_NULLPTR));
633         scrollColorOn->setText(QString());
634         capsBox->clear();
635         capsBox->insertItems(0, QStringList()
636          << QApplication::translate("KPerfWidget", "Normal", Q_NULLPTR)
637          << QApplication::translate("KPerfWidget", "Always on", Q_NULLPTR)
638          << QApplication::translate("KPerfWidget", "Always off", Q_NULLPTR)
639          << QApplication::translate("KPerfWidget", "RGB indicator", Q_NULLPTR)
640          << QApplication::translate("KPerfWidget", "RGB + normal", Q_NULLPTR)
641         );
642         scrollColorOff->setText(QString());
643         muteBox->setText(QApplication::translate("KPerfWidget", "Indicate mute:", Q_NULLPTR));
```

```
        muteColorOn->setText(QString());
        macroColorOff->setText(QString());
        label_3->setText(QApplication::translate("KPerfWidget", "Top row", Q_NULLPTR));
        muteColorOff->setText(QString());
        k95Label3->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        macroColorOn->setText(QString());
#ifndef QT_NO_TOOLTIP
        muteColorNA->setToolTip(QApplication::translate("KPerfWidget", "If the sound device does not support muting, or if mute status is unknown, this color will be displayed.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        muteColorNA->setText(QString());
        label_19->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
        label_21->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
        label_24->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        label_20->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
        label_16->setText(QApplication::translate("KPerfWidget", "67%", Q_NULLPTR));
        label_14->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        label_18->setText(QApplication::translate("KPerfWidget", "33%", Q_NULLPTR));
        label_15->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        k95Label4->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
        label_17->setText(QApplication::translate("KPerfWidget", "Unknown", Q_NULLPTR));
        label_11->setText(QApplication::translate("KPerfWidget", "On", Q_NULLPTR));
        label_23->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        k95Label1->setText(QApplication::translate("KPerfWidget", "K95 buttons", Q_NULLPTR));
        copyButton->setText(QApplication::translate("KPerfWidget", "Copy to mode...", Q_NULLPTR));
        label_2->setText(QApplication::translate("KPerfWidget", "Indicator intensity:", Q_NULLPTR));
        intensityBox->setSuffix(QApplication::translate("KPerfWidget", "%", Q_NULLPTR));
        k95Label5->setText(QApplication::translate("KPerfWidget", "Off", Q_NULLPTR));
        k95Label6->setText(QApplication::translate("KPerfWidget", "Note: macro recording not yet implemented. Indicator will always display \"off\".", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.96.2.2 void Ui_KPerfWidget::setupUi (QWidget * *KPerfWidget*) [inline]

Definition at line 111 of file ui_kperfwidget.h.

References capsBox, capsColorOff, capsColorOn, copyButton, gridLayout, horizontalLayout, horizontalLayout_2, horizontalSpacer, horizontalSpacer_2, horizontalSpacer_3, horizontalSpacer_4, horizontalSpacer_5, horizontalSpacer_6, horizontalSpacer_7, horizontalSpacer_8, intensityBox, k95Label1, k95Label2, k95Label3, k95Label4, k95Label5, k95Label6, k95Line, k95Spacer, label, label_10, label_11, label_12, label_14, label_15, label_16, label_17, label_18, label_19, label_2, label_20, label_21, label_22, label_23, label_24, label_3, label_4, label_5, label_6, label_7, label_8, lightBox, lightColor1, lightColor2, lightColor3, line, line_2, line_3, lockBox, lockColorOff, lockColorOn, macroBox, macroColorOff, macroColorOn, modeBox, modeColorOff, modeColorOn, muteBox, muteColorNA, muteColorOff, muteColorOn, numBox, numColorOff, numColorOn, retranslateUi(), scrollBox, scrollColorOff, scrollColorOn, verticalSpacer, verticalSpacer_2, verticalSpacer_3, and verticalSpacer_4.

Referenced by KPerfWidget::KPerfWidget().

```
    {
        if (KPerfWidget->objectName().isEmpty())
            KPerfWidget->setObjectName(QStringLiteral("KPerfWidget"));
        KPerfWidget->resize(840, 679);
        gridLayout = new QGridLayout(KPerfWidget);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        k95Spacer = new QWidget(KPerfWidget);
        k95Spacer->setObjectName(QStringLiteral("k95Spacer"));
        QSizePolicy sizePolicy(QSizePolicy::Fixed, QSizePolicy::Fixed);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(k95Spacer->sizePolicy().hasHeightForWidth());
        k95Spacer->setSizePolicy(sizePolicy);
        k95Spacer->setMinimumSize(QSize(15, 10));
```

```
        k95Spacer->setMaximumSize(QSize(15, 10));

        gridLayout->addWidget(k95Spacer, 12, 4, 1, 1);

        label_10 = new QLabel(KPerfWidget);
        label_10->setObjectName(QStringLiteral("label_10"));

        gridLayout->addWidget(label_10, 15, 5, 1, 1);

        lockColorOff = new ColorButton(KPerfWidget);
        lockColorOff->setObjectName(QStringLiteral("lockColorOff"));
        sizePolicy.setHeightForWidth(lockColorOff->sizePolicy().hasHeightForWidth());
        lockColorOff->setSizePolicy(sizePolicy);
        lockColorOff->setMinimumSize(QSize(0, 40));
        lockColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(lockColorOff, 16, 7, 1, 1);

        line = new QFrame(KPerfWidget);
        line->setObjectName(QStringLiteral("line"));
        line->setFrameShape(QFrame::HLine);
        line->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line, 2, 0, 1, 13);

        horizontalSpacer_5 = new QSpacerItem(10, 20, QSizePolicy::Fixed,
QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_5, 17, 6, 1, 1);

        k95Label2 = new QLabel(KPerfWidget);
        k95Label2->setObjectName(QStringLiteral("k95Label2"));

        gridLayout->addWidget(k95Label2, 9, 5, 1, 1);

        label_12 = new QLabel(KPerfWidget);
        label_12->setObjectName(QStringLiteral("label_12"));

        gridLayout->addWidget(label_12, 17, 5, 1, 1);

        modeColorOff = new ColorButton(KPerfWidget);
        modeColorOff->setObjectName(QStringLiteral("modeColorOff"));
        sizePolicy.setHeightForWidth(modeColorOff->sizePolicy().hasHeightForWidth());
        modeColorOff->setSizePolicy(sizePolicy);
        modeColorOff->setMinimumSize(QSize(0, 40));
        modeColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(modeColorOff, 9, 7, 1, 1);

        lightColor3 = new ColorButton(KPerfWidget);
        lightColor3->setObjectName(QStringLiteral("lightColor3"));
        sizePolicy.setHeightForWidth(lightColor3->sizePolicy().hasHeightForWidth());
        lightColor3->setSizePolicy(sizePolicy);
        lightColor3->setMinimumSize(QSize(0, 40));
        lightColor3->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(lightColor3, 15, 4, 1, 1);

        horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding,
QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer, 15, 12, 1, 1);

        lockBox = new QCheckBox(KPerfWidget);
        lockBox->setObjectName(QStringLiteral("lockBox"));

        gridLayout->addWidget(lockBox, 16, 1, 1, 2);

        modeColorOn = new ColorButton(KPerfWidget);
        modeColorOn->setObjectName(QStringLiteral("modeColorOn"));
        sizePolicy.setHeightForWidth(modeColorOn->sizePolicy().hasHeightForWidth());
        modeColorOn->setSizePolicy(sizePolicy);
        modeColorOn->setMinimumSize(QSize(0, 40));
        modeColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(modeColorOn, 9, 4, 1, 1);

        macroBox = new QCheckBox(KPerfWidget);
        macroBox->setObjectName(QStringLiteral("macroBox"));

        gridLayout->addWidget(macroBox, 10, 1, 1, 2);

        numColorOn = new ColorButton(KPerfWidget);
        numColorOn->setObjectName(QStringLiteral("numColorOn"));
        sizePolicy.setHeightForWidth(numColorOn->sizePolicy().hasHeightForWidth());
        numColorOn->setSizePolicy(sizePolicy);
        numColorOn->setMinimumSize(QSize(0, 40));
```

```
        numColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(numColorOn, 21, 4, 1, 1);

        numBox = new QComboBox(KPerfWidget);
        numBox->setObjectName(QStringLiteral("numBox"));

        gridLayout->addWidget(numBox, 21, 2, 1, 1);

        label_5 = new QLabel(KPerfWidget);
        label_5->setObjectName(QStringLiteral("label_5"));

        gridLayout->addWidget(label_5, 21, 1, 1, 1);

        verticalSpacer_2 = new QSpacerItem(20, 20, QSizePolicy::Minimum, QSizePolicy::Fixed
    );

        gridLayout->addItem(verticalSpacer_2, 4, 1, 1, 1);

        lightColor2 = new ColorButton(KPerfWidget);
        lightColor2->setObjectName(QStringLiteral("lightColor2"));
        sizePolicy.setHeightForWidth(lightColor2->sizePolicy().hasHeightForWidth());
        lightColor2->setSizePolicy(sizePolicy);
        lightColor2->setMinimumSize(QSize(0, 40));
        lightColor2->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(lightColor2, 15, 7, 1, 1);

        horizontalSpacer_7 = new QSpacerItem(10, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_7, 17, 3, 1, 1);

        label_8 = new QLabel(KPerfWidget);
        label_8->setObjectName(QStringLiteral("label_8"));
        QFont font;
        font.setPointSize(8);
        font.setItalic(true);
        label_8->setFont(font);

        gridLayout->addWidget(label_8, 25, 1, 1, 12);

        lightBox = new QCheckBox(KPerfWidget);
        lightBox->setObjectName(QStringLiteral("lightBox"));

        gridLayout->addWidget(lightBox, 15, 1, 1, 2);

        lightColor1 = new ColorButton(KPerfWidget);
        lightColor1->setObjectName(QStringLiteral("lightColor1"));
        sizePolicy.setHeightForWidth(lightColor1->sizePolicy().hasHeightForWidth());
        lightColor1->setSizePolicy(sizePolicy);
        lightColor1->setMinimumSize(QSize(0, 40));
        lightColor1->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(lightColor1, 15, 10, 1, 1);

        verticalSpacer_4 = new QSpacerItem(0, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_4, 24, 4, 1, 1);

        label_6 = new QLabel(KPerfWidget);
        label_6->setObjectName(QStringLiteral("label_6"));

        gridLayout->addWidget(label_6, 22, 1, 1, 1);

        label = new QLabel(KPerfWidget);
        label->setObjectName(QStringLiteral("label"));
        QFont font1;
        font1.setBold(true);
        font1.setWeight(75);
        label->setFont(font1);

        gridLayout->addWidget(label, 1, 0, 1, 13);

        horizontalSpacer_6 = new QSpacerItem(10, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_6, 17, 9, 1, 1);

        lockColorOn = new ColorButton(KPerfWidget);
        lockColorOn->setObjectName(QStringLiteral("lockColorOn"));
        sizePolicy.setHeightForWidth(lockColorOn->sizePolicy().hasHeightForWidth());
        lockColorOn->setSizePolicy(sizePolicy);
        lockColorOn->setMinimumSize(QSize(0, 40));
        lockColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(lockColorOn, 16, 4, 1, 1);
```

```
        label_4 = new QLabel(KPerfWidget);
        label_4->setObjectName(QStringLiteral("label_4"));
        label_4->setFont(font1);

        gridLayout->addWidget(label_4, 19, 0, 1, 13);

        verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding
    );

        gridLayout->addItem(verticalSpacer, 26, 2, 1, 1);

        verticalSpacer_3 = new QSpacerItem(20, 20, QSizePolicy::Minimum, QSizePolicy::Fixed
    );

        gridLayout->addItem(verticalSpacer_3, 18, 4, 1, 1);

        modeBox = new QCheckBox(KPerfWidget);
        modeBox->setObjectName(QStringLiteral("modeBox"));

        gridLayout->addWidget(modeBox, 9, 1, 1, 2);

        capsColorOff = new ColorButton(KPerfWidget);
        capsColorOff->setObjectName(QStringLiteral("capsColorOff"));
        sizePolicy.setHeightForWidth(capsColorOff->sizePolicy().hasHeightForWidth());
        capsColorOff->setSizePolicy(sizePolicy);
        capsColorOff->setMinimumSize(QSize(0, 40));
        capsColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(capsColorOff, 22, 7, 1, 1);

        numColorOff = new ColorButton(KPerfWidget);
        numColorOff->setObjectName(QStringLiteral("numColorOff"));
        QSizePolicy sizePolicy1(QSizePolicy::Fixed, QSizePolicy::Fixed);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(40);
        sizePolicy1.setHeightForWidth(numColorOff->sizePolicy().hasHeightForWidth());
        numColorOff->setSizePolicy(sizePolicy1);
        numColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(numColorOff, 21, 7, 1, 1);

        capsColorOn = new ColorButton(KPerfWidget);
        capsColorOn->setObjectName(QStringLiteral("capsColorOn"));
        sizePolicy.setHeightForWidth(capsColorOn->sizePolicy().hasHeightForWidth());
        capsColorOn->setSizePolicy(sizePolicy);
        capsColorOn->setMinimumSize(QSize(0, 40));
        capsColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(capsColorOn, 22, 4, 1, 1);

        line_3 = new QFrame(KPerfWidget);
        line_3->setObjectName(QStringLiteral("line_3"));
        line_3->setFrameShape(QFrame::HLine);
        line_3->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_3, 20, 0, 1, 13);

        label_22 = new QLabel(KPerfWidget);
        label_22->setObjectName(QStringLiteral("label_22"));

        gridLayout->addWidget(label_22, 21, 8, 1, 1);

        scrollBox = new QComboBox(KPerfWidget);
        scrollBox->setObjectName(QStringLiteral("scrollBox"));

        gridLayout->addWidget(scrollBox, 23, 2, 1, 1);

        label_7 = new QLabel(KPerfWidget);
        label_7->setObjectName(QStringLiteral("label_7"));

        gridLayout->addWidget(label_7, 23, 1, 1, 1);

        scrollColorOn = new ColorButton(KPerfWidget);
        scrollColorOn->setObjectName(QStringLiteral("scrollColorOn"));
        sizePolicy.setHeightForWidth(scrollColorOn->sizePolicy().hasHeightForWidth());
        scrollColorOn->setSizePolicy(sizePolicy);
        scrollColorOn->setMinimumSize(QSize(0, 40));
        scrollColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(scrollColorOn, 23, 4, 1, 1);

        capsBox = new QComboBox(KPerfWidget);
        capsBox->setObjectName(QStringLiteral("capsBox"));

        gridLayout->addWidget(capsBox, 22, 2, 1, 1);

```

```
        scrollColorOff = new ColorButton(KPerfWidget);
        scrollColorOff->setObjectName(QStringLiteral("scrollColorOff"));
        sizePolicy.setHeightForWidth(scrollColorOff->sizePolicy().hasHeightForWidth());
        scrollColorOff->setSizePolicy(sizePolicy);
        scrollColorOff->setMinimumSize(QSize(0, 40));
        scrollColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(scrollColorOff, 23, 7, 1, 1);

        muteBox = new QCheckBox(KPerfWidget);
        muteBox->setObjectName(QStringLiteral("muteBox"));

        gridLayout->addWidget(muteBox, 17, 1, 1, 2);

        muteColorOn = new ColorButton(KPerfWidget);
        muteColorOn->setObjectName(QStringLiteral("muteColorOn"));
        sizePolicy.setHeightForWidth(muteColorOn->sizePolicy().hasHeightForWidth());
        muteColorOn->setSizePolicy(sizePolicy);
        muteColorOn->setMinimumSize(QSize(0, 40));
        muteColorOn->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(muteColorOn, 17, 4, 1, 1);

        macroColorOff = new ColorButton(KPerfWidget);
        macroColorOff->setObjectName(QStringLiteral("macroColorOff"));
        QSizePolicy sizePolicy2(QSizePolicy::Minimum, QSizePolicy::Fixed);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(40);
        sizePolicy2.setHeightForWidth(macroColorOff->sizePolicy().hasHeightForWidth());
        macroColorOff->setSizePolicy(sizePolicy2);
        macroColorOff->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(macroColorOff, 10, 7, 1, 1);

        label_3 = new QLabel(KPerfWidget);
        label_3->setObjectName(QStringLiteral("label_3"));
        label_3->setFont(font1);

        gridLayout->addWidget(label_3, 13, 0, 1, 3);

        muteColorOff = new ColorButton(KPerfWidget);
        muteColorOff->setObjectName(QStringLiteral("muteColorOff"));
        sizePolicy.setHeightForWidth(muteColorOff->sizePolicy().hasHeightForWidth());
        muteColorOff->setSizePolicy(sizePolicy);
        muteColorOff->setMinimumSize(QSize(0, 40));
        muteColorOff->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(muteColorOff, 17, 7, 1, 1);

        k95Label3 = new QLabel(KPerfWidget);
        k95Label3->setObjectName(QStringLiteral("k95Label3"));

        gridLayout->addWidget(k95Label3, 9, 8, 1, 1);

        macroColorOn = new ColorButton(KPerfWidget);
        macroColorOn->setObjectName(QStringLiteral("macroColorOn"));
        sizePolicy2.setHeightForWidth(macroColorOn->sizePolicy().hasHeightForWidth());
        macroColorOn->setSizePolicy(sizePolicy2);
        macroColorOn->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(macroColorOn, 10, 4, 1, 1);

        muteColorNA = new ColorButton(KPerfWidget);
        muteColorNA->setObjectName(QStringLiteral("muteColorNA"));
        muteColorNA->setMinimumSize(QSize(0, 40));
        muteColorNA->setMaximumSize(QSize(16777215, 40));

        gridLayout->addWidget(muteColorNA, 17, 10, 1, 1);

        label_19 = new QLabel(KPerfWidget);
        label_19->setObjectName(QStringLiteral("label_19"));

        gridLayout->addWidget(label_19, 21, 5, 1, 1);

        k95Line = new QFrame(KPerfWidget);
        k95Line->setObjectName(QStringLiteral("k95Line"));
        k95Line->setFrameShape(QFrame::HLine);
        k95Line->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(k95Line, 8, 0, 1, 13);

        label_21 = new QLabel(KPerfWidget);
        label_21->setObjectName(QStringLiteral("label_21"));

        gridLayout->addWidget(label_21, 23, 5, 1, 1);

        label_24 = new QLabel(KPerfWidget);
```

```
        label_24->setObjectName(QStringLiteral("label_24"));

        gridLayout->addWidget(label_24, 23, 8, 1, 1);

        label_20 = new QLabel(KPerfWidget);
        label_20->setObjectName(QStringLiteral("label_20"));

        gridLayout->addWidget(label_20, 22, 5, 1, 1);

        label_16 = new QLabel(KPerfWidget);
        label_16->setObjectName(QStringLiteral("label_16"));

        gridLayout->addWidget(label_16, 15, 8, 1, 1);

        label_14 = new QLabel(KPerfWidget);
        label_14->setObjectName(QStringLiteral("label_14"));

        gridLayout->addWidget(label_14, 17, 8, 1, 1);

        label_18 = new QLabel(KPerfWidget);
        label_18->setObjectName(QStringLiteral("label_18"));

        gridLayout->addWidget(label_18, 15, 11, 1, 1);

        horizontalSpacer_2 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_2, 15, 0, 1, 1);

        label_15 = new QLabel(KPerfWidget);
        label_15->setObjectName(QStringLiteral("label_15"));

        gridLayout->addWidget(label_15, 16, 8, 1, 1);

        k95Label4 = new QLabel(KPerfWidget);
        k95Label4->setObjectName(QStringLiteral("k95Label4"));

        gridLayout->addWidget(k95Label4, 10, 5, 1, 1);

        label_17 = new QLabel(KPerfWidget);
        label_17->setObjectName(QStringLiteral("label_17"));

        gridLayout->addWidget(label_17, 17, 11, 1, 1);

        label_11 = new QLabel(KPerfWidget);
        label_11->setObjectName(QStringLiteral("label_11"));

        gridLayout->addWidget(label_11, 16, 5, 1, 1);

        label_23 = new QLabel(KPerfWidget);
        label_23->setObjectName(QStringLiteral("label_23"));

        gridLayout->addWidget(label_23, 22, 8, 1, 1);

        k95Label1 = new QLabel(KPerfWidget);
        k95Label1->setObjectName(QStringLiteral("k95Label1"));
        k95Label1->setFont(font1);

        gridLayout->addWidget(k95Label1, 7, 0, 1, 5);

        horizontalLayout_2 = new QHBoxLayout();
        horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
        copyButton = new QPushButton(KPerfWidget);
        copyButton->setObjectName(QStringLiteral("copyButton"));

        horizontalLayout_2->addWidget(copyButton);

        horizontalSpacer_8 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer_8);


        gridLayout->addLayout(horizontalLayout_2, 3, 10, 1, 3);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        label_2 = new QLabel(KPerfWidget);
        label_2->setObjectName(QStringLiteral("label_2"));

        horizontalLayout->addWidget(label_2);

        horizontalSpacer_4 = new QSpacerItem(10, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        horizontalLayout->addItem(horizontalSpacer_4);

```

```
        intensityBox = new QSpinBox(KPerfWidget);
        intensityBox->setObjectName(QStringLiteral("intensityBox"));
        intensityBox->setMaximum(100);
        intensityBox->setValue(100);

        horizontalLayout->addWidget(intensityBox);

        horizontalSpacer_3 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        horizontalLayout->addItem(horizontalSpacer_3);


        gridLayout->addLayout(horizontalLayout, 3, 1, 1, 9);

        k95Label5 = new QLabel(KPerfWidget);
        k95Label5->setObjectName(QStringLiteral("k95Label5"));

        gridLayout->addWidget(k95Label5, 10, 8, 1, 1);

        line_2 = new QFrame(KPerfWidget);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
        line_2->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_2, 14, 0, 1, 13);

        k95Label6 = new QLabel(KPerfWidget);
        k95Label6->setObjectName(QStringLiteral("k95Label6"));
        k95Label6->setFont(font);

        gridLayout->addWidget(k95Label6, 11, 1, 1, 10);


        retranslateUi(KPerfWidget);

        QMetaObject::connectSlotsByName(KPerfWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.96.3 Field Documentation

12.96.3.1 QComboBox* Ui_KPerfWidget::capsBox

Definition at line 74 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.2 ColorButton* Ui_KPerfWidget::capsColorOff

Definition at line 66 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.3 ColorButton* Ui_KPerfWidget::capsColorOn

Definition at line 68 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.4 QPushButton* Ui_KPerfWidget::copyButton

Definition at line 100 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.5 QGridLayout* Ui_KPerfWidget::gridLayout

Definition at line 34 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.6 QHBoxLayout* Ui_KPerfWidget::horizontalLayout

Definition at line 102 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.7 QHBoxLayout* Ui_KPerfWidget::horizontalLayout_2

Definition at line 99 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.8 QSpacerItem* Ui_KPerfWidget::horizontalSpacer

Definition at line 44 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.9 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_2

Definition at line 92 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.10 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_3

Definition at line 106 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.11 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_4

Definition at line 104 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.12 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_5

Definition at line 39 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.13 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_6

Definition at line 60 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.14 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_7

Definition at line 53 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.15 QSpacerItem* Ui_KPerfWidget::horizontalSpacer_8

Definition at line 101 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.16 QSpinBox* Ui_KPerfWidget::intensityBox

Definition at line 105 of file ui_kperfwidget.h.

Referenced by retranslateUi(), KPerfWidget::setPerf(), and setupUi().

12.96.3.17 QLabel* Ui_KPerfWidget::k95Label1

Definition at line 98 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.18 QLabel* Ui_KPerfWidget::k95Label2

Definition at line 40 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.19 QLabel* Ui_KPerfWidget::k95Label3

Definition at line 81 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.20 QLabel* Ui_KPerfWidget::k95Label4

Definition at line 94 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.21 QLabel* Ui_KPerfWidget::k95Label5

Definition at line 107 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.22 QLabel* Ui_KPerfWidget::k95Label6

Definition at line 109 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.23 QFrame* Ui_KPerfWidget::k95Line

Definition at line 85 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), and setupUi().

12.96.3.24 QWidget* Ui_KPerfWidget::k95Spacer

Definition at line 35 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), and setupUi().

12.96.3.25 QLabel* Ui_KPerfWidget::label

Definition at line 59 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.26 QLabel* Ui_KPerfWidget::label_10

Definition at line 36 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.27 QLabel* Ui_KPerfWidget::label_11

Definition at line 96 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.28 QLabel* Ui_KPerfWidget::label_12

Definition at line 41 of file ui_kperfwidget.h.

Referenced by retranslateUi(), KPerfWidget::setPerf(), and setupUi().

12.96.3.29 QLabel* Ui_KPerfWidget::label_14

Definition at line 90 of file ui_kperfwidget.h.

Referenced by retranslateUi(), KPerfWidget::setPerf(), and setupUi().

12.96.3.30 QLabel* Ui_KPerfWidget::label_15

Definition at line 93 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.31 QLabel* Ui_KPerfWidget::label_16

Definition at line 89 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.32 QLabel* Ui_KPerfWidget::label_17

Definition at line 95 of file ui_kperfwidget.h.

Referenced by retranslateUi(), KPerfWidget::setPerf(), and setupUi().

12.96.3.33 QLabel* Ui_KPerfWidget::label_18

Definition at line 91 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.34 QLabel* Ui_KPerfWidget::label_19

Definition at line 84 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.35 QLabel* Ui_KPerfWidget::label_2

Definition at line 103 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.36 QLabel* Ui_KPerfWidget::label_20

Definition at line 88 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.37 QLabel* Ui_KPerfWidget::label_21

Definition at line 86 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.38 QLabel* Ui_KPerfWidget::label_22

Definition at line 70 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.39 QLabel* Ui_KPerfWidget::label_23

Definition at line 97 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.40 QLabel* Ui_KPerfWidget::label_24

Definition at line 87 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.41 QLabel* Ui_KPerfWidget::label_3

Definition at line 79 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.42 QLabel* Ui_KPerfWidget::label_4

Definition at line 62 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.43 QLabel* Ui_KPerfWidget::label_5

Definition at line 50 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.44 QLabel* Ui_KPerfWidget::label_6

Definition at line 58 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.45 QLabel* Ui_KPerfWidget::label_7

Definition at line 72 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.46 QLabel* Ui_KPerfWidget::label_8

Definition at line 54 of file ui_kperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.96.3.47 QCheckBox* Ui_KPerfWidget::lightBox

Definition at line 55 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.48 ColorButton* Ui_KPerfWidget::lightColor1

Definition at line 56 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.49 ColorButton* Ui_KPerfWidget::lightColor2

Definition at line 52 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.50 ColorButton* Ui_KPerfWidget::lightColor3

Definition at line 43 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.51 QFrame* Ui_KPerfWidget::line

Definition at line 38 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.52 QFrame* Ui_KPerfWidget::line_2

Definition at line 108 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.53 QFrame* Ui_KPerfWidget::line_3

Definition at line 69 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.54 QCheckBox* Ui_KPerfWidget::lockBox

Definition at line 45 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.55 ColorButton* Ui_KPerfWidget::lockColorOff

Definition at line 37 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.56 ColorButton* Ui_KPerfWidget::lockColorOn

Definition at line 61 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.57 QCheckBox* Ui_KPerfWidget::macroBox

Definition at line 47 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.58 ColorButton* Ui_KPerfWidget::macroColorOff

Definition at line 78 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.59 ColorButton* Ui_KPerfWidget::macroColorOn

Definition at line 82 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.60 QCheckBox* Ui_KPerfWidget::modeBox

Definition at line 65 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.61 ColorButton* Ui_KPerfWidget::modeColorOff

Definition at line 42 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.62 ColorButton* Ui_KPerfWidget::modeColorOn

Definition at line 46 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.63 QCheckBox* Ui_KPerfWidget::muteBox

Definition at line 76 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), KPerfWidget::setPerf(), and setupUi().

12.96.3.64 ColorButton* Ui_KPerfWidget::muteColorNA

Definition at line 83 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), KPerfWidget::setPerf(), and setupUi().

12.96.3.65 ColorButton* Ui_KPerfWidget::muteColorOff

Definition at line 80 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), KPerfWidget::setPerf(), and setupUi().

12.96.3.66 ColorButton* Ui_KPerfWidget::muteColorOn

Definition at line 77 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), KPerfWidget::setPerf(), and setupUi().

12.96.3.67 QComboBox* Ui_KPerfWidget::numBox

Definition at line 49 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.68 ColorButton* Ui_KPerfWidget::numColorOff

Definition at line 67 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.69 ColorButton* Ui_KPerfWidget::numColorOn

Definition at line 48 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.70 QComboBox* Ui_KPerfWidget::scrollBox

Definition at line 71 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.71 ColorButton* Ui_KPerfWidget::scrollColorOff

Definition at line 75 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.72 ColorButton* Ui_KPerfWidget::scrollColorOn

Definition at line 73 of file ui_kperfwidget.h.

Referenced by KPerfWidget::KPerfWidget(), retranslateUi(), and setupUi().

12.96.3.73 QSpacerItem* Ui_KPerfWidget::verticalSpacer

Definition at line 63 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.74 QSpacerItem* Ui_KPerfWidget::verticalSpacer_2

Definition at line 51 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.75 QSpacerItem* Ui_KPerfWidget::verticalSpacer_3

Definition at line 64 of file ui_kperfwidget.h.

Referenced by setupUi().

12.96.3.76 QSpacerItem* Ui_KPerfWidget::verticalSpacer_4

Definition at line 57 of file ui_kperfwidget.h.

Referenced by setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_kperfwidget.h

12.97 Ui_LayoutDialog Class Reference

```
#include <src/ckb/ui_layoutdialog.h>
```

Inheritance diagram for Ui_LayoutDialog:

Collaboration diagram for Ui_LayoutDialog:

Public Member Functions

- void setupUi (QDialog *LayoutDialog)

- void retranslateUi (QDialog *LayoutDialog)

Data Fields

- QGridLayout * gridLayout
- QSpacerItem * verticalSpacer
- QSpacerItem * verticalSpacer_3
- QDialogButtonBox * buttonBox
- QLabel * label
- QSpacerItem * horizontalSpacer_2
- QSpacerItem * verticalSpacer_2
- QSpacerItem * horizontalSpacer
- QComboBox * comboBox
- QLabel * label_2
- QSpacerItem * verticalSpacer_4

12.97.1 Detailed Description

Definition at line 26 of file ui_layoutdialog.h.

12.97.2 Member Function Documentation

12.97.2.1 void Ui_LayoutDialog::retranslateUi (QDialog * *LayoutDialog*) [inline]

Definition at line 109 of file ui_layoutdialog.h.

References label, and label_2.

Referenced by setupUi().

```
110     {
111         LayoutDialog->setWindowTitle(QApplication::translate("LayoutDialog", "Keyboard Layout", Q_NULLPTR))
    ;
112         label->setText(QApplication::translate("LayoutDialog", "Please select your keyboard layout:",
    Q_NULLPTR));
113         label_2->setText(QApplication::translate("LayoutDialog", "Note: this only controls the
     layout within the ckb application. If your keys are typing the wrong characters, check your system preferences.",
     Q_NULLPTR));
114     } // retranslateUi
```

Here is the caller graph for this function:

12.97.2.2 void Ui_LayoutDialog::setupUi (QDialog * *LayoutDialog*) [inline]

Definition at line 41 of file ui_layoutdialog.h.

References buttonBox, comboBox, gridLayout, horizontalSpacer, horizontalSpacer_2, label, label_2, retranslateUi(), verticalSpacer, verticalSpacer_2, verticalSpacer_3, and verticalSpacer_4.

Referenced by LayoutDialog::LayoutDialog().

```
 {
     if (LayoutDialog->objectName().isEmpty())
         LayoutDialog->setObjectName(QStringLiteral("LayoutDialog"));
     LayoutDialog->resize(400, 240);
     gridLayout = new QGridLayout(LayoutDialog);
     gridLayout->setObjectName(QStringLiteral("gridLayout"));
     verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

     gridLayout->addItem(verticalSpacer, 6, 0, 1, 3);

     verticalSpacer_3 = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

     gridLayout->addItem(verticalSpacer_3, 0, 1, 1, 1);

     buttonBox = new QDialogButtonBox(LayoutDialog);
     buttonBox->setObjectName(QStringLiteral("buttonBox"));
     buttonBox->setOrientation(Qt::Horizontal);
     buttonBox->setStandardButtons(QDialogButtonBox::Ok);

     gridLayout->addWidget(buttonBox, 7, 0, 1, 3);

     label = new QLabel(LayoutDialog);
     label->setObjectName(QStringLiteral("label"));
     label->setAlignment(Qt::AlignCenter);

     gridLayout->addWidget(label, 1, 0, 1, 3);

     horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

     gridLayout->addItem(horizontalSpacer_2, 3, 2, 1, 1);

     verticalSpacer_2 = new QSpacerItem(20, 15, QSizePolicy::Minimum, QSizePolicy::Fixed);

     gridLayout->addItem(verticalSpacer_2, 4, 1, 1, 1);

     horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

     gridLayout->addItem(horizontalSpacer, 3, 0, 1, 1);

     comboBox = new QComboBox(LayoutDialog);
     comboBox->setObjectName(QStringLiteral("comboBox"));

     gridLayout->addWidget(comboBox, 3, 1, 1, 1);

     label_2 = new QLabel(LayoutDialog);
     label_2->setObjectName(QStringLiteral("label_2"));
     QFont font;
     font.setPointSize(8);
     font.setItalic(true);
     label_2->setFont(font);
     label_2->setAlignment(Qt::AlignCenter);
     label_2->setWordWrap(true);

     gridLayout->addWidget(label_2, 5, 0, 1, 3);

     verticalSpacer_4 = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

     gridLayout->addItem(verticalSpacer_4, 2, 1, 1, 1);


      retranslateUi(LayoutDialog);
      QObject::connect(buttonBox, SIGNAL(accepted()), LayoutDialog, SLOT(accept()));
      QObject::connect(buttonBox, SIGNAL(rejected()), LayoutDialog, SLOT(reject()));

      QMetaObject::connectSlotsByName(LayoutDialog);
  } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.97.3 Field Documentation

12.97.3.1 QDialogButtonBox* Ui_LayoutDialog::buttonBox

Definition at line 32 of file ui_layoutdialog.h.

Referenced by setupUi().

12.97.3.2 QComboBox* Ui_LayoutDialog::comboBox

Definition at line 37 of file ui_layoutdialog.h.

Referenced by LayoutDialog::LayoutDialog(), LayoutDialog::selected(), and setupUi().

12.97.3.3 QGridLayout* Ui_LayoutDialog::gridLayout

Definition at line 29 of file ui_layoutdialog.h.

Referenced by setupUi().

12.97.3.4 QSpacerItem* Ui_LayoutDialog::horizontalSpacer

Definition at line 36 of file ui_layoutdialog.h.

Referenced by setupUi().

12.97.3.5 QSpacerItem* Ui_LayoutDialog::horizontalSpacer_2

Definition at line 34 of file ui_layoutdialog.h.

Referenced by setupUi().

12.97.3.6 QLabel* Ui_LayoutDialog::label

Definition at line 33 of file ui_layoutdialog.h.

Referenced by retranslateUi(), and setupUi().

12.97.3.7 QLabel* Ui_LayoutDialog::label_2

Definition at line 38 of file ui_layoutdialog.h.

Referenced by retranslateUi(), and setupUi().

12.97.3.8 QSpacerItem* Ui_LayoutDialog::verticalSpacer

Definition at line 30 of file ui_layoutdialog.h.

Referenced by setupUi().

12.97.3.9 QSpacerItem* Ui_LayoutDialog::verticalSpacer_2

Definition at line 35 of file ui_layoutdialog.h.

Referenced by setupUi().

12.97.3.10 QSpacerItem* Ui_LayoutDialog::verticalSpacer_3

Definition at line 31 of file ui_layoutdialog.h.

Referenced by setupUi().

12.97.3.11 QSpacerItem* Ui_LayoutDialog::verticalSpacer_4

Definition at line 39 of file ui_layoutdialog.h.

Referenced by setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_layoutdialog.h

12.98 Ui_MainWindow Class Reference

```
#include <src/ckb/ui_mainwindow.h>
```

Inheritance diagram for Ui_MainWindow:

Collaboration diagram for Ui_MainWindow:

Public Member Functions

- void setupUi (QMainWindow *MainWindow)
- void retranslateUi (QMainWindow *MainWindow)

Data Fields

- QAction ∗ actionExit
- QAction ∗ actionAbout
- QWidget ∗ centralWidget
- QGridLayout ∗ gridLayout
- QTabWidget ∗ tabWidget

12.98.1 Detailed Description

Definition at line 24 of file ui_mainwindow.h.

12.98.2 Member Function Documentation

12.98.2.1 void Ui_MainWindow::retranslateUi (QMainWindow ∗ *MainWindow*) [inline]

Definition at line 68 of file ui_mainwindow.h.

References actionAbout, and actionExit.

Referenced by setupUi().

```
69     {
70         MainWindow->setWindowTitle(QApplication::translate("MainWindow", "ckb-next", Q_NULLPTR));
71         actionExit->setText(QApplication::translate("MainWindow", "Exit", Q_NULLPTR));
72         actionExit->setShortcut(QApplication::translate("MainWindow", "Ctrl+Q", Q_NULLPTR));
73         actionAbout->setText(QApplication::translate("MainWindow", "About", Q_NULLPTR));
74     } // retranslateUi
```

Here is the caller graph for this function:

12.98.2.2 void Ui_MainWindow::setupUi (QMainWindow ∗ *MainWindow*) [inline]

Definition at line 33 of file ui_mainwindow.h.

References actionAbout, actionExit, centralWidget, gridLayout, retranslateUi(), and tabWidget.

Referenced by MainWindow::MainWindow().

```
34     {
35         if (MainWindow->objectName().isEmpty())
36             MainWindow->setObjectName(QStringLiteral("MainWindow"));
37         MainWindow->resize(1000, 750);
38         MainWindow->setMinimumSize(QSize(1000, 750));
39         QIcon icon;
40         icon.addFile(QStringLiteral(":/img/ckb-logo.png"), QSize(), QIcon::Normal, QIcon::Off);
41         MainWindow->setWindowIcon(icon);
42         MainWindow->setUnifiedTitleAndToolBarOnMac(true);
43         actionExit = new QAction(MainWindow);
44         actionExit->setObjectName(QStringLiteral("actionExit"));
45         actionAbout = new QAction(MainWindow);
46         actionAbout->setObjectName(QStringLiteral("actionAbout"));
47         centralWidget = new QWidget(MainWindow);
48         centralWidget->setObjectName(QStringLiteral("centralWidget"));
49         gridLayout = new QGridLayout(centralWidget);
50         gridLayout->setSpacing(6);
```

```
        gridLayout->setContentsMargins(11, 11, 11, 11);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        tabWidget = new QTabWidget(centralWidget);
        tabWidget->setObjectName(QStringLiteral("tabWidget"));

        gridLayout->addWidget(tabWidget, 0, 0, 1, 1);

        MainWindow->setCentralWidget(centralWidget);

        retranslateUi(MainWindow);

        tabWidget->setCurrentIndex(-1);


        QMetaObject::connectSlotsByName(MainWindow);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.98.3 Field Documentation

12.98.3.1 QAction* Ui_MainWindow::actionAbout

Definition at line 28 of file ui_mainwindow.h.

Referenced by retranslateUi(), and setupUi().

12.98.3.2 QAction* Ui_MainWindow::actionExit

Definition at line 27 of file ui_mainwindow.h.

Referenced by MainWindow::MainWindow(), retranslateUi(), and setupUi().

12.98.3.3 QWidget* Ui_MainWindow::centralWidget

Definition at line 29 of file ui_mainwindow.h.

Referenced by setupUi().

12.98.3.4 QGridLayout* Ui_MainWindow::gridLayout

Definition at line 30 of file ui_mainwindow.h.

Referenced by setupUi().

12.98.3.5 QTabWidget* Ui_MainWindow::tabWidget

Definition at line 31 of file ui_mainwindow.h.

Referenced by MainWindow::addDevice(), MainWindow::MainWindow(), MainWindow::removeDevice(), setupUi(), and MainWindow::showFwUpdateNotification().

The documentation for this class was generated from the following file:

- src/ckb/ui_mainwindow.h

12.99 Ui_ModeSelectDialog Class Reference

```
#include <src/ckb/ui_modeselectdialog.h>
```

Inheritance diagram for Ui_ModeSelectDialog:

Collaboration diagram for Ui_ModeSelectDialog:

Public Member Functions

- void setupUi (QDialog *ModeSelectDialog)
- void retranslateUi (QDialog *ModeSelectDialog)

Data Fields

- QGridLayout * gridLayout
- QLabel * label
- QDialogButtonBox * buttonBox
- QListWidget * modeList
- QPushButton * selAllButton
- QPushButton * selNoneButton

12.99.1 Detailed Description

Definition at line 26 of file ui_modeselectdialog.h.

12.99.2 Member Function Documentation

12.99.2.1 void Ui_ModeSelectDialog::retranslateUi (QDialog * *ModeSelectDialog*) [inline]

Definition at line 82 of file ui_modeselectdialog.h.

References label, selAllButton, and selNoneButton.

Referenced by setupUi().

```
83     {
84         ModeSelectDialog->setWindowTitle(QApplication::translate("ModeSelectDialog", "Select Modes",
     Q_NULLPTR));
85         label->setText(QApplication::translate("ModeSelectDialog", "TextLabel", Q_NULLPTR));
86         selAllButton->setText(QApplication::translate("ModeSelectDialog", "Select All",
     Q_NULLPTR));
87         selNoneButton->setText(QApplication::translate("ModeSelectDialog", "Select None",
     Q_NULLPTR));
88     } // retranslateUi
```

Here is the caller graph for this function:

12.99.2.2 void Ui_ModeSelectDialog::setupUi (QDialog * *ModeSelectDialog*) [inline]

Definition at line 36 of file ui_modeselectdialog.h.

References buttonBox, gridLayout, label, modeList, retranslateUi(), selAllButton, and selNoneButton.

Referenced by ModeSelectDialog::ModeSelectDialog().

```
37      {
38          if (ModeSelectDialog->objectName().isEmpty())
39              ModeSelectDialog->setObjectName(QStringLiteral("ModeSelectDialog"));
40          ModeSelectDialog->resize(320, 320);
41          gridLayout = new QGridLayout(ModeSelectDialog);
42          gridLayout->setObjectName(QStringLiteral("gridLayout"));
43          label = new QLabel(ModeSelectDialog);
44          label->setObjectName(QStringLiteral("label"));
45          label->setAlignment(Qt::AlignLeading|Qt::AlignLeft|Qt::AlignTop);
46
47          gridLayout->addWidget(label, 0, 0, 1, 2);
48
49          buttonBox = new QDialogButtonBox(ModeSelectDialog);
50          buttonBox->setObjectName(QStringLiteral("buttonBox"));
51          buttonBox->setOrientation(Qt::Vertical);
52          buttonBox->setStandardButtons(QDialogButtonBox::Cancel|QDialogButtonBox::Ok);
53          buttonBox->setCenterButtons(false);
54
55          gridLayout->addWidget(buttonBox, 0, 2, 3, 1);
56
57          modeList = new QListWidget(ModeSelectDialog);
58          modeList->setObjectName(QStringLiteral("modeList"));
59          modeList->setFrameShadow(QFrame::Plain);
60          modeList->setSelectionMode(QAbstractItemView::ExtendedSelection);
61
62          gridLayout->addWidget(modeList, 1, 0, 1, 2);
63
64          selAllButton = new QPushButton(ModeSelectDialog);
65          selAllButton->setObjectName(QStringLiteral("selAllButton"));
66
67          gridLayout->addWidget(selAllButton, 2, 0, 1, 1);
68
69          selNoneButton = new QPushButton(ModeSelectDialog);
70          selNoneButton->setObjectName(QStringLiteral("selNoneButton"));
71
72          gridLayout->addWidget(selNoneButton, 2, 1, 1, 1);
73
74
75          retranslateUi(ModeSelectDialog);
76          QObject::connect(buttonBox, SIGNAL(accepted()), ModeSelectDialog, SLOT(accept()));
77          QObject::connect(buttonBox, SIGNAL(rejected()), ModeSelectDialog, SLOT(reject()));
78
79          QMetaObject::connectSlotsByName(ModeSelectDialog);
80      } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.99.3 Field Documentation

12.99.3.1 QDialogButtonBox* Ui_ModeSelectDialog::buttonBox

Definition at line 31 of file ui_modeselectdialog.h.

Referenced by setupUi().

12.99.3.2 QGridLayout* Ui_ModeSelectDialog::gridLayout

Definition at line 29 of file ui_modeselectdialog.h.

Referenced by setupUi().

12.99.3.3 QLabel* Ui_ModeSelectDialog::label

Definition at line 30 of file ui_modeselectdialog.h.

Referenced by ModeSelectDialog::ModeSelectDialog(), retranslateUi(), and setupUi().

12.99.3.4 QListWidget* Ui_ModeSelectDialog::modeList

Definition at line 32 of file ui_modeselectdialog.h.

Referenced by ModeSelectDialog::ModeSelectDialog(), ModeSelectDialog::on_selAllButton_clicked(), ModeSelectDialog::on_selNoneButton_clicked(), ModeSelectDialog::selection(), and setupUi().

12.99.3.5 QPushButton* Ui_ModeSelectDialog::selAllButton

Definition at line 33 of file ui_modeselectdialog.h.

Referenced by retranslateUi(), and setupUi().

12.99.3.6 QPushButton* Ui_ModeSelectDialog::selNoneButton

Definition at line 34 of file ui_modeselectdialog.h.

Referenced by retranslateUi(), and setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_modeselectdialog.h

12.100 Ui_MPerfWidget Class Reference

```
#include <src/ckb/ui_mperfwidget.h>
```

Inheritance diagram for Ui_MPerfWidget:

Collaboration diagram for Ui_MPerfWidget:

Public Member Functions

- void setupUi (QWidget *MPerfWidget)
- void retranslateUi (QWidget *MPerfWidget)

Data Fields

- QVBoxLayout * verticalLayout
- QLabel * label
- QFrame * line
- QGridLayout * gridLayout
- QLabel * label_25
- QHBoxLayout * horizontalLayout_2
- QComboBox * lHeightBox
- QSpacerItem * horizontalSpacer_2
- QCheckBox * eBox2
- QSlider * ySlider3
- QSlider * xSlider2
- QSpinBox * xBox3
- QSpinBox * yBox0
- QSlider * ySlider0
- ColorButton * iButton4
- ColorButton * iButton5
- QSpacerItem * horizontalSpacer_4
- QSpacerItem * verticalSpacer_3
- QSpacerItem * horizontalSpacer_5
- ColorButton * iButton3
- QLabel * label_12
- QSpinBox * xBox4
- QSpinBox * xBox0
- QSpinBox * yBox5
- QCheckBox * eBox5
- QSlider * xSlider5
- QSpinBox * xBox1

- QSpinBox * yBox2
- QSpinBox * yBox3
- QSlider * xSlider4
- QLabel * label_4
- QSlider * xSlider0
- ColorButton * iButton2
- QFrame * line_3
- ColorButton * iButtonO
- QSpinBox * yBox1
- QSlider * ySlider2
- QSpinBox * xBox2
- QSlider * xSlider1
- QSpacerItem * horizontalSpacer
- QSpinBox * yBox4
- ColorButton * iButton1
- QSlider * ySlider4
- QSlider * ySlider1
- ColorButton * iButton0
- QSlider * xSlider3
- QSpinBox * xBox5
- QLabel * label_3
- QLabel * label_6
- QSlider * ySlider5
- QLabel * label_7
- QLabel * label_8
- QLabel * label_5
- QLabel * label_15
- QLabel * label_13
- QLabel * label_14
- QCheckBox * eBox4
- QLabel * label_11
- QCheckBox * eBox3
- QCheckBox * eBox1
- QLabel * label_2
- QSpacerItem * verticalSpacer
- QCheckBox * aSnapBox
- QFrame * line_2
- QHBoxLayout * horizontalLayout_4
- QCheckBox * indicBox
- QSpacerItem * horizontalSpacer_3
- QSpinBox * spinBox
- QSpacerItem * horizontalSpacer_7
- QCheckBox * xyBox
- QSpacerItem * verticalSpacer_2
- QHBoxLayout * horizontalLayout
- QPushButton * copyButton
- QSpacerItem * horizontalSpacer_6

12.100.1 Detailed Description

Definition at line 33 of file ui_mperfwidget.h.

12.100.2 Member Function Documentation

12.100.2.1 void Ui_MPerfWidget::retranslateUi (QWidget * *MPerfWidget*) [inline]

Definition at line 641 of file ui_mperfwidget.h.

References aSnapBox, copyButton, eBox1, eBox2, eBox3, eBox4, eBox5, iButton0, iButton1, iButton2, iButton3, iButton4, iButton5, iButtonO, indicBox, label, label_11, label_12, label_13, label_14, label_15, label_2, label_25, label_3, label_4, label_5, label_6, label_7, label_8, lHeightBox, spinBox, and xyBox.

Referenced by setupUi().

```
    {
        MPerfWidget->setWindowTitle(QApplication::translate("MPerfWidget", "Form", Q_NULLPTR));
        label->setText(QApplication::translate("MPerfWidget", "DPI", Q_NULLPTR));
        label_25->setText(QApplication::translate("MPerfWidget", "Lift height:", Q_NULLPTR));
        lHeightBox->clear();
        lHeightBox->insertItems(0, QStringList()
         << QApplication::translate("MPerfWidget", "Low", Q_NULLPTR)
         << QApplication::translate("MPerfWidget", "Medium-low", Q_NULLPTR)
         << QApplication::translate("MPerfWidget", "Medium", Q_NULLPTR)
         << QApplication::translate("MPerfWidget", "Medium-high", Q_NULLPTR)
         << QApplication::translate("MPerfWidget", "High", Q_NULLPTR)
        );
#ifndef QT_NO_TOOLTIP
        eBox2->setToolTip(QApplication::translate("MPerfWidget", "Uncheck this box to skip the stage while moving up or down.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        eBox2->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButton4->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton4->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButton5->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton5->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButton3->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton3->setText(QString());
        label_12->setText(QApplication::translate("MPerfWidget", "X Value:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        eBox5->setToolTip(QApplication::translate("MPerfWidget", "Uncheck this box to skip the stage while moving up or down.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        eBox5->setText(QString());
        label_4->setText(QApplication::translate("MPerfWidget", "Y Value:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        iButton2->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton2->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButtonO->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButtonO->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButton1->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton1->setText(QString());
#ifndef QT_NO_TOOLTIP
        iButton0->setToolTip(QApplication::translate("MPerfWidget", "Tip: alt+click to set all colors at once", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        iButton0->setText(QString());
        label_3->setText(QApplication::translate("MPerfWidget", "You can assign other DPIs in the Binding tab.", Q_NULLPTR));
        label_6->setText(QApplication::translate("MPerfWidget", "2:", Q_NULLPTR));
        label_7->setText(QApplication::translate("MPerfWidget", "3:", Q_NULLPTR));
        label_8->setText(QApplication::translate("MPerfWidget", "4:", Q_NULLPTR));
        label_5->setText(QApplication::translate("MPerfWidget", "1:", Q_NULLPTR));
        label_15->setText(QApplication::translate("MPerfWidget", "Other:", Q_NULLPTR));
        label_13->setText(QApplication::translate("MPerfWidget", "5:", Q_NULLPTR));
        label_14->setText(QApplication::translate("MPerfWidget", "Sniper:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        eBox4->setToolTip(QApplication::translate("MPerfWidget", "Uncheck this box to skip the stage while moving up or down.", Q_NULLPTR));
```

```
#endif // QT_NO_TOOLTIP
        eBox4->setText(QString());
        label_11->setText(QApplication::translate("MPerfWidget", "DPI Stage:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        eBox3->setToolTip(QApplication::translate("MPerfWidget", "Uncheck this box to skip the stage while moving up or down.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        eBox3->setText(QString());
#ifndef QT_NO_TOOLTIP
        eBox1->setToolTip(QApplication::translate("MPerfWidget", "Uncheck this box to skip the stage while moving up or down.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        eBox1->setText(QString());
        label_2->setText(QApplication::translate("MPerfWidget", "Movement", Q_NULLPTR));
        aSnapBox->setText(QApplication::translate("MPerfWidget", "Angle snap", Q_NULLPTR));
        indicBox->setText(QApplication::translate("MPerfWidget", "Use DPI indicator:", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        spinBox->setToolTip(QApplication::translate("MPerfWidget", "Indicator intensity", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        spinBox->setSuffix(QApplication::translate("MPerfWidget", "%", Q_NULLPTR));
        xyBox->setText(QApplication::translate("MPerfWidget", "Independent X/Y states", Q_NULLPTR));
        copyButton->setText(QApplication::translate("MPerfWidget", "Copy to mode...", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.100.2.2 void Ui_MPerfWidget::setupUi (QWidget * *MPerfWidget*) [inline]

Definition at line 111 of file ui_mperfwidget.h.

References aSnapBox, copyButton, eBox1, eBox2, eBox3, eBox4, eBox5, gridLayout, horizontalLayout, horizontalLayout_2, horizontalLayout_4, horizontalSpacer, horizontalSpacer_2, horizontalSpacer_3, horizontalSpacer_4, horizontalSpacer_5, horizontalSpacer_6, horizontalSpacer_7, iButton0, iButton1, iButton2, iButton3, iButton4, iButton5, iButtonO, indicBox, label, label_11, label_12, label_13, label_14, label_15, label_2, label_25, label_3, label_4, label_5, label_6, label_7, label_8, lHeightBox, line, line_2, line_3, retranslateUi(), spinBox, verticalLayout, verticalSpacer, verticalSpacer_2, verticalSpacer_3, xBox0, xBox1, xBox2, xBox3, xBox4, xBox5, xSlider0, xSlider1, xSlider2, xSlider3, xSlider4, xSlider5, xyBox, yBox0, yBox1, yBox2, yBox3, yBox4, yBox5, ySlider0, ySlider1, ySlider2, ySlider3, ySlider4, and ySlider5.

Referenced by MPerfWidget::MPerfWidget().

```
    {
        if (MPerfWidget->objectName().isEmpty())
            MPerfWidget->setObjectName(QStringLiteral("MPerfWidget"));
        MPerfWidget->resize(932, 637);
        verticalLayout = new QVBoxLayout(MPerfWidget);
        verticalLayout->setObjectName(QStringLiteral("verticalLayout"));
        label = new QLabel(MPerfWidget);
        label->setObjectName(QStringLiteral("label"));
        QFont font;
        font.setBold(true);
        font.setWeight(75);
        label->setFont(font);

        verticalLayout->addWidget(label);

        line = new QFrame(MPerfWidget);
        line->setObjectName(QStringLiteral("line"));
        line->setFrameShape(QFrame::HLine);
        line->setFrameShadow(QFrame::Sunken);

        verticalLayout->addWidget(line);

        gridLayout = new QGridLayout();
```

```
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        label_25 = new QLabel(MPerfWidget);
        label_25->setObjectName(QStringLiteral("label_25"));
        label_25->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout->addWidget(label_25, 16, 5, 1, 2);

        horizontalLayout_2 = new QHBoxLayout();
        horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
        lHeightBox = new QComboBox(MPerfWidget);
        lHeightBox->setObjectName(QStringLiteral("lHeightBox"));

        horizontalLayout_2->addWidget(lHeightBox);

        horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer_2);


        gridLayout->addLayout(horizontalLayout_2, 16, 8, 1, 3);

        eBox2 = new QCheckBox(MPerfWidget);
        eBox2->setObjectName(QStringLiteral("eBox2"));

        gridLayout->addWidget(eBox2, 7, 1, 1, 1);

        ySlider3 = new QSlider(MPerfWidget);
        ySlider3->setObjectName(QStringLiteral("ySlider3"));
        ySlider3->setMinimum(0);
        ySlider3->setMaximum(1000);
        ySlider3->setSingleStep(10);
        ySlider3->setPageStep(50);
        ySlider3->setValue(0);
        ySlider3->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider3, 8, 8, 1, 1);

        xSlider2 = new QSlider(MPerfWidget);
        xSlider2->setObjectName(QStringLiteral("xSlider2"));
        xSlider2->setMinimum(0);
        xSlider2->setMaximum(1000);
        xSlider2->setSingleStep(10);
        xSlider2->setPageStep(50);
        xSlider2->setValue(0);
        xSlider2->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider2, 7, 5, 1, 1);

        xBox3 = new QSpinBox(MPerfWidget);
        xBox3->setObjectName(QStringLiteral("xBox3"));
        xBox3->setMinimum(100);
        xBox3->setMaximum(12000);
        xBox3->setSingleStep(50);

        gridLayout->addWidget(xBox3, 8, 6, 1, 1);

        yBox0 = new QSpinBox(MPerfWidget);
        yBox0->setObjectName(QStringLiteral("yBox0"));
        yBox0->setMinimum(100);
        yBox0->setMaximum(12000);
        yBox0->setSingleStep(50);

        gridLayout->addWidget(yBox0, 11, 9, 1, 1);

        ySlider0 = new QSlider(MPerfWidget);
        ySlider0->setObjectName(QStringLiteral("ySlider0"));
        ySlider0->setMinimum(0);
        ySlider0->setMaximum(1000);
        ySlider0->setSingleStep(10);
        ySlider0->setPageStep(50);
        ySlider0->setValue(0);
        ySlider0->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider0, 11, 8, 1, 1);

        iButton4 = new ColorButton(MPerfWidget);
        iButton4->setObjectName(QStringLiteral("iButton4"));
        QSizePolicy sizePolicy(QSizePolicy::Fixed, QSizePolicy::Fixed);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(iButton4->sizePolicy().hasHeightForWidth());
        iButton4->setSizePolicy(sizePolicy);
        iButton4->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton4, 9, 2, 1, 1);

```

```
        iButton5 = new ColorButton(MPerfWidget);
        iButton5->setObjectName(QStringLiteral("iButton5"));
        sizePolicy.setHeightForWidth(iButton5->sizePolicy().hasHeightForWidth());
        iButton5->setSizePolicy(sizePolicy);
        iButton5->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton5, 10, 2, 1, 1);

        horizontalSpacer_4 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_4, 4, 4, 1, 1);

        verticalSpacer_3 = new QSpacerItem(20, 15, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_3, 3, 2, 1, 1);

        horizontalSpacer_5 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_5, 4, 7, 1, 1);

        iButton3 = new ColorButton(MPerfWidget);
        iButton3->setObjectName(QStringLiteral("iButton3"));
        sizePolicy.setHeightForWidth(iButton3->sizePolicy().hasHeightForWidth());
        iButton3->setSizePolicy(sizePolicy);
        iButton3->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton3, 8, 2, 1, 1);

        label_12 = new QLabel(MPerfWidget);
        label_12->setObjectName(QStringLiteral("label_12"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Preferred);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(label_12->sizePolicy().hasHeightForWidth());
        label_12->setSizePolicy(sizePolicy1);

        gridLayout->addWidget(label_12, 4, 5, 1, 1);

        xBox4 = new QSpinBox(MPerfWidget);
        xBox4->setObjectName(QStringLiteral("xBox4"));
        xBox4->setMinimum(100);
        xBox4->setMaximum(12000);
        xBox4->setSingleStep(50);

        gridLayout->addWidget(xBox4, 9, 6, 1, 1);

        xBox0 = new QSpinBox(MPerfWidget);
        xBox0->setObjectName(QStringLiteral("xBox0"));
        xBox0->setMinimum(100);
        xBox0->setMaximum(12000);
        xBox0->setSingleStep(50);

        gridLayout->addWidget(xBox0, 11, 6, 1, 1);

        yBox5 = new QSpinBox(MPerfWidget);
        yBox5->setObjectName(QStringLiteral("yBox5"));
        yBox5->setMinimum(100);
        yBox5->setMaximum(12000);
        yBox5->setSingleStep(50);

        gridLayout->addWidget(yBox5, 10, 9, 1, 1);

        eBox5 = new QCheckBox(MPerfWidget);
        eBox5->setObjectName(QStringLiteral("eBox5"));

        gridLayout->addWidget(eBox5, 10, 1, 1, 1);

        xSlider5 = new QSlider(MPerfWidget);
        xSlider5->setObjectName(QStringLiteral("xSlider5"));
        xSlider5->setMinimum(0);
        xSlider5->setMaximum(1000);
        xSlider5->setSingleStep(10);
        xSlider5->setPageStep(50);
        xSlider5->setValue(0);
        xSlider5->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider5, 10, 5, 1, 1);

        xBox1 = new QSpinBox(MPerfWidget);
        xBox1->setObjectName(QStringLiteral("xBox1"));
        sizePolicy.setHeightForWidth(xBox1->sizePolicy().hasHeightForWidth());
        xBox1->setSizePolicy(sizePolicy);
        xBox1->setMinimum(100);
        xBox1->setMaximum(12000);
```

```
        xBox1->setSingleStep(50);

        gridLayout->addWidget(xBox1, 6, 6, 1, 1);

        yBox2 = new QSpinBox(MPerfWidget);
        yBox2->setObjectName(QStringLiteral("yBox2"));
        yBox2->setMinimum(100);
        yBox2->setMaximum(12000);
        yBox2->setSingleStep(50);

        gridLayout->addWidget(yBox2, 7, 9, 1, 1);

        yBox3 = new QSpinBox(MPerfWidget);
        yBox3->setObjectName(QStringLiteral("yBox3"));
        yBox3->setMinimum(100);
        yBox3->setMaximum(12000);
        yBox3->setSingleStep(50);

        gridLayout->addWidget(yBox3, 8, 9, 1, 1);

        xSlider4 = new QSlider(MPerfWidget);
        xSlider4->setObjectName(QStringLiteral("xSlider4"));
        xSlider4->setMinimum(0);
        xSlider4->setMaximum(1000);
        xSlider4->setSingleStep(10);
        xSlider4->setPageStep(50);
        xSlider4->setValue(0);
        xSlider4->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider4, 9, 5, 1, 1);

        label_4 = new QLabel(MPerfWidget);
        label_4->setObjectName(QStringLiteral("label_4"));
        sizePolicy1.setHeightForWidth(label_4->sizePolicy().hasHeightForWidth());
        label_4->setSizePolicy(sizePolicy1);

        gridLayout->addWidget(label_4, 4, 8, 1, 1);

        xSlider0 = new QSlider(MPerfWidget);
        xSlider0->setObjectName(QStringLiteral("xSlider0"));
        xSlider0->setMinimum(0);
        xSlider0->setMaximum(1000);
        xSlider0->setSingleStep(10);
        xSlider0->setPageStep(50);
        xSlider0->setValue(0);
        xSlider0->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider0, 11, 5, 1, 1);

        iButton2 = new ColorButton(MPerfWidget);
        iButton2->setObjectName(QStringLiteral("iButton2"));
        sizePolicy.setHeightForWidth(iButton2->sizePolicy().hasHeightForWidth());
        iButton2->setSizePolicy(sizePolicy);
        iButton2->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton2, 7, 2, 1, 1);

        line_3 = new QFrame(MPerfWidget);
        line_3->setObjectName(QStringLiteral("line_3"));
        line_3->setFrameShape(QFrame::HLine);
        line_3->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_3, 5, 0, 1, 11);

        iButton0 = new ColorButton(MPerfWidget);
        iButton0->setObjectName(QStringLiteral("iButton0"));
        sizePolicy.setHeightForWidth(iButton0->sizePolicy().hasHeightForWidth());
        iButton0->setSizePolicy(sizePolicy);
        iButton0->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton0, 12, 2, 1, 1);

        yBox1 = new QSpinBox(MPerfWidget);
        yBox1->setObjectName(QStringLiteral("yBox1"));
        sizePolicy.setHeightForWidth(yBox1->sizePolicy().hasHeightForWidth());
        yBox1->setSizePolicy(sizePolicy);
        yBox1->setMinimum(100);
        yBox1->setMaximum(12000);
        yBox1->setSingleStep(50);

        gridLayout->addWidget(yBox1, 6, 9, 1, 1);

        ySlider2 = new QSlider(MPerfWidget);
        ySlider2->setObjectName(QStringLiteral("ySlider2"));
        ySlider2->setMinimum(0);
        ySlider2->setMaximum(1000);
        ySlider2->setSingleStep(10);
```

```
        ySlider2->setPageStep(50);
        ySlider2->setValue(0);
        ySlider2->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider2, 7, 8, 1, 1);

        xBox2 = new QSpinBox(MPerfWidget);
        xBox2->setObjectName(QStringLiteral("xBox2"));
        xBox2->setMinimum(100);
        xBox2->setMaximum(12000);
        xBox2->setSingleStep(50);

        gridLayout->addWidget(xBox2, 7, 6, 1, 1);

        xSlider1 = new QSlider(MPerfWidget);
        xSlider1->setObjectName(QStringLiteral("xSlider1"));
        QSizePolicy sizePolicy2(QSizePolicy::Expanding, QSizePolicy::Fixed);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(0);
        sizePolicy2.setHeightForWidth(xSlider1->sizePolicy().hasHeightForWidth());
        xSlider1->setSizePolicy(sizePolicy2);
        xSlider1->setMinimum(0);
        xSlider1->setMaximum(1000);
        xSlider1->setSingleStep(10);
        xSlider1->setPageStep(50);
        xSlider1->setValue(0);
        xSlider1->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider1, 6, 5, 1, 1);

        horizontalSpacer = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer, 0, 0, 1, 1);

        yBox4 = new QSpinBox(MPerfWidget);
        yBox4->setObjectName(QStringLiteral("yBox4"));
        yBox4->setMinimum(100);
        yBox4->setMaximum(12000);
        yBox4->setSingleStep(50);

        gridLayout->addWidget(yBox4, 9, 9, 1, 1);

        iButton1 = new ColorButton(MPerfWidget);
        iButton1->setObjectName(QStringLiteral("iButton1"));
        sizePolicy.setHeightForWidth(iButton1->sizePolicy().hasHeightForWidth());
        iButton1->setSizePolicy(sizePolicy);
        iButton1->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton1, 6, 2, 1, 1);

        ySlider4 = new QSlider(MPerfWidget);
        ySlider4->setObjectName(QStringLiteral("ySlider4"));
        ySlider4->setMinimum(0);
        ySlider4->setMaximum(1000);
        ySlider4->setSingleStep(10);
        ySlider4->setPageStep(50);
        ySlider4->setValue(0);
        ySlider4->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider4, 9, 8, 1, 1);

        ySlider1 = new QSlider(MPerfWidget);
        ySlider1->setObjectName(QStringLiteral("ySlider1"));
        ySlider1->setMinimum(0);
        ySlider1->setMaximum(1000);
        ySlider1->setSingleStep(10);
        ySlider1->setPageStep(50);
        ySlider1->setValue(0);
        ySlider1->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider1, 6, 8, 1, 1);

        iButton0 = new ColorButton(MPerfWidget);
        iButton0->setObjectName(QStringLiteral("iButton0"));
        sizePolicy.setHeightForWidth(iButton0->sizePolicy().hasHeightForWidth());
        iButton0->setSizePolicy(sizePolicy);
        iButton0->setMinimumSize(QSize(0, 40));

        gridLayout->addWidget(iButton0, 11, 2, 1, 1);

        xSlider3 = new QSlider(MPerfWidget);
        xSlider3->setObjectName(QStringLiteral("xSlider3"));
        xSlider3->setMinimum(0);
        xSlider3->setMaximum(1000);
        xSlider3->setSingleStep(10);
        xSlider3->setPageStep(50);
```

```
        xSlider3->setValue(0);
        xSlider3->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(xSlider3, 8, 5, 1, 1);

        xBox5 = new QSpinBox(MPerfWidget);
        xBox5->setObjectName(QStringLiteral("xBox5"));
        xBox5->setMinimum(100);
        xBox5->setMaximum(12000);
        xBox5->setSingleStep(50);

        gridLayout->addWidget(xBox5, 10, 6, 1, 1);

        label_3 = new QLabel(MPerfWidget);
        label_3->setObjectName(QStringLiteral("label_3"));

        gridLayout->addWidget(label_3, 12, 5, 1, 5);

        label_6 = new QLabel(MPerfWidget);
        label_6->setObjectName(QStringLiteral("label_6"));

        gridLayout->addWidget(label_6, 7, 3, 1, 1);

        ySlider5 = new QSlider(MPerfWidget);
        ySlider5->setObjectName(QStringLiteral("ySlider5"));
        ySlider5->setMinimum(0);
        ySlider5->setMaximum(1000);
        ySlider5->setSingleStep(10);
        ySlider5->setPageStep(50);
        ySlider5->setValue(0);
        ySlider5->setOrientation(Qt::Horizontal);

        gridLayout->addWidget(ySlider5, 10, 8, 1, 1);

        label_7 = new QLabel(MPerfWidget);
        label_7->setObjectName(QStringLiteral("label_7"));

        gridLayout->addWidget(label_7, 8, 3, 1, 1);

        label_8 = new QLabel(MPerfWidget);
        label_8->setObjectName(QStringLiteral("label_8"));

        gridLayout->addWidget(label_8, 9, 3, 1, 1);

        label_5 = new QLabel(MPerfWidget);
        label_5->setObjectName(QStringLiteral("label_5"));

        gridLayout->addWidget(label_5, 6, 3, 1, 1);

        label_15 = new QLabel(MPerfWidget);
        label_15->setObjectName(QStringLiteral("label_15"));

        gridLayout->addWidget(label_15, 12, 3, 1, 1);

        label_13 = new QLabel(MPerfWidget);
        label_13->setObjectName(QStringLiteral("label_13"));

        gridLayout->addWidget(label_13, 10, 3, 1, 1);

        label_14 = new QLabel(MPerfWidget);
        label_14->setObjectName(QStringLiteral("label_14"));

        gridLayout->addWidget(label_14, 11, 3, 1, 1);

        eBox4 = new QCheckBox(MPerfWidget);
        eBox4->setObjectName(QStringLiteral("eBox4"));

        gridLayout->addWidget(eBox4, 9, 1, 1, 1);

        label_11 = new QLabel(MPerfWidget);
        label_11->setObjectName(QStringLiteral("label_11"));

        gridLayout->addWidget(label_11, 4, 2, 1, 2);

        eBox3 = new QCheckBox(MPerfWidget);
        eBox3->setObjectName(QStringLiteral("eBox3"));

        gridLayout->addWidget(eBox3, 8, 1, 1, 1);

        eBox1 = new QCheckBox(MPerfWidget);
        eBox1->setObjectName(QStringLiteral("eBox1"));

        gridLayout->addWidget(eBox1, 6, 1, 1, 1);

        label_2 = new QLabel(MPerfWidget);
        label_2->setObjectName(QStringLiteral("label_2"));
        label_2->setFont(font);
```

```

        gridLayout->addWidget(label_2, 14, 0, 1, 10);

        verticalSpacer = new QSpacerItem(20, 30, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer, 13, 2, 1, 1);

        aSnapBox = new QCheckBox(MPerfWidget);
        aSnapBox->setObjectName(QStringLiteral("aSnapBox"));

        gridLayout->addWidget(aSnapBox, 16, 1, 1, 4);

        line_2 = new QFrame(MPerfWidget);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
        line_2->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_2, 15, 0, 1, 10);

        horizontalLayout_4 = new QHBoxLayout();
        horizontalLayout_4->setObjectName(QStringLiteral("horizontalLayout_4"));
        indicBox = new QCheckBox(MPerfWidget);
        indicBox->setObjectName(QStringLiteral("indicBox"));

        horizontalLayout_4->addWidget(indicBox);

        horizontalSpacer_3 = new QSpacerItem(5, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        horizontalLayout_4->addItem(horizontalSpacer_3);

        spinBox = new QSpinBox(MPerfWidget);
        spinBox->setObjectName(QStringLiteral("spinBox"));
        spinBox->setMaximum(100);
        spinBox->setValue(100);

        horizontalLayout_4->addWidget(spinBox);

        horizontalSpacer_7 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        horizontalLayout_4->addItem(horizontalSpacer_7);


        gridLayout->addLayout(horizontalLayout_4, 0, 1, 1, 9);

        xyBox = new QCheckBox(MPerfWidget);
        xyBox->setObjectName(QStringLiteral("xyBox"));

        gridLayout->addWidget(xyBox, 2, 1, 1, 9);


        verticalLayout->addLayout(gridLayout);

        verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
    QSizePolicy::Expanding);

        verticalLayout->addItem(verticalSpacer_2);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        copyButton = new QPushButton(MPerfWidget);
        copyButton->setObjectName(QStringLiteral("copyButton"));

        horizontalLayout->addWidget(copyButton);

        horizontalSpacer_6 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        horizontalLayout->addItem(horizontalSpacer_6);


        verticalLayout->addLayout(horizontalLayout);


        retranslateUi(MPerfWidget);

        QMetaObject::connectSlotsByName(MPerfWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.100.3 Field Documentation

12.100.3.1 QCheckBox* Ui_MPerfWidget::aSnapBox

Definition at line 98 of file ui_mperfwidget.h.

Referenced by retranslateUi(), MPerfWidget::setPerf(), and setupUi().

12.100.3.2 QPushButton* Ui_MPerfWidget::copyButton

Definition at line 108 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.3 QCheckBox* Ui_MPerfWidget::eBox1

Definition at line 95 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), and setupUi().

12.100.3.4 QCheckBox* Ui_MPerfWidget::eBox2

Definition at line 44 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), and setupUi().

12.100.3.5 QCheckBox* Ui_MPerfWidget::eBox3

Definition at line 94 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), and setupUi().

12.100.3.6 QCheckBox∗ Ui_MPerfWidget::eBox4

Definition at line 92 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), and setupUi().

12.100.3.7 QCheckBox∗ Ui_MPerfWidget::eBox5

Definition at line 60 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), and setupUi().

12.100.3.8 QGridLayout∗ Ui_MPerfWidget::gridLayout

Definition at line 39 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.9 QHBoxLayout∗ Ui_MPerfWidget::horizontalLayout

Definition at line 107 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.10 QHBoxLayout∗ Ui_MPerfWidget::horizontalLayout_2

Definition at line 41 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.11 QHBoxLayout∗ Ui_MPerfWidget::horizontalLayout_4

Definition at line 100 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.12 QSpacerItem∗ Ui_MPerfWidget::horizontalSpacer

Definition at line 75 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.13 QSpacerItem∗ Ui_MPerfWidget::horizontalSpacer_2

Definition at line 43 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.14 QSpacerItem∗ Ui_MPerfWidget::horizontalSpacer_3

Definition at line 102 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.15 QSpacerItem* Ui_MPerfWidget::horizontalSpacer_4

Definition at line 52 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.16 QSpacerItem* Ui_MPerfWidget::horizontalSpacer_5

Definition at line 54 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.17 QSpacerItem* Ui_MPerfWidget::horizontalSpacer_6

Definition at line 109 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.18 QSpacerItem* Ui_MPerfWidget::horizontalSpacer_7

Definition at line 104 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.19 ColorButton* Ui_MPerfWidget::iButton0

Definition at line 80 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), and setupUi().

12.100.3.20 ColorButton* Ui_MPerfWidget::iButton1

Definition at line 77 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), and setupUi().

12.100.3.21 ColorButton* Ui_MPerfWidget::iButton2

Definition at line 68 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), and setupUi().

12.100.3.22 ColorButton* Ui_MPerfWidget::iButton3

Definition at line 55 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), and setupUi().

12.100.3.23 ColorButton* Ui_MPerfWidget::iButton4

Definition at line 50 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), and setupUi().

12.100.3.24 ColorButton* Ui_MPerfWidget::iButton5

Definition at line 51 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), and setupUi().

12.100.3.25 ColorButton* Ui_MPerfWidget::iButtonO

Definition at line 70 of file ui_mperfwidget.h.

Referenced by MPerfWidget::colorChanged(), MPerfWidget::MPerfWidget(), retranslateUi(), MPerfWidget::setPerf(), and setupUi().

12.100.3.26 QCheckBox* Ui_MPerfWidget::indicBox

Definition at line 101 of file ui_mperfwidget.h.

Referenced by retranslateUi(), MPerfWidget::setPerf(), and setupUi().

12.100.3.27 QLabel* Ui_MPerfWidget::label

Definition at line 37 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.28 QLabel* Ui_MPerfWidget::label_11

Definition at line 93 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.29 QLabel* Ui_MPerfWidget::label_12

Definition at line 56 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.30 QLabel* Ui_MPerfWidget::label_13

Definition at line 90 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.31 QLabel* Ui_MPerfWidget::label_14

Definition at line 91 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.32 QLabel* Ui_MPerfWidget::label_15

Definition at line 89 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.33 QLabel* Ui_MPerfWidget::label_2

Definition at line 96 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.34 QLabel* Ui_MPerfWidget::label_25

Definition at line 40 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.35 QLabel* Ui_MPerfWidget::label_3

Definition at line 83 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.36 QLabel* Ui_MPerfWidget::label_4

Definition at line 66 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.37 QLabel* Ui_MPerfWidget::label_5

Definition at line 88 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.38 QLabel* Ui_MPerfWidget::label_6

Definition at line 84 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.39 QLabel* Ui_MPerfWidget::label_7

Definition at line 86 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.40 QLabel* Ui_MPerfWidget::label_8

Definition at line 87 of file ui_mperfwidget.h.

Referenced by retranslateUi(), and setupUi().

12.100.3.41 QComboBox* Ui_MPerfWidget::lHeightBox

Definition at line 42 of file ui_mperfwidget.h.

Referenced by retranslateUi(), MPerfWidget::setPerf(), and setupUi().

12.100.3.42 QFrame* Ui_MPerfWidget::line

Definition at line 38 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.43 QFrame* Ui_MPerfWidget::line_2

Definition at line 99 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.44 QFrame* Ui_MPerfWidget::line_3

Definition at line 69 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.45 QSpinBox* Ui_MPerfWidget::spinBox

Definition at line 103 of file ui_mperfwidget.h.

Referenced by retranslateUi(), MPerfWidget::setPerf(), and setupUi().

12.100.3.46 QVBoxLayout* Ui_MPerfWidget::verticalLayout

Definition at line 36 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.47 QSpacerItem* Ui_MPerfWidget::verticalSpacer

Definition at line 97 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.48 QSpacerItem* Ui_MPerfWidget::verticalSpacer_2

Definition at line 106 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.49 QSpacerItem* Ui_MPerfWidget::verticalSpacer_3

Definition at line 53 of file ui_mperfwidget.h.

Referenced by setupUi().

12.100.3.50 QSpinBox* Ui_MPerfWidget::xBox0

Definition at line 58 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.51 QSpinBox* Ui_MPerfWidget::xBox1

Definition at line 62 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.52 QSpinBox* Ui_MPerfWidget::xBox2

Definition at line 73 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.53 QSpinBox* Ui_MPerfWidget::xBox3

Definition at line 47 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.54 QSpinBox* Ui_MPerfWidget::xBox4

Definition at line 57 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.55 QSpinBox* Ui_MPerfWidget::xBox5

Definition at line 82 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.56 QSlider* Ui_MPerfWidget::xSlider0

Definition at line 67 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.57 QSlider* Ui_MPerfWidget::xSlider1

Definition at line 74 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.58 QSlider* Ui_MPerfWidget::xSlider2

Definition at line 46 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.59 QSlider* Ui_MPerfWidget::xSlider3

Definition at line 81 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.60 QSlider* Ui_MPerfWidget::xSlider4

Definition at line 65 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.61 QSlider* Ui_MPerfWidget::xSlider5

Definition at line 61 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.62 QCheckBox* Ui_MPerfWidget::xyBox

Definition at line 105 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), retranslateUi(), setupUi(), and MPerfWidget::sliderYMoved().

12.100.3.63 QSpinBox* Ui_MPerfWidget::yBox0

Definition at line 48 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.64 QSpinBox* Ui_MPerfWidget::yBox1

Definition at line 71 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.65 QSpinBox* Ui_MPerfWidget::yBox2

Definition at line 63 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.66 QSpinBox* Ui_MPerfWidget::yBox3

Definition at line 64 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.67 QSpinBox* Ui_MPerfWidget::yBox4

Definition at line 76 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.68 QSpinBox* Ui_MPerfWidget::yBox5

Definition at line 59 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.69 QSlider* Ui_MPerfWidget::ySlider0

Definition at line 49 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.70 QSlider* Ui_MPerfWidget::ySlider1

Definition at line 79 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.71 QSlider* Ui_MPerfWidget::ySlider2

Definition at line 72 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.72 QSlider* Ui_MPerfWidget::ySlider3

Definition at line 45 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.73 QSlider* Ui_MPerfWidget::ySlider4

Definition at line 78 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

12.100.3.74 QSlider* Ui_MPerfWidget::ySlider5

Definition at line 85 of file ui_mperfwidget.h.

Referenced by MPerfWidget::MPerfWidget(), and setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_mperfwidget.h

12.101 Ui_RebindWidget Class Reference

```
#include <src/ckb/ui_rebindwidget.h>
```

Inheritance diagram for Ui_RebindWidget:

Collaboration diagram for Ui_RebindWidget:

Public Member Functions

- void setupUi (QWidget *RebindWidget)
- void retranslateUi (QWidget *RebindWidget)

Data Fields

- QVBoxLayout * verticalLayout
- QTabWidget * tabWidget
- QWidget * keyTab

- QGridLayout * gridLayout_2
- QComboBox * numBox
- QComboBox * typingBox
- QComboBox * fnBox
- QSpacerItem * verticalSpacer_10
- QSpacerItem * verticalSpacer_3
- QSpacerItem * horizontalSpacer_2
- QRadioButton * typingButton
- QComboBox * modBox
- QSpacerItem * horizontalSpacer_3
- QRadioButton * mediaButton
- QSpacerItem * verticalSpacer_4
- QSpacerItem * horizontalSpacer_9
- QSpacerItem * horizontalSpacer_4
- QRadioButton * modButton
- QRadioButton * fnButton
- QComboBox * mediaBox
- QRadioButton * numButton
- QSpacerItem * horizontalSpacer_17
- QWidget * mouseTab
- QGridLayout * gridLayout
- QRadioButton * dpiButton
- QSpacerItem * verticalSpacer_2
- QSpacerItem * verticalSpacer_8
- QSpacerItem * horizontalSpacer_18
- QSpacerItem * horizontalSpacer_20
- QComboBox * mb2Box
- QComboBox * dpiBox
- QSpinBox * dpiCustYBox
- QComboBox * mbBox
- QComboBox * wheelBox
- QRadioButton * mbButton
- QSpinBox * dpiCustXBox
- QLabel * dpiWarning
- QRadioButton * wheelButton
- QSpacerItem * horizontalSpacer_22
- QRadioButton * mb2Button
- QLabel * dpiCustLabel
- QSpacerItem * horizontalSpacer_19
- QSpacerItem * horizontalSpacer_21
- QWidget * animTab
- QGridLayout * gridLayout_5
- QSpacerItem * verticalSpacer_11
- QComboBox * animBox
- QSpacerItem * horizontalSpacer_24
- QSpacerItem * horizontalSpacer_25
- QCheckBox * animKrBox
- QCheckBox * animOnceBox
- QSpacerItem * horizontalSpacer_26
- QRadioButton * animButton
- QSpacerItem * horizontalSpacer_23
- QWidget * actionTab
- QGridLayout * gridLayout_3
- QSpacerItem * horizontalSpacer_5
- QRadioButton * modeButton

- QCheckBox * modeWrapBox
- QCheckBox * lightWrapBox
- QSpacerItem * verticalSpacer_7
- QSpacerItem * verticalSpacer_6
- QRadioButton * lockButton
- QSpacerItem * verticalSpacer_5
- QComboBox * lightBox
- QComboBox * lockBox
- QRadioButton * lightButton
- QComboBox * modeBox
- QSpacerItem * horizontalSpacer_8
- QSpacerItem * horizontalSpacer_10
- QSpacerItem * horizontalSpacer_7
- QSpacerItem * horizontalSpacer_6
- QWidget * programTab
- QGridLayout * gridLayout_4
- QSpacerItem * verticalSpacer
- QSpacerItem * horizontalSpacer
- QCheckBox * programKpButton
- QLineEdit * programKpBox
- QSpacerItem * horizontalSpacer_11
- QSpacerItem * horizontalSpacer_13
- QLineEdit * programKrBox
- QCheckBox * programKrButton
- QSpacerItem * horizontalSpacer_12
- QWidget * programKpExtra
- QHBoxLayout * horizontalLayout_2
- QCheckBox * programKpSIBox
- QComboBox * programKpModeBox
- QSpacerItem * horizontalSpacer_15
- QWidget * programKrExtra
- QHBoxLayout * horizontalLayout_3
- QCheckBox * programKrSIBox
- QComboBox * programKrModeBox
- QSpacerItem * horizontalSpacer_16
- QLabel * progTipLabel
- QWidget * macroTab
- QWidget * layoutWidget1
- QGridLayout * gridLayout_8
- QGroupBox * groupBox_2
- QPlainTextEdit * pteMacroBox
- QPlainTextEdit * pteMacroComment
- QPlainTextEdit * pteMacroText
- QWidget * layoutWidget
- QVBoxLayout * verticalLayout_2
- QGroupBox * groupBox_3
- QGroupBox * groupBox_4
- QWidget * layoutWidget_2
- QGridLayout * gridLayout_10
- QGroupBox * groupBox
- QPushButton * btnStopMacro
- QPushButton * btnStartMacro
- QPushButton * btnClearMacro
- QLabel * lbl_macro
- QHBoxLayout * horizontalLayout

- QSpacerItem * horizontalSpacer_14
- QPushButton * unbindButton
- QPushButton * resetButton
- QPushButton * cancelButton
- QPushButton * applyButton

12.101.1 Detailed Description

Definition at line 35 of file ui_rebindwidget.h.

12.101.2 Member Function Documentation

12.101.2.1 void Ui_RebindWidget::retranslateUi (QWidget * *RebindWidget*) [inline]

Definition at line 825 of file ui_rebindwidget.h.

References actionTab, animBox, animButton, animKrBox, animOnceBox, animTab, applyButton, btnClearMacro, btnStartMacro, btnStopMacro, cancelButton, dpiBox, dpiButton, dpiCustLabel, dpiWarning, fnBox, fnButton, groupBox, groupBox_2, groupBox_3, groupBox_4, keyTab, lbl_macro, lightBox, lightButton, lightWrapBox, lockBox, lockButton, macroTab, mb2Box, mb2Button, mbBox, mbButton, mediaBox, mediaButton, modBox, modButton, modeBox, modeButton, modeWrapBox, mouseTab, numBox, numButton, programKpButton, programKpModeBox, programKpSIBox, programKrButton, programKrModeBox, programKrSIBox, programTab, progTipLabel, pteMacroComment, pteMacroText, resetButton, tabWidget, typingBox, typingButton, unbindButton, wheelBox, and wheelButton.

Referenced by setupUi().

```
    {
        numBox->clear();
        numBox->insertItems(0, QStringList()
         << QString()
        );
        typingBox->clear();
        typingBox->insertItems(0, QStringList()
         << QString()
        );
        fnBox->clear();
        fnBox->insertItems(0, QStringList()
         << QString()
        );
        typingButton->setText(QApplication::translate("RebindWidget", "Typing:", Q_NULLPTR));
        modBox->clear();
        modBox->insertItems(0, QStringList()
         << QString()
        );
        mediaButton->setText(QApplication::translate("RebindWidget", "Media:", Q_NULLPTR));
        modButton->setText(QApplication::translate("RebindWidget", "Modifier:", Q_NULLPTR));
        fnButton->setText(QApplication::translate("RebindWidget", "Miscellaneous:", Q_NULLPTR));
        mediaBox->clear();
        mediaBox->insertItems(0, QStringList()
         << QString()
        );
        numButton->setText(QApplication::translate("RebindWidget", "Number pad:", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(keyTab), QApplication::translate("
    RebindWidget", "Keyboard", Q_NULLPTR));
        dpiButton->setText(QApplication::translate("RebindWidget", "Change DPI:", Q_NULLPTR));
        mb2Box->clear();
        mb2Box->insertItems(0, QStringList()
         << QString()
         << QApplication::translate("RebindWidget", "4 (Back)", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "5 (Forward)", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "6", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "7", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "8", Q_NULLPTR)
        );
        dpiBox->clear();
        dpiBox->insertItems(0, QStringList()
         << QString()
         << QApplication::translate("RebindWidget", "(Up)", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "(Down)", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "Sniper", Q_NULLPTR)
         << QApplication::translate("RebindWidget", "1:", Q_NULLPTR)
```

```
        << QApplication::translate("RebindWidget", "2:", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "3:", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "4:", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "5:", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Custom:", Q_NULLPTR)
      );
      mbBox->clear();
      mbBox->insertItems(0, QStringList()
        << QString()
        << QApplication::translate("RebindWidget", "Left", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Right", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Middle", Q_NULLPTR)
      );
      wheelBox->clear();
      wheelBox->insertItems(0, QStringList()
        << QString()
        << QApplication::translate("RebindWidget", "Up", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Down", Q_NULLPTR)
      );
      mbButton->setText(QApplication::translate("RebindWidget", "Standard button:", Q_NULLPTR));
      dpiWarning->setText(QApplication::translate("RebindWidget", "DPI is only available for mice.", Q_NULLPTR));
      wheelButton->setText(QApplication::translate("RebindWidget", "Wheel:", Q_NULLPTR));
      mb2Button->setText(QApplication::translate("RebindWidget", "Special button:", Q_NULLPTR));
      dpiCustLabel->setText(QApplication::translate("RebindWidget", "x", Q_NULLPTR));
      tabWidget->setTabText(tabWidget->indexOf(mouseTab), QApplication::translate("RebindWidget", "Mouse", Q_NULLPTR));
      animBox->clear();
      animBox->insertItems(0, QStringList()
        << QString()
      );
      animKrBox->setText(QApplication::translate("RebindWidget", "Stop on key release", Q_NULLPTR));
      animOnceBox->setText(QApplication::translate("RebindWidget", "Restart every time", Q_NULLPTR));
      animButton->setText(QApplication::translate("RebindWidget", "Start animation on keypress:", Q_NULLPTR));
      tabWidget->setTabText(tabWidget->indexOf(animTab), QApplication::translate("RebindWidget", "Animation", Q_NULLPTR));
      modeButton->setText(QApplication::translate("RebindWidget", "Switch to mode:", Q_NULLPTR));
      modeWrapBox->setText(QApplication::translate("RebindWidget", "Wrap-around", Q_NULLPTR));
      lightWrapBox->setText(QApplication::translate("RebindWidget", "Wrap-around", Q_NULLPTR));
      lockButton->setText(QApplication::translate("RebindWidget", "Windows lock:", Q_NULLPTR));
      lightBox->clear();
      lightBox->insertItems(0, QStringList()
        << QString()
        << QApplication::translate("RebindWidget", "Up", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Down", Q_NULLPTR)
      );
      lockBox->clear();
      lockBox->insertItems(0, QStringList()
        << QString()
        << QApplication::translate("RebindWidget", "Toggle", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "On", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Off", Q_NULLPTR)
      );
      lightButton->setText(QApplication::translate("RebindWidget", "Brightness:", Q_NULLPTR));
      modeBox->clear();
      modeBox->insertItems(0, QStringList()
        << QString()
        << QApplication::translate("RebindWidget", "(Previous)", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "(Next)", Q_NULLPTR)
      );
      tabWidget->setTabText(tabWidget->indexOf(actionTab), QApplication::translate("RebindWidget", "Special", Q_NULLPTR));
      programKpButton->setText(QApplication::translate("RebindWidget", "Launch program on key press:", Q_NULLPTR));
      programKrButton->setText(QApplication::translate("RebindWidget", "Launch program on key release:", Q_NULLPTR));
      programKpSIBox->setText(QApplication::translate("RebindWidget", "Single instance", Q_NULLPTR));
      programKpModeBox->clear();
      programKpModeBox->insertItems(0, QStringList()
        << QApplication::translate("RebindWidget", "Run indefinitely", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Stop on release", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Stop on re-press", Q_NULLPTR)
      );
      programKrSIBox->setText(QApplication::translate("RebindWidget", "Single instance", Q_NULLPTR));
      programKrModeBox->clear();
      programKrModeBox->insertItems(0, QStringList()
        << QApplication::translate("RebindWidget", "Run indefinitely", Q_NULLPTR)
        << QApplication::translate("RebindWidget", "Stop on re-press", Q_NULLPTR)
      );
      progTipLabel->setText(QApplication::translate("RebindWidget", "Tip", Q_NULLPTR));
```

```
        tabWidget->setTabText(tabWidget->indexOf(programTab), QApplication::translate("RebindWidget", "Program", Q_NULLPTR));
        groupBox_2->setTitle(QApplication::translate("RebindWidget", "Macro Key Actions", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        pteMacroComment->setToolTip(QApplication::translate("RebindWidget", "What is this macro for?", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        pteMacroComment->setDocumentTitle(QString());
        pteMacroComment->setPlainText(QString());
        pteMacroText->setDocumentTitle(QString());
        pteMacroText->setPlainText(QString());
        groupBox_3->setTitle(QApplication::translate("RebindWidget", "Macro Comment", Q_NULLPTR));
        groupBox_4->setTitle(QApplication::translate("RebindWidget", "Macro Text", Q_NULLPTR));
        groupBox->setTitle(QApplication::translate("RebindWidget", "Macro recording", Q_NULLPTR));
        btnStopMacro->setText(QApplication::translate("RebindWidget", "Stop", Q_NULLPTR));
        btnStartMacro->setText(QApplication::translate("RebindWidget", "Start", Q_NULLPTR));
        btnClearMacro->setText(QApplication::translate("RebindWidget", "Clear", Q_NULLPTR));
        lbl_macro->setText(QApplication::translate("RebindWidget", "Comment label for help", Q_NULLPTR));
        tabWidget->setTabText(tabWidget->indexOf(macroTab), QApplication::translate("RebindWidget", "Macro", Q_NULLPTR));
        unbindButton->setText(QApplication::translate("RebindWidget", "Unbind", Q_NULLPTR));
        resetButton->setText(QApplication::translate("RebindWidget", "Reset to Default", Q_NULLPTR));
        cancelButton->setText(QApplication::translate("RebindWidget", "Cancel", Q_NULLPTR));
        applyButton->setText(QApplication::translate("RebindWidget", "Apply", Q_NULLPTR));
        Q_UNUSED(RebindWidget);
    } // retranslateUi
```

Here is the caller graph for this function:

12.101.2.2 void Ui_RebindWidget::setupUi (QWidget * *RebindWidget*) [inline]

Definition at line 157 of file ui_rebindwidget.h.

References actionTab, animBox, animButton, animKrBox, animOnceBox, animTab, applyButton, btnClearMacro, btnStartMacro, btnStopMacro, cancelButton, dpiBox, dpiButton, dpiCustLabel, dpiCustXBox, dpiCustYBox, dpiWarning, fnBox, fnButton, gridLayout, gridLayout_10, gridLayout_2, gridLayout_3, gridLayout_4, gridLayout_5, gridLayout_8, groupBox, groupBox_2, groupBox_3, groupBox_4, horizontalLayout, horizontalLayout_2, horizontalLayout_3, horizontalSpacer, horizontalSpacer_10, horizontalSpacer_11, horizontalSpacer_12, horizontalSpacer_13, horizontalSpacer_14, horizontalSpacer_15, horizontalSpacer_16, horizontalSpacer_17, horizontalSpacer_18, horizontalSpacer_19, horizontalSpacer_2, horizontalSpacer_20, horizontalSpacer_21, horizontalSpacer_22, horizontalSpacer_23, horizontalSpacer_24, horizontalSpacer_25, horizontalSpacer_26, horizontalSpacer_3, horizontalSpacer_4, horizontalSpacer_5, horizontalSpacer_6, horizontalSpacer_7, horizontalSpacer_8, horizontalSpacer_9, keyTab, layoutWidget, layoutWidget1, layoutWidget_2, lbl_macro, lightBox, lightButton, lightWrapBox, lockBox, lockButton, macroTab, mb2Box, mb2Button, mbBox, mbButton, mediaBox, mediaButton, modBox, modButton, modeBox, modeButton, modeWrapBox, mouseTab, numBox, numButton, programKpBox, programKpButton, programKpExtra, programKpModeBox, programKpSIBox, programKrBox, programKrButton, programKrExtra, programKrModeBox, programKrSIBox, programTab, progTipLabel, pteMacroBox, pteMacroComment, pteMacroText, resetButton, retranslateUi(), tabWidget, typingBox, typingButton, unbindButton, verticalLayout, verticalLayout_2, verticalSpacer, verticalSpacer_10, verticalSpacer_11, verticalSpacer_2, verticalSpacer_3, verticalSpacer_4, verticalSpacer_5, verticalSpacer_6, verticalSpacer_7, verticalSpacer_8, wheelBox, and wheelButton.

Referenced by RebindWidget::RebindWidget().

```
    {
        if (RebindWidget->objectName().isEmpty())
            RebindWidget->setObjectName(QStringLiteral("RebindWidget"));
        RebindWidget->resize(687, 342);
```

```
        QSizePolicy sizePolicy(QSizePolicy::Expanding, QSizePolicy::Preferred);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(RebindWidget->sizePolicy().hasHeightForWidth());
        RebindWidget->setSizePolicy(sizePolicy);
        verticalLayout = new QVBoxLayout(RebindWidget);
        verticalLayout->setObjectName(QStringLiteral("verticalLayout"));
        tabWidget = new QTabWidget(RebindWidget);
        tabWidget->setObjectName(QStringLiteral("tabWidget"));
        keyTab = new QWidget();
        keyTab->setObjectName(QStringLiteral("keyTab"));
        sizePolicy.setHeightForWidth(keyTab->sizePolicy().hasHeightForWidth());
        keyTab->setSizePolicy(sizePolicy);
        gridLayout_2 = new QGridLayout(keyTab);
        gridLayout_2->setObjectName(QStringLiteral("gridLayout_2"));
        gridLayout_2->setContentsMargins(-1, -1, -1, 0);
        numBox = new QComboBox(keyTab);
        numBox->setObjectName(QStringLiteral("numBox"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Fixed);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(numBox->sizePolicy().hasHeightForWidth());
        numBox->setSizePolicy(sizePolicy1);

        gridLayout_2->addWidget(numBox, 6, 4, 1, 1);

        typingBox = new QComboBox(keyTab);
        typingBox->setObjectName(QStringLiteral("typingBox"));
        sizePolicy1.setHeightForWidth(typingBox->sizePolicy().hasHeightForWidth());
        typingBox->setSizePolicy(sizePolicy1);

        gridLayout_2->addWidget(typingBox, 1, 1, 1, 1);

        fnBox = new QComboBox(keyTab);
        fnBox->setObjectName(QStringLiteral("fnBox"));
        sizePolicy1.setHeightForWidth(fnBox->sizePolicy().hasHeightForWidth());
        fnBox->setSizePolicy(sizePolicy1);

        gridLayout_2->addWidget(fnBox, 6, 1, 1, 1);

        verticalSpacer_10 = new QSpacerItem(0, 5, QSizePolicy::Minimum, QSizePolicy::Fixed
);

        gridLayout_2->addItem(verticalSpacer_10, 9, 1, 1, 1);

        verticalSpacer_3 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
QSizePolicy::Expanding);

        gridLayout_2->addItem(verticalSpacer_3, 15, 2, 1, 1);

        horizontalSpacer_2 = new QSpacerItem(5, 20, QSizePolicy::Fixed,
QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_2, 1, 3, 1, 1);

        typingButton = new QRadioButton(keyTab);
        typingButton->setObjectName(QStringLiteral("typingButton"));
        typingButton->setAutoExclusive(false);

        gridLayout_2->addWidget(typingButton, 0, 0, 1, 2);

        modBox = new QComboBox(keyTab);
        modBox->setObjectName(QStringLiteral("modBox"));
        sizePolicy1.setHeightForWidth(modBox->sizePolicy().hasHeightForWidth());
        modBox->setSizePolicy(sizePolicy1);

        gridLayout_2->addWidget(modBox, 1, 4, 1, 1);

        horizontalSpacer_3 = new QSpacerItem(5, 20, QSizePolicy::Fixed,
QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_3, 1, 0, 1, 1);

        mediaButton = new QRadioButton(keyTab);
        mediaButton->setObjectName(QStringLiteral("mediaButton"));
        mediaButton->setAutoExclusive(false);

        gridLayout_2->addWidget(mediaButton, 10, 0, 1, 2);

        verticalSpacer_4 = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed)
;

        gridLayout_2->addItem(verticalSpacer_4, 2, 1, 1, 1);

        horizontalSpacer_9 = new QSpacerItem(0, 20, QSizePolicy::Expanding,
QSizePolicy::Minimum);

```

```
        gridLayout_2->addItem(horizontalSpacer_9, 1, 5, 1, 2);

        horizontalSpacer_4 = new QSpacerItem(0, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_4, 1, 2, 1, 1);

        modButton = new QRadioButton(keyTab);
        modButton->setObjectName(QStringLiteral("modButton"));

        gridLayout_2->addWidget(modButton, 0, 3, 1, 2);

        fnButton = new QRadioButton(keyTab);
        fnButton->setObjectName(QStringLiteral("fnButton"));
        fnButton->setAutoExclusive(false);

        gridLayout_2->addWidget(fnButton, 5, 0, 1, 2);

        mediaBox = new QComboBox(keyTab);
        mediaBox->setObjectName(QStringLiteral("mediaBox"));
        sizePolicy1.setHeightForWidth(mediaBox->sizePolicy().hasHeightForWidth());
        mediaBox->setSizePolicy(sizePolicy1);

        gridLayout_2->addWidget(mediaBox, 11, 1, 1, 1);

        numButton = new QRadioButton(keyTab);
        numButton->setObjectName(QStringLiteral("numButton"));
        numButton->setAutoExclusive(false);

        gridLayout_2->addWidget(numButton, 5, 3, 1, 2);

        horizontalSpacer_17 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_2->addItem(horizontalSpacer_17, 1, 7, 1, 1);

        tabWidget->addTab(keyTab, QString());
        mouseTab = new QWidget();
        mouseTab->setObjectName(QStringLiteral("mouseTab"));
        gridLayout = new QGridLayout(mouseTab);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        dpiButton = new QRadioButton(mouseTab);
        dpiButton->setObjectName(QStringLiteral("dpiButton"));
        dpiButton->setAutoExclusive(false);

        gridLayout->addWidget(dpiButton, 3, 3, 1, 5);

        verticalSpacer_2 = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout->addItem(verticalSpacer_2, 5, 1, 1, 1);

        verticalSpacer_8 = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_8, 2, 1, 1, 1);

        horizontalSpacer_18 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_18, 1, 0, 1, 1);

        horizontalSpacer_20 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_20, 1, 3, 1, 1);

        mb2Box = new QComboBox(mouseTab);
        mb2Box->setObjectName(QStringLiteral("mb2Box"));
        sizePolicy1.setHeightForWidth(mb2Box->sizePolicy().hasHeightForWidth());
        mb2Box->setSizePolicy(sizePolicy1);

        gridLayout->addWidget(mb2Box, 1, 4, 1, 4);

        dpiBox = new QComboBox(mouseTab);
        dpiBox->setObjectName(QStringLiteral("dpiBox"));

        gridLayout->addWidget(dpiBox, 4, 4, 1, 1);

        dpiCustYBox = new QSpinBox(mouseTab);
        dpiCustYBox->setObjectName(QStringLiteral("dpiCustYBox"));
        dpiCustYBox->setMinimum(400);
        dpiCustYBox->setMaximum(8500);
        dpiCustYBox->setSingleStep(50);

        gridLayout->addWidget(dpiCustYBox, 4, 7, 1, 1);

```

```
        mbBox = new QComboBox(mouseTab);
        mbBox->setObjectName(QStringLiteral("mbBox"));
        sizePolicy1.setHeightForWidth(mbBox->sizePolicy().hasHeightForWidth());
        mbBox->setSizePolicy(sizePolicy1);

        gridLayout->addWidget(mbBox, 1, 1, 1, 1);

        wheelBox = new QComboBox(mouseTab);
        wheelBox->setObjectName(QStringLiteral("wheelBox"));

        gridLayout->addWidget(wheelBox, 4, 1, 1, 1);

        mbButton = new QRadioButton(mouseTab);
        mbButton->setObjectName(QStringLiteral("mbButton"));
        mbButton->setAutoExclusive(false);

        gridLayout->addWidget(mbButton, 0, 0, 1, 2);

        dpiCustXBox = new QSpinBox(mouseTab);
        dpiCustXBox->setObjectName(QStringLiteral("dpiCustXBox"));
        dpiCustXBox->setMinimum(400);
        dpiCustXBox->setMaximum(8500);
        dpiCustXBox->setSingleStep(50);

        gridLayout->addWidget(dpiCustXBox, 4, 5, 1, 1);

        dpiWarning = new QLabel(mouseTab);
        dpiWarning->setObjectName(QStringLiteral("dpiWarning"));
        QSizePolicy sizePolicy2(QSizePolicy::Preferred, QSizePolicy::Fixed);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(0);
        sizePolicy2.setHeightForWidth(dpiWarning->sizePolicy().hasHeightForWidth());
        dpiWarning->setSizePolicy(sizePolicy2);

        gridLayout->addWidget(dpiWarning, 6, 0, 1, 10);

        wheelButton = new QRadioButton(mouseTab);
        wheelButton->setObjectName(QStringLiteral("wheelButton"));

        gridLayout->addWidget(wheelButton, 3, 0, 1, 2);

        horizontalSpacer_22 = new QSpacerItem(5, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_22, 1, 8, 1, 1);

        mb2Button = new QRadioButton(mouseTab);
        mb2Button->setObjectName(QStringLiteral("mb2Button"));
        mb2Button->setAutoExclusive(false);

        gridLayout->addWidget(mb2Button, 0, 3, 1, 5);

        dpiCustLabel = new QLabel(mouseTab);
        dpiCustLabel->setObjectName(QStringLiteral("dpiCustLabel"));

        gridLayout->addWidget(dpiCustLabel, 4, 6, 1, 1);

        horizontalSpacer_19 = new QSpacerItem(0, 0, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_19, 1, 2, 1, 1);

        horizontalSpacer_21 = new QSpacerItem(0, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

        gridLayout->addItem(horizontalSpacer_21, 1, 9, 1, 1);

        tabWidget->addTab(mouseTab, QString());
        animTab = new QWidget();
        animTab->setObjectName(QStringLiteral("animTab"));
        gridLayout_5 = new QGridLayout(animTab);
        gridLayout_5->setObjectName(QStringLiteral("gridLayout_5"));
        verticalSpacer_11 = new QSpacerItem(20, 40, QSizePolicy::Minimum,
    QSizePolicy::Expanding);

        gridLayout_5->addItem(verticalSpacer_11, 6, 2, 1, 1);

        animBox = new QComboBox(animTab);
        animBox->setObjectName(QStringLiteral("animBox"));
        sizePolicy1.setHeightForWidth(animBox->sizePolicy().hasHeightForWidth());
        animBox->setSizePolicy(sizePolicy1);

        gridLayout_5->addWidget(animBox, 4, 2, 1, 1);

        horizontalSpacer_24 = new QSpacerItem(20, 20, QSizePolicy::Fixed,
    QSizePolicy::Minimum);

```

```
        gridLayout_5->addItem(horizontalSpacer_24, 4, 3, 1, 1);

        horizontalSpacer_25 = new QSpacerItem(438, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_5->addItem(horizontalSpacer_25, 4, 7, 1, 1);

        animKrBox = new QCheckBox(animTab);
        animKrBox->setObjectName(QStringLiteral("animKrBox"));

        gridLayout_5->addWidget(animKrBox, 4, 6, 1, 1);

        animOnceBox = new QCheckBox(animTab);
        animOnceBox->setObjectName(QStringLiteral("animOnceBox"));

        gridLayout_5->addWidget(animOnceBox, 4, 4, 1, 1);

        horizontalSpacer_26 = new QSpacerItem(20, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_5->addItem(horizontalSpacer_26, 4, 5, 1, 1);

        animButton = new QRadioButton(animTab);
        animButton->setObjectName(QStringLiteral("animButton"));
        sizePolicy1.setHeightForWidth(animButton->sizePolicy().hasHeightForWidth());
        animButton->setSizePolicy(sizePolicy1);

        gridLayout_5->addWidget(animButton, 0, 1, 1, 2);

        horizontalSpacer_23 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_5->addItem(horizontalSpacer_23, 4, 1, 1, 1);

        tabWidget->addTab(animTab, QString());
        actionTab = new QWidget();
        actionTab->setObjectName(QStringLiteral("actionTab"));
        sizePolicy.setHeightForWidth(actionTab->sizePolicy().hasHeightForWidth());
        actionTab->setSizePolicy(sizePolicy);
        gridLayout_3 = new QGridLayout(actionTab);
        gridLayout_3->setObjectName(QStringLiteral("gridLayout_3"));
        gridLayout_3->setContentsMargins(-1, -1, -1, 0);
        horizontalSpacer_5 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_5, 1, 0, 1, 1);

        modeButton = new QRadioButton(actionTab);
        modeButton->setObjectName(QStringLiteral("modeButton"));
        modeButton->setAutoExclusive(false);

        gridLayout_3->addWidget(modeButton, 0, 0, 1, 2);

        modeWrapBox = new QCheckBox(actionTab);
        modeWrapBox->setObjectName(QStringLiteral("modeWrapBox"));
        modeWrapBox->setChecked(true);

        gridLayout_3->addWidget(modeWrapBox, 1, 3, 1, 1);

        lightWrapBox = new QCheckBox(actionTab);
        lightWrapBox->setObjectName(QStringLiteral("lightWrapBox"));
        lightWrapBox->setChecked(true);

        gridLayout_3->addWidget(lightWrapBox, 4, 3, 1, 1);

        verticalSpacer_7 = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout_3->addItem(verticalSpacer_7, 2, 1, 1, 1);

        verticalSpacer_6 = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout_3->addItem(verticalSpacer_6, 5, 1, 1, 1);

        lockButton = new QRadioButton(actionTab);
        lockButton->setObjectName(QStringLiteral("lockButton"));
        lockButton->setAutoExclusive(false);

        gridLayout_3->addWidget(lockButton, 6, 0, 1, 2);

        verticalSpacer_5 = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout_3->addItem(verticalSpacer_5, 8, 1, 1, 1);

        lightBox = new QComboBox(actionTab);
```

```
        lightBox->setObjectName(QStringLiteral("lightBox"));
        sizePolicy1.setHeightForWidth(lightBox->sizePolicy().hasHeightForWidth());
        lightBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(lightBox, 4, 1, 1, 1);

        lockBox = new QComboBox(actionTab);
        lockBox->setObjectName(QStringLiteral("lockBox"));
        sizePolicy1.setHeightForWidth(lockBox->sizePolicy().hasHeightForWidth());
        lockBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(lockBox, 7, 1, 1, 1);

        lightButton = new QRadioButton(actionTab);
        lightButton->setObjectName(QStringLiteral("lightButton"));
        lightButton->setAutoExclusive(false);

        gridLayout_3->addWidget(lightButton, 3, 0, 1, 2);

        modeBox = new QComboBox(actionTab);
        modeBox->setObjectName(QStringLiteral("modeBox"));
        sizePolicy1.setHeightForWidth(modeBox->sizePolicy().hasHeightForWidth());
        modeBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(modeBox, 1, 1, 1, 1);

        horizontalSpacer_8 = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_8, 1, 2, 1, 1);

        horizontalSpacer_10 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_10, 7, 3, 1, 1);

        horizontalSpacer_7 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_7, 1, 4, 1, 1);

        horizontalSpacer_6 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_6, 1, 5, 1, 1);

        tabWidget->addTab(actionTab, QString());
        programTab = new QWidget();
        programTab->setObjectName(QStringLiteral("programTab"));
        gridLayout_4 = new QGridLayout(programTab);
        gridLayout_4->setObjectName(QStringLiteral("gridLayout_4"));
        verticalSpacer = new QSpacerItem(20, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout_4->addItem(verticalSpacer, 2, 1, 1, 1);

        horizontalSpacer = new QSpacerItem(5, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_4->addItem(horizontalSpacer, 1, 0, 1, 1);

        programKpButton = new QCheckBox(programTab);
        programKpButton->setObjectName(QStringLiteral("programKpButton"));

        gridLayout_4->addWidget(programKpButton, 0, 0, 1, 2);

        programKpBox = new QLineEdit(programTab);
        programKpBox->setObjectName(QStringLiteral("programKpBox"));

        gridLayout_4->addWidget(programKpBox, 1, 1, 1, 1);

        horizontalSpacer_11 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_4->addItem(horizontalSpacer_11, 0, 2, 1, 2);

        horizontalSpacer_13 = new QSpacerItem(20, 20, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_4->addItem(horizontalSpacer_13, 1, 2, 1, 1);

        programKrBox = new QLineEdit(programTab);
        programKrBox->setObjectName(QStringLiteral("programKrBox"));

        gridLayout_4->addWidget(programKrBox, 4, 1, 1, 1);

        programKrButton = new QCheckBox(programTab);
        programKrButton->setObjectName(QStringLiteral("programKrButton"));
```

```

        gridLayout_4->addWidget(programKrButton, 3, 0, 1, 2);

        horizontalSpacer_12 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_4->addItem(horizontalSpacer_12, 0, 4, 1, 1);

        programKpExtra = new QWidget(programTab);
        programKpExtra->setObjectName(QStringLiteral("programKpExtra"));
        horizontalLayout_2 = new QHBoxLayout(programKpExtra);
        horizontalLayout_2->setSpacing(12);
        horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
        horizontalLayout_2->setContentsMargins(0, 0, 0, 0);
        programKpSIBox = new QCheckBox(programKpExtra);
        programKpSIBox->setObjectName(QStringLiteral("programKpSIBox"));

        horizontalLayout_2->addWidget(programKpSIBox);

        programKpModeBox = new QComboBox(programKpExtra);
        programKpModeBox->setObjectName(QStringLiteral("programKpModeBox"));

        horizontalLayout_2->addWidget(programKpModeBox);

        horizontalSpacer_15 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer_15);


        gridLayout_4->addWidget(programKpExtra, 1, 3, 1, 2);

        programKrExtra = new QWidget(programTab);
        programKrExtra->setObjectName(QStringLiteral("programKrExtra"));
        horizontalLayout_3 = new QHBoxLayout(programKrExtra);
        horizontalLayout_3->setSpacing(12);
        horizontalLayout_3->setObjectName(QStringLiteral("horizontalLayout_3"));
        horizontalLayout_3->setContentsMargins(0, 0, 0, 0);
        programKrSIBox = new QCheckBox(programKrExtra);
        programKrSIBox->setObjectName(QStringLiteral("programKrSIBox"));

        horizontalLayout_3->addWidget(programKrSIBox);

        programKrModeBox = new QComboBox(programKrExtra);
        programKrModeBox->setObjectName(QStringLiteral("programKrModeBox"));

        horizontalLayout_3->addWidget(programKrModeBox);

        horizontalSpacer_16 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout_3->addItem(horizontalSpacer_16);


        gridLayout_4->addWidget(programKrExtra, 4, 3, 1, 2);

        progTipLabel = new QLabel(programTab);
        progTipLabel->setObjectName(QStringLiteral("progTipLabel"));
        QSizePolicy sizePolicy3(QSizePolicy::Preferred, QSizePolicy::Expanding);
        sizePolicy3.setHorizontalStretch(0);
        sizePolicy3.setVerticalStretch(0);
        sizePolicy3.setHeightForWidth(progTipLabel->sizePolicy().hasHeightForWidth());
        progTipLabel->setSizePolicy(sizePolicy3);
        progTipLabel->setTextInteractionFlags(Qt::LinksAccessibleByMouse|Qt::TextSelectableByMouse);

        gridLayout_4->addWidget(progTipLabel, 5, 1, 1, 4);

        tabWidget->addTab(programTab, QString());
        macroTab = new QWidget();
        macroTab->setObjectName(QStringLiteral("macroTab"));
        layoutWidget1 = new QWidget(macroTab);
        layoutWidget1->setObjectName(QStringLiteral("layoutWidget1"));
        layoutWidget1->setGeometry(QRect(40, 12, 241, 171));
        gridLayout_8 = new QGridLayout(layoutWidget1);
        gridLayout_8->setObjectName(QStringLiteral("gridLayout_8"));
        gridLayout_8->setContentsMargins(0, 0, 0, 0);
        groupBox_2 = new QGroupBox(layoutWidget1);
        groupBox_2->setObjectName(QStringLiteral("groupBox_2"));

        gridLayout_8->addWidget(groupBox_2, 0, 0, 1, 1);

        pteMacroBox = new QPlainTextEdit(layoutWidget1);
        pteMacroBox->setObjectName(QStringLiteral("pteMacroBox"));
        pteMacroBox->setFocusPolicy(Qt::WheelFocus);
        pteMacroBox->setTabChangesFocus(true);

```

```
        gridLayout_8->addWidget(pteMacroBox, 1, 0, 1, 1);

        pteMacroComment = new QPlainTextEdit(macroTab);
        pteMacroComment->setObjectName(QStringLiteral("pteMacroComment"));
        pteMacroComment->setEnabled(true);
        pteMacroComment->setGeometry(QRect(420, 20, 311, 31));
        pteMacroComment->setFocusPolicy(Qt::WheelFocus);
        pteMacroComment->setContextMenuPolicy(Qt::NoContextMenu);
        pteMacroComment->setAcceptDrops(true);
        pteMacroComment->setToolTipDuration(1);
        pteMacroComment->setInputMethodHints(Qt::ImhNone);
        pteMacroComment->setVerticalScrollBarPolicy(Qt::ScrollBarAlwaysOff);
        pteMacroComment->setTabChangesFocus(true);
        pteMacroComment->setUndoRedoEnabled(true);
        pteMacroComment->setReadOnly(false);
        pteMacroComment->setTabStopWidth(1);
        pteMacroText = new QPlainTextEdit(macroTab);
        pteMacroText->setObjectName(QStringLiteral("pteMacroText"));
        pteMacroText->setGeometry(QRect(420, 60, 311, 61));
        pteMacroText->setFocusPolicy(Qt::StrongFocus);
        pteMacroText->setContextMenuPolicy(Qt::NoContextMenu);
        pteMacroText->setAcceptDrops(false);
        pteMacroText->setInputMethodHints(Qt::ImhNoAutoUppercase);
        pteMacroText->setUndoRedoEnabled(false);
        pteMacroText->setReadOnly(false);
        pteMacroText->setTabStopWidth(1);
        layoutWidget = new QWidget(macroTab);
        layoutWidget->setObjectName(QStringLiteral("layoutWidget"));
        layoutWidget->setGeometry(QRect(300, 20, 119, 81));
        verticalLayout_2 = new QVBoxLayout(layoutWidget);
        verticalLayout_2->setObjectName(QStringLiteral("verticalLayout_2"));
        verticalLayout_2->setContentsMargins(0, 0, 0, 0);
        groupBox_3 = new QGroupBox(layoutWidget);
        groupBox_3->setObjectName(QStringLiteral("groupBox_3"));

        verticalLayout_2->addWidget(groupBox_3);

        groupBox_4 = new QGroupBox(layoutWidget);
        groupBox_4->setObjectName(QStringLiteral("groupBox_4"));

        verticalLayout_2->addWidget(groupBox_4);

        layoutWidget_2 = new QWidget(macroTab);
        layoutWidget_2->setObjectName(QStringLiteral("layoutWidget_2"));
        layoutWidget_2->setGeometry(QRect(300, 160, 436, 30));
        gridLayout_10 = new QGridLayout(layoutWidget_2);
        gridLayout_10->setObjectName(QStringLiteral("gridLayout_10"));
        gridLayout_10->setContentsMargins(0, 0, 0, 0);
        groupBox = new QGroupBox(layoutWidget_2);
        groupBox->setObjectName(QStringLiteral("groupBox"));

        gridLayout_10->addWidget(groupBox, 0, 0, 1, 1);

        btnStopMacro = new QPushButton(layoutWidget_2);
        btnStopMacro->setObjectName(QStringLiteral("btnStopMacro"));
        btnStopMacro->setEnabled(false);

        gridLayout_10->addWidget(btnStopMacro, 0, 2, 1, 1);

        btnStartMacro = new QPushButton(layoutWidget_2);
        btnStartMacro->setObjectName(QStringLiteral("btnStartMacro"));

        gridLayout_10->addWidget(btnStartMacro, 0, 1, 1, 1);

        btnClearMacro = new QPushButton(layoutWidget_2);
        btnClearMacro->setObjectName(QStringLiteral("btnClearMacro"));

        gridLayout_10->addWidget(btnClearMacro, 0, 3, 1, 1);

        lbl_macro = new QLabel(macroTab);
        lbl_macro->setObjectName(QStringLiteral("lbl_macro"));
        lbl_macro->setGeometry(QRect(300, 130, 431, 27));
        tabWidget->addTab(macroTab, QString());
        pteMacroComment->raise();
        layoutWidget1->raise();
        layoutWidget->raise();
        pteMacroText->raise();
        layoutWidget_2->raise();
        lbl_macro->raise();

        verticalLayout->addWidget(tabWidget);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        horizontalSpacer_14 = new QSpacerItem(40, 20, QSizePolicy::Expanding,
    QSizePolicy::Minimum);

```

```
        horizontalLayout->addItem(horizontalSpacer_14);

        unbindButton = new QPushButton(RebindWidget);
        unbindButton->setObjectName(QStringLiteral("unbindButton"));

        horizontalLayout->addWidget(unbindButton);

        resetButton = new QPushButton(RebindWidget);
        resetButton->setObjectName(QStringLiteral("resetButton"));

        horizontalLayout->addWidget(resetButton);

        cancelButton = new QPushButton(RebindWidget);
        cancelButton->setObjectName(QStringLiteral("cancelButton"));

        horizontalLayout->addWidget(cancelButton);

        applyButton = new QPushButton(RebindWidget);
        applyButton->setObjectName(QStringLiteral("applyButton"));

        horizontalLayout->addWidget(applyButton);


        verticalLayout->addLayout(horizontalLayout);

        QWidget::setTabOrder(tabWidget, pteMacroComment);
        QWidget::setTabOrder(pteMacroComment, pteMacroBox);
        QWidget::setTabOrder(pteMacroBox, dpiButton);
        QWidget::setTabOrder(dpiButton, mb2Box);
        QWidget::setTabOrder(mb2Box, btnStartMacro);
        QWidget::setTabOrder(btnStartMacro, fnBox);
        QWidget::setTabOrder(fnBox, dpiCustYBox);
        QWidget::setTabOrder(dpiCustYBox, dpiBox);
        QWidget::setTabOrder(dpiBox, applyButton);
        QWidget::setTabOrder(applyButton, mbBox);
        QWidget::setTabOrder(mbBox, cancelButton);
        QWidget::setTabOrder(cancelButton, wheelBox);
        QWidget::setTabOrder(wheelBox, btnStopMacro);
        QWidget::setTabOrder(btnStopMacro, mbButton);
        QWidget::setTabOrder(mbButton, dpiCustXBox);
        QWidget::setTabOrder(dpiCustXBox, btnClearMacro);
        QWidget::setTabOrder(btnClearMacro, wheelButton);
        QWidget::setTabOrder(wheelButton, mb2Button);
        QWidget::setTabOrder(mb2Button, animBox);
        QWidget::setTabOrder(animBox, animKrBox);
        QWidget::setTabOrder(animKrBox, animOnceBox);
        QWidget::setTabOrder(animOnceBox, animButton);
        QWidget::setTabOrder(animButton, modeButton);
        QWidget::setTabOrder(modeButton, modeWrapBox);
        QWidget::setTabOrder(modeWrapBox, lightWrapBox);
        QWidget::setTabOrder(lightWrapBox, lockButton);
        QWidget::setTabOrder(lockButton, lightBox);
        QWidget::setTabOrder(lightBox, resetButton);
        QWidget::setTabOrder(resetButton, lockBox);
        QWidget::setTabOrder(lockBox, lightButton);
        QWidget::setTabOrder(lightButton, modeBox);
        QWidget::setTabOrder(modeBox, unbindButton);
        QWidget::setTabOrder(unbindButton, programKpButton);
        QWidget::setTabOrder(programKpButton, programKpBox);
        QWidget::setTabOrder(programKpBox, programKrBox);
        QWidget::setTabOrder(programKrBox, programKrButton);
        QWidget::setTabOrder(programKrButton, programKpSIBox);
        QWidget::setTabOrder(programKpSIBox, programKpModeBox);
        QWidget::setTabOrder(programKpModeBox, programKrSIBox);
        QWidget::setTabOrder(programKrSIBox, programKrModeBox);
        QWidget::setTabOrder(programKrModeBox, typingBox);
        QWidget::setTabOrder(typingBox, numBox);
        QWidget::setTabOrder(numBox, pteMacroText);
        QWidget::setTabOrder(pteMacroText, typingButton);
        QWidget::setTabOrder(typingButton, mediaButton);
        QWidget::setTabOrder(mediaButton, modBox);
        QWidget::setTabOrder(modBox, modButton);
        QWidget::setTabOrder(modButton, fnButton);
        QWidget::setTabOrder(fnButton, mediaBox);
        QWidget::setTabOrder(mediaBox, numButton);

        retranslateUi(RebindWidget);
        QObject::connect(cancelButton, SIGNAL(clicked()), pteMacroBox, SLOT(clear()));
        QObject::connect(btnClearMacro, SIGNAL(clicked()), pteMacroBox, SLOT(clear()));
        QObject::connect(btnClearMacro, SIGNAL(clicked()), pteMacroText, SLOT(clear()));
        QObject::connect(btnClearMacro, SIGNAL(clicked()), pteMacroComment, SLOT(clear()));
        QObject::connect(btnClearMacro, SIGNAL(clicked()), btnStopMacro, SLOT(animateClick()));
```

```

        tabWidget->setCurrentIndex(0);
        applyButton->setDefault(true);


        QMetaObject::connectSlotsByName(RebindWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.101.3 Field Documentation

12.101.3.1 QWidget* Ui_RebindWidget::actionTab

Definition at line 92 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.2 QComboBox* Ui_RebindWidget::animBox

Definition at line 84 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_animBox_currentIndexChanged(), RebindWidget::on_animButton_clicked(), retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.3 QRadioButton* Ui_RebindWidget::animButton

Definition at line 90 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_animBox_currentIndexChanged(), retranslateUi(), and setupUi().

12.101.3.4 QCheckBox* Ui_RebindWidget::animKrBox

Definition at line 87 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), retranslateUi(), RebindWidget::setSelection(), and setupUi().

12.101.3.5 QCheckBox* Ui_RebindWidget::animOnceBox

Definition at line 88 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), retranslateUi(), RebindWidget::setSelection(), and setupUi().

12.101.3.6 QWidget* Ui_RebindWidget::animTab

Definition at line 81 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.7 QPushButton* Ui_RebindWidget::applyButton

Definition at line 155 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_btnStopMacro_clicked(), retranslateUi(), and setupUi().

12.101.3.8 QPushButton* Ui_RebindWidget::btnClearMacro

Definition at line 148 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.9 QPushButton* Ui_RebindWidget::btnStartMacro

Definition at line 147 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_btnStopMacro_clicked(), retranslateUi(), and setupUi().

12.101.3.10 QPushButton* Ui_RebindWidget::btnStopMacro

Definition at line 146 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_btnStopMacro_clicked(), retranslateUi(), and setupUi().

12.101.3.11 QPushButton* Ui_RebindWidget::cancelButton

Definition at line 154 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.12 QComboBox* Ui_RebindWidget::dpiBox

Definition at line 68 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_dpiBox_currentIndexChanged(), RebindWidget::on_dpiButton_clicked(), retranslateUi(), RebindWidget::setBind(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.13 QRadioButton* Ui_RebindWidget::dpiButton

Definition at line 62 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_dpiBox_currentIndexChanged(), retranslateUi(), RebindWidget::setBind(), and setupUi().

12.101.3.14 QLabel* Ui_RebindWidget::dpiCustLabel

Definition at line 78 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_dpiBox_currentIndexChanged(), retranslateUi(), RebindWidget::setBind(), and setupUi().

12.101.3.15 QSpinBox* Ui_RebindWidget::dpiCustXBox

Definition at line 73 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_dpiBox_currentIndexChanged(), RebindWidget::setBind(), RebindWidget::setSelection(), and setupUi().

12.101.3.16 QSpinBox* Ui_RebindWidget::dpiCustYBox

Definition at line 69 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_dpiBox_currentIndexChanged(), RebindWidget::setBind(), RebindWidget::setSelection(), and setupUi().

12.101.3.17 QLabel* Ui_RebindWidget::dpiWarning

Definition at line 74 of file ui_rebindwidget.h.

Referenced by retranslateUi(), RebindWidget::setBind(), and setupUi().

12.101.3.18 QComboBox* Ui_RebindWidget::fnBox

Definition at line 44 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_fnBox_currentIndexChanged(), RebindWidget::on_fnButton_clicked(), RebindWidget::RebindWidget(), retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.19 QRadioButton* Ui_RebindWidget::fnButton

Definition at line 56 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_fnBox_currentIndexChanged(), retranslateUi(), and setupUi().

12.101.3.20 QGridLayout* Ui_RebindWidget::gridLayout

Definition at line 61 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.21 QGridLayout* Ui_RebindWidget::gridLayout_10

Definition at line 144 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.22 QGridLayout* Ui_RebindWidget::gridLayout_2

Definition at line 41 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.23 QGridLayout* Ui_RebindWidget::gridLayout_3

Definition at line 93 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.24 QGridLayout* Ui_RebindWidget::gridLayout_4

Definition at line 111 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.25 QGridLayout* Ui_RebindWidget::gridLayout_5

Definition at line 82 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.26 QGridLayout* Ui_RebindWidget::gridLayout_8

Definition at line 134 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.27 QGroupBox* Ui_RebindWidget::groupBox

Definition at line 145 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.28 QGroupBox* Ui_RebindWidget::groupBox_2

Definition at line 135 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.29 QGroupBox* Ui_RebindWidget::groupBox_3

Definition at line 141 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.30 QGroupBox* Ui_RebindWidget::groupBox_4

Definition at line 142 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.31 QHBoxLayout* Ui_RebindWidget::horizontalLayout

Definition at line 150 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.32 QHBoxLayout* Ui_RebindWidget::horizontalLayout_2

Definition at line 122 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.33 QHBoxLayout* Ui_RebindWidget::horizontalLayout_3

Definition at line 127 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.34 QSpacerItem* Ui_RebindWidget::horizontalSpacer

Definition at line 113 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.35 QSpacerItem* Ui_RebindWidget::horizontalSpacer_10

Definition at line 107 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.36 QSpacerItem* Ui_RebindWidget::horizontalSpacer_11

Definition at line 116 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.37 QSpacerItem* Ui_RebindWidget::horizontalSpacer_12

Definition at line 120 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.38 QSpacerItem* Ui_RebindWidget::horizontalSpacer_13

Definition at line 117 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.39 QSpacerItem* Ui_RebindWidget::horizontalSpacer_14

Definition at line 151 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.40 QSpacerItem* Ui_RebindWidget::horizontalSpacer_15

Definition at line 125 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.41 QSpacerItem* Ui_RebindWidget::horizontalSpacer_16

Definition at line 130 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.42 QSpacerItem* Ui_RebindWidget::horizontalSpacer_17

Definition at line 59 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.43 QSpacerItem* Ui_RebindWidget::horizontalSpacer_18

Definition at line 65 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.44 QSpacerItem* Ui_RebindWidget::horizontalSpacer_19

Definition at line 79 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.45 QSpacerItem* Ui_RebindWidget::horizontalSpacer_2

Definition at line 47 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.46 QSpacerItem* Ui_RebindWidget::horizontalSpacer_20

Definition at line 66 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.47 QSpacerItem* Ui_RebindWidget::horizontalSpacer_21

Definition at line 80 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.48 QSpacerItem* Ui_RebindWidget::horizontalSpacer_22

Definition at line 76 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.49 QSpacerItem* Ui_RebindWidget::horizontalSpacer_23

Definition at line 91 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.50 QSpacerItem* Ui_RebindWidget::horizontalSpacer_24

Definition at line 85 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.51 QSpacerItem* Ui_RebindWidget::horizontalSpacer_25

Definition at line 86 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.52 QSpacerItem* Ui_RebindWidget::horizontalSpacer_26

Definition at line 89 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.53 QSpacerItem* Ui_RebindWidget::horizontalSpacer_3

Definition at line 50 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.54 QSpacerItem* Ui_RebindWidget::horizontalSpacer_4

Definition at line 54 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.55 QSpacerItem* Ui_RebindWidget::horizontalSpacer_5

Definition at line 94 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.56 QSpacerItem* Ui_RebindWidget::horizontalSpacer_6

Definition at line 109 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.57 QSpacerItem* Ui_RebindWidget::horizontalSpacer_7

Definition at line 108 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.58 QSpacerItem* Ui_RebindWidget::horizontalSpacer_8

Definition at line 106 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.59 QSpacerItem* Ui_RebindWidget::horizontalSpacer_9

Definition at line 53 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.60 QWidget* Ui_RebindWidget::keyTab

Definition at line 40 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.61 QWidget* Ui_RebindWidget::layoutWidget

Definition at line 139 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.62 QWidget* Ui_RebindWidget::layoutWidget1

Definition at line 133 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.63 QWidget* Ui_RebindWidget::layoutWidget_2

Definition at line 143 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.64 QLabel* Ui_RebindWidget::lbl_macro

Definition at line 149 of file ui_rebindwidget.h.

Referenced by RebindWidget::helpStatus(), retranslateUi(), and setupUi().

12.101.3.65 QComboBox* Ui_RebindWidget::lightBox

Definition at line 102 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_lightBox_currentIndexChanged(), RebindWidget::on_lightButton_clicked(), retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.66 QRadioButton* Ui_RebindWidget::lightButton

Definition at line 104 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_lightBox_currentIndexChanged(), retranslateUi(), and setupUi().

12.101.3.67 QCheckBox* Ui_RebindWidget::lightWrapBox

Definition at line 97 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_lightBox_currentIndexChanged(), RebindWidget::RebindWidget(), retranslateUi(), RebindWidget::setSelection(), and setupUi().

12.101.3.68 QComboBox* Ui_RebindWidget::lockBox

Definition at line 103 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_lockBox_currentIndexChanged(), RebindWidget::on_lockButton_clicked(), retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.69 QRadioButton* Ui_RebindWidget::lockButton

Definition at line 100 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_lockBox_currentIndexChanged(), retranslateUi(), and setupUi().

12.101.3.70 QWidget* Ui_RebindWidget::macroTab

Definition at line 132 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.71 QComboBox* Ui_RebindWidget::mb2Box

Definition at line 67 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_mb2Box_currentIndexChanged(), RebindWidget::on_mb2Button_clicked(), retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.72 QRadioButton* Ui_RebindWidget::mb2Button

Definition at line 77 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_mb2Box_currentIndexChanged(), retranslateUi(), and setupUi().

12.101.3.73 QComboBox* Ui_RebindWidget::mbBox

Definition at line 70 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_mbBox_currentIndexChanged(), RebindWidget::on_mbButton_clicked(), retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.74 QRadioButton* Ui_RebindWidget::mbButton

Definition at line 72 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_mbBox_currentIndexChanged(), retranslateUi(), and setupUi().

12.101.3.75 QComboBox∗ Ui_RebindWidget::mediaBox

Definition at line 57 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_mediaBox_currentIndexChanged(), RebindWidget::on_mediaButton_clicked(), RebindWidget::RebindWidget(), retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.76 QRadioButton∗ Ui_RebindWidget::mediaButton

Definition at line 51 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_mediaBox_currentIndexChanged(), retranslateUi(), and setupUi().

12.101.3.77 QComboBox∗ Ui_RebindWidget::modBox

Definition at line 49 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_modBox_currentIndexChanged(), RebindWidget::on_modButton_clicked(), RebindWidget::RebindWidget(), retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.78 QRadioButton∗ Ui_RebindWidget::modButton

Definition at line 55 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_modBox_currentIndexChanged(), retranslateUi(), and setupUi().

12.101.3.79 QComboBox∗ Ui_RebindWidget::modeBox

Definition at line 105 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_modeBox_currentIndexChanged(), RebindWidget::on_modeButton_clicked(), retranslateUi(), RebindWidget::setBind(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.80 QRadioButton∗ Ui_RebindWidget::modeButton

Definition at line 95 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_modeBox_currentIndexChanged(), retranslateUi(), and setupUi().

12.101.3.81 QCheckBox∗ Ui_RebindWidget::modeWrapBox

Definition at line 96 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_modeBox_currentIndexChanged(), RebindWidget::RebindWidget(), retranslateUi(), RebindWidget::setSelection(), and setupUi().

12.101.3.82 QWidget∗ Ui_RebindWidget::mouseTab

Definition at line 60 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.83 QComboBox∗ Ui_RebindWidget::numBox

Definition at line 42 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_numBox_currentIndexChanged(), RebindWidget::on_numButton_clicked(), RebindWidget::RebindWidget(), retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.84 QRadioButton∗ Ui_RebindWidget::numButton

Definition at line 58 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_numBox_currentIndexChanged(), retranslateUi(), and setupUi().

12.101.3.85 QLineEdit∗ Ui_RebindWidget::programKpBox

Definition at line 115 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_programKpBox_textChanged(), RebindWidget::on_programKpButton_clicked(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.86 QCheckBox∗ Ui_RebindWidget::programKpButton

Definition at line 114 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_programKpBox_textChanged(), retranslateUi(), RebindWidget::setBox(), and setupUi().

12.101.3.87 QWidget∗ Ui_RebindWidget::programKpExtra

Definition at line 121 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_programKpBox_textChanged(), RebindWidget::RebindWidget(), and setupUi().

12.101.3.88 QComboBox∗ Ui_RebindWidget::programKpModeBox

Definition at line 124 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_programKpSIBox_clicked(), retranslateUi(), RebindWidget::setSelection(), and setupUi().

12.101.3.89 QCheckBox∗ Ui_RebindWidget::programKpSIBox

Definition at line 123 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), retranslateUi(), RebindWidget::setSelection(), and setupUi().

12.101.3.90 QLineEdit∗ Ui_RebindWidget::programKrBox

Definition at line 118 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_programKrBox_textChanged(), RebindWidget::on_programKrButton_clicked(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.91 QCheckBox* Ui_RebindWidget::programKrButton

Definition at line 119 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_programKrBox_textChanged(), retranslateUi(), RebindWidget::setBox(), and setupUi().

12.101.3.92 QWidget* Ui_RebindWidget::programKrExtra

Definition at line 126 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_programKrBox_textChanged(), RebindWidget::RebindWidget(), and setupUi().

12.101.3.93 QComboBox* Ui_RebindWidget::programKrModeBox

Definition at line 129 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_programKrSIBox_clicked(), retranslateUi(), RebindWidget::setSelection(), and setupUi().

12.101.3.94 QCheckBox* Ui_RebindWidget::programKrSIBox

Definition at line 128 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), retranslateUi(), RebindWidget::setSelection(), and setupUi().

12.101.3.95 QWidget* Ui_RebindWidget::programTab

Definition at line 110 of file ui_rebindwidget.h.

Referenced by retranslateUi(), and setupUi().

12.101.3.96 QLabel* Ui_RebindWidget::progTipLabel

Definition at line 131 of file ui_rebindwidget.h.

Referenced by RebindWidget::RebindWidget(), retranslateUi(), and setupUi().

12.101.3.97 QPlainTextEdit* Ui_RebindWidget::pteMacroBox

Definition at line 136 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::convertMacroBox(), RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_pteMacroBox_textChanged(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.98 QPlainTextEdit* Ui_RebindWidget::pteMacroComment

Definition at line 137 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), retranslateUi(), RebindWidget::setSelection(), and setupUi().

12.101.3.99 QPlainTextEdit* Ui_RebindWidget::pteMacroText

Definition at line 138 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_btnStartMacro_clicked(), retranslateUi(), RebindWidget::setSelection(), and setupUi().

12.101.3.100 QPushButton* Ui_RebindWidget::resetButton

Definition at line 153 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_btnStopMacro_clicked(), retranslateUi(), and setupUi().

12.101.3.101 QTabWidget* Ui_RebindWidget::tabWidget

Definition at line 39 of file ui_rebindwidget.h.

Referenced by retranslateUi(), RebindWidget::setSelection(), and setupUi().

12.101.3.102 QComboBox* Ui_RebindWidget::typingBox

Definition at line 43 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_typingBox_currentIndexChanged(), RebindWidget::on_typingButton_clicked(), retranslateUi(), RebindWidget::setBind(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.103 QRadioButton* Ui_RebindWidget::typingButton

Definition at line 48 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_typingBox_currentIndexChanged(), retranslateUi(), and setupUi().

12.101.3.104 QPushButton* Ui_RebindWidget::unbindButton

Definition at line 152 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_btnStartMacro_clicked(), RebindWidget::on_btnStopMacro_clicked(), retranslateUi(), and setupUi().

12.101.3.105 QVBoxLayout* Ui_RebindWidget::verticalLayout

Definition at line 38 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.106 QVBoxLayout* Ui_RebindWidget::verticalLayout_2

Definition at line 140 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.107 QSpacerItem* Ui_RebindWidget::verticalSpacer

Definition at line 112 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.108 QSpacerItem* Ui_RebindWidget::verticalSpacer_10

Definition at line 45 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.109 QSpacerItem* Ui_RebindWidget::verticalSpacer_11

Definition at line 83 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.110 QSpacerItem* Ui_RebindWidget::verticalSpacer_2

Definition at line 63 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.111 QSpacerItem* Ui_RebindWidget::verticalSpacer_3

Definition at line 46 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.112 QSpacerItem* Ui_RebindWidget::verticalSpacer_4

Definition at line 52 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.113 QSpacerItem* Ui_RebindWidget::verticalSpacer_5

Definition at line 101 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.114 QSpacerItem* Ui_RebindWidget::verticalSpacer_6

Definition at line 99 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.115 QSpacerItem* Ui_RebindWidget::verticalSpacer_7

Definition at line 98 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.116 QSpacerItem* Ui_RebindWidget::verticalSpacer_8

Definition at line 64 of file ui_rebindwidget.h.

Referenced by setupUi().

12.101.3.117 QComboBox* Ui_RebindWidget::wheelBox

Definition at line 71 of file ui_rebindwidget.h.

Referenced by RebindWidget::applyChanges(), RebindWidget::on_wheelBox_currentIndexChanged(), RebindWidget::on_wheelButton_clicked(), retranslateUi(), RebindWidget::setBox(), RebindWidget::setSelection(), and setupUi().

12.101.3.118 QRadioButton* Ui_RebindWidget::wheelButton

Definition at line 75 of file ui_rebindwidget.h.

Referenced by RebindWidget::on_wheelBox_currentIndexChanged(), retranslateUi(), and setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_rebindwidget.h

12.102 Ui_SettingsWidget Class Reference

```
#include <src/ckb/ui_settingswidget.h>
```

Inheritance diagram for Ui_SettingsWidget:

Collaboration diagram for Ui_SettingsWidget:

Public Member Functions

- void setupUi (QWidget *SettingsWidget)
- void retranslateUi (QWidget *SettingsWidget)

Data Fields

- QGridLayout * gridLayout
- QLabel * label_2
- QLabel * label
- QLabel * label_6
- QGridLayout * gridLayout_5
- QSpacerItem * horizontalSpacer_7
- QLabel * devicesLabel
- QLabel * label_5
- QComboBox * layoutBox
- QSpacerItem * verticalSpacer_10
- QHBoxLayout * horizontalLayout_2
- QLabel * label_3
- QSpacerItem * horizontalSpacer
- QPushButton * pushButton
- QSpacerItem * verticalSpacer
- QSpacerItem * verticalSpacer_8
- QCheckBox * loginItemBox
- QSpacerItem * verticalSpacer_6
- QCheckBox * autoFWBox
- QFrame * line_2
- QLabel * label_8
- QGridLayout * gridLayout_3
- QLabel * shiftLabel
- QLabel * capsLabel
- QSpacerItem * horizontalSpacer_10
- QComboBox * capsBox
- QLabel * ctrlLabel

- QSpacerItem * horizontalSpacer_9
- QComboBox * ctrlBox
- QComboBox * shiftBox
- QLabel * winLabel
- QComboBox * winBox
- QComboBox * altBox
- QLabel * altLabel
- QFrame * line
- QSpacerItem * verticalSpacer_3
- QSpacerItem * verticalSpacer_5
- QFrame * line_3
- QSpacerItem * verticalSpacer_4
- QSpacerItem * verticalSpacer_2
- QLabel * versionLabel
- QHBoxLayout * horizontalLayout
- QPushButton * extraButton
- QSpacerItem * horizontalSpacer_2
- QSpacerItem * verticalSpacer_7

12.102.1 Detailed Description

Definition at line 29 of file ui_settingswidget.h.

12.102.2 Member Function Documentation

12.102.2.1 void Ui_SettingsWidget::retranslateUi (QWidget * *SettingsWidget*) [inline]

Definition at line 347 of file ui_settingswidget.h.

References altLabel, autoFWBox, capsLabel, ctrlLabel, devicesLabel, extraButton, label, label_2, label_3, label_5, label_6, label_8, loginItemBox, pushButton, shiftLabel, versionLabel, and winLabel.

Referenced by setupUi().

```
    {
        SettingsWidget->setWindowTitle(QApplication::translate("SettingsWidget", "Form", Q_NULLPTR));
        label_2->setText(QApplication::translate("SettingsWidget", "\302\251 2014-2016 <a href=\"
    https://github.com/ccMSC/\" style=\"text-decoration:none;\">ccMSC</a>.<br/>\302\251 2017 <a href=\"
    https://github.com/mattanger/ckb-next/graphs/contributors\" style=\"text-decoration:none;\">The ckb-next development
     team</a>.", Q_NULLPTR));
        label->setText(QApplication::translate("SettingsWidget", "Modifier keys", Q_NULLPTR));
        label_6->setText(QApplication::translate("SettingsWidget", "Application", Q_NULLPTR));
        devicesLabel->setText(QApplication::translate("SettingsWidget", "No devices connected",
     Q_NULLPTR));
        label_5->setText(QApplication::translate("SettingsWidget", "Keyboard layout:", Q_NULLPTR));
        label_3->setText(QApplication::translate("SettingsWidget", "<a href=\"
    https://github.com/mattanger/ckb-next\" style=\"text-decoration:none;\">https://github.com/mattanger/ckb-next</a>", Q_NU
        pushButton->setText(QApplication::translate("SettingsWidget", "Quit", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        loginItemBox->setToolTip(QApplication::translate("SettingsWidget", "ckb-next will be
     started when you log in to your computer.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        loginItemBox->setText(QApplication::translate("SettingsWidget", "Start ckb-next at
     login", Q_NULLPTR));
#ifndef QT_NO_TOOLTIP
        autoFWBox->setToolTip(QApplication::translate("SettingsWidget", "You will be notified when
     new firmware versions are available. You'll have the option to install them immediately or wait until
     later.", Q_NULLPTR));
#endif // QT_NO_TOOLTIP
        autoFWBox->setText(QApplication::translate("SettingsWidget", "Check for new firmware
     automatically", Q_NULLPTR));
        label_8->setText(QApplication::translate("SettingsWidget", "These will override the keyboard
     profile. See \"Binding\" tab for more settings.", Q_NULLPTR));
        shiftLabel->setText(QApplication::translate("SettingsWidget", "Shift:", Q_NULLPTR));
        capsLabel->setText(QApplication::translate("SettingsWidget", "Caps Lock:", Q_NULLPTR));
        ctrlLabel->setText(QApplication::translate("SettingsWidget", "Ctrl:", Q_NULLPTR));
        winLabel->setText(QApplication::translate("SettingsWidget", "Windows:", Q_NULLPTR));
```

```
        altLabel->setText(QApplication::translate("SettingsWidget", "Alt:", Q_NULLPTR));
        versionLabel->setText(QApplication::translate("SettingsWidget", "ckb-next", Q_NULLPTR));
        extraButton->setText(QApplication::translate("SettingsWidget", "More settings", Q_NULLPTR));
    } // retranslateUi
```

Here is the caller graph for this function:

12.102.2.2 void Ui_SettingsWidget::setupUi (QWidget * *SettingsWidget*) [inline]

Definition at line 78 of file ui_settingswidget.h.

References altBox, altLabel, autoFWBox, capsBox, capsLabel, ctrlBox, ctrlLabel, devicesLabel, extraButton, gridLayout, gridLayout_3, gridLayout_5, horizontalLayout, horizontalLayout_2, horizontalSpacer, horizontalSpacer_10, horizontalSpacer_2, horizontalSpacer_7, horizontalSpacer_9, label, label_2, label_3, label_5, label_6, label_8, layoutBox, line, line_2, line_3, loginItemBox, pushButton, retranslateUi(), shiftBox, shiftLabel, versionLabel, verticalSpacer, verticalSpacer_10, verticalSpacer_2, verticalSpacer_3, verticalSpacer_4, verticalSpacer_5, verticalSpacer_6, verticalSpacer_7, verticalSpacer_8, winBox, and winLabel.

Referenced by SettingsWidget::SettingsWidget().

```
    {
        if (SettingsWidget->objectName().isEmpty())
            SettingsWidget->setObjectName(QStringLiteral("SettingsWidget"));
        SettingsWidget->resize(827, 654);
        gridLayout = new QGridLayout(SettingsWidget);
        gridLayout->setObjectName(QStringLiteral("gridLayout"));
        label_2 = new QLabel(SettingsWidget);
        label_2->setObjectName(QStringLiteral("label_2"));
        label_2->setOpenExternalLinks(true);
        label_2->setAlignment(Qt::AlignLeading|Qt::AlignLeft|Qt::AlignVCenter);

        gridLayout->addWidget(label_2, 20, 0, 1, 2);

        label = new QLabel(SettingsWidget);
        label->setObjectName(QStringLiteral("label"));
        QFont font;
        font.setBold(true);
        font.setWeight(75);
        label->setFont(font);

        gridLayout->addWidget(label, 6, 0, 1, 2);

        label_6 = new QLabel(SettingsWidget);
        label_6->setObjectName(QStringLiteral("label_6"));
        label_6->setFont(font);

        gridLayout->addWidget(label_6, 12, 0, 1, 2);

        gridLayout_5 = new QGridLayout();
        gridLayout_5->setObjectName(QStringLiteral("gridLayout_5"));
        horizontalSpacer_7 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_5->addItem(horizontalSpacer_7, 2, 2, 1, 1);

        devicesLabel = new QLabel(SettingsWidget);
        devicesLabel->setObjectName(QStringLiteral("devicesLabel"));

        gridLayout_5->addWidget(devicesLabel, 0, 0, 1, 3);

        label_5 = new QLabel(SettingsWidget);
        label_5->setObjectName(QStringLiteral("label_5"));

```

```
        gridLayout_5->addWidget(label_5, 2, 0, 1, 1);

        layoutBox = new QComboBox(SettingsWidget);
        layoutBox->setObjectName(QStringLiteral("layoutBox"));

        gridLayout_5->addWidget(layoutBox, 2, 1, 1, 1);

        verticalSpacer_10 = new QSpacerItem(20, 6, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout_5->addItem(verticalSpacer_10, 1, 0, 1, 1);


        gridLayout->addLayout(gridLayout_5, 4, 1, 1, 1);

        horizontalLayout_2 = new QHBoxLayout();
        horizontalLayout_2->setObjectName(QStringLiteral("horizontalLayout_2"));
        label_3 = new QLabel(SettingsWidget);
        label_3->setObjectName(QStringLiteral("label_3"));
        label_3->setOpenExternalLinks(true);

        horizontalLayout_2->addWidget(label_3);

        horizontalSpacer = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout_2->addItem(horizontalSpacer);

        pushButton = new QPushButton(SettingsWidget);
        pushButton->setObjectName(QStringLiteral("pushButton"));
        pushButton->setFlat(false);

        horizontalLayout_2->addWidget(pushButton);


        gridLayout->addLayout(horizontalLayout_2, 21, 0, 1, 2);

        verticalSpacer = new QSpacerItem(20, 40, QSizePolicy::Minimum, QSizePolicy::Expanding);

        gridLayout->addItem(verticalSpacer, 19, 0, 1, 2);

        verticalSpacer_8 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_8, 16, 0, 1, 1);

        loginItemBox = new QCheckBox(SettingsWidget);
        loginItemBox->setObjectName(QStringLiteral("loginItemBox"));

        gridLayout->addWidget(loginItemBox, 16, 1, 1, 1);

        verticalSpacer_6 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_6, 15, 0, 1, 1);

        autoFWBox = new QCheckBox(SettingsWidget);
        autoFWBox->setObjectName(QStringLiteral("autoFWBox"));
        autoFWBox->setChecked(true);

        gridLayout->addWidget(autoFWBox, 15, 1, 1, 1);

        line_2 = new QFrame(SettingsWidget);
        line_2->setObjectName(QStringLiteral("line_2"));
        line_2->setFrameShape(QFrame::HLine);
        line_2->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_2, 13, 0, 1, 2);

        label_8 = new QLabel(SettingsWidget);
        label_8->setObjectName(QStringLiteral("label_8"));
        QFont font1;
        font1.setItalic(true);
        label_8->setFont(font1);

        gridLayout->addWidget(label_8, 8, 1, 1, 1);

        gridLayout_3 = new QGridLayout();
        gridLayout_3->setObjectName(QStringLiteral("gridLayout_3"));
        shiftLabel = new QLabel(SettingsWidget);
        shiftLabel->setObjectName(QStringLiteral("shiftLabel"));
        QSizePolicy sizePolicy(QSizePolicy::Expanding, QSizePolicy::Preferred);
        sizePolicy.setHorizontalStretch(0);
        sizePolicy.setVerticalStretch(0);
        sizePolicy.setHeightForWidth(shiftLabel->sizePolicy().hasHeightForWidth());
        shiftLabel->setSizePolicy(sizePolicy);
```

```
        shiftLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_3->addWidget(shiftLabel, 0, 3, 1, 1);

        capsLabel = new QLabel(SettingsWidget);
        capsLabel->setObjectName(QStringLiteral("capsLabel"));
        capsLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_3->addWidget(capsLabel, 0, 1, 1, 1);

        horizontalSpacer_10 = new QSpacerItem(0, 0, QSizePolicy::Fixed, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_10, 0, 0, 1, 1);

        capsBox = new QComboBox(SettingsWidget);
        capsBox->setObjectName(QStringLiteral("capsBox"));
        QSizePolicy sizePolicy1(QSizePolicy::Expanding, QSizePolicy::Fixed);
        sizePolicy1.setHorizontalStretch(0);
        sizePolicy1.setVerticalStretch(0);
        sizePolicy1.setHeightForWidth(capsBox->sizePolicy().hasHeightForWidth());
        capsBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(capsBox, 0, 2, 1, 1);

        ctrlLabel = new QLabel(SettingsWidget);
        ctrlLabel->setObjectName(QStringLiteral("ctrlLabel"));
        ctrlLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_3->addWidget(ctrlLabel, 1, 1, 1, 1);

        horizontalSpacer_9 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        gridLayout_3->addItem(horizontalSpacer_9, 1, 7, 1, 1);

        ctrlBox = new QComboBox(SettingsWidget);
        ctrlBox->setObjectName(QStringLiteral("ctrlBox"));

        gridLayout_3->addWidget(ctrlBox, 1, 2, 1, 1);

        shiftBox = new QComboBox(SettingsWidget);
        shiftBox->setObjectName(QStringLiteral("shiftBox"));
        sizePolicy1.setHeightForWidth(shiftBox->sizePolicy().hasHeightForWidth());
        shiftBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(shiftBox, 0, 4, 1, 1);

        winLabel = new QLabel(SettingsWidget);
        winLabel->setObjectName(QStringLiteral("winLabel"));
        sizePolicy.setHeightForWidth(winLabel->sizePolicy().hasHeightForWidth());
        winLabel->setSizePolicy(sizePolicy);
        winLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_3->addWidget(winLabel, 1, 3, 1, 1);

        winBox = new QComboBox(SettingsWidget);
        winBox->setObjectName(QStringLiteral("winBox"));
        sizePolicy1.setHeightForWidth(winBox->sizePolicy().hasHeightForWidth());
        winBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(winBox, 1, 4, 1, 1);

        altBox = new QComboBox(SettingsWidget);
        altBox->setObjectName(QStringLiteral("altBox"));
        sizePolicy1.setHeightForWidth(altBox->sizePolicy().hasHeightForWidth());
        altBox->setSizePolicy(sizePolicy1);

        gridLayout_3->addWidget(altBox, 1, 6, 1, 1);

        altLabel = new QLabel(SettingsWidget);
        altLabel->setObjectName(QStringLiteral("altLabel"));
        sizePolicy.setHeightForWidth(altLabel->sizePolicy().hasHeightForWidth());
        altLabel->setSizePolicy(sizePolicy);
        altLabel->setAlignment(Qt::AlignRight|Qt::AlignTrailing|Qt::AlignVCenter);

        gridLayout_3->addWidget(altLabel, 1, 5, 1, 1);


        gridLayout->addLayout(gridLayout_3, 10, 1, 1, 1);

        line = new QFrame(SettingsWidget);
        line->setObjectName(QStringLiteral("line"));
        line->setFrameShape(QFrame::HLine);
        line->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line, 1, 0, 1, 2);
```

```

        verticalSpacer_3 = new QSpacerItem(0, 5, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_3, 2, 1, 1, 1);

        verticalSpacer_5 = new QSpacerItem(20, 12, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_5, 11, 1, 1, 1);

        line_3 = new QFrame(SettingsWidget);
        line_3->setObjectName(QStringLiteral("line_3"));
        QSizePolicy sizePolicy2(QSizePolicy::Minimum, QSizePolicy::Fixed);
        sizePolicy2.setHorizontalStretch(0);
        sizePolicy2.setVerticalStretch(0);
        sizePolicy2.setHeightForWidth(line_3->sizePolicy().hasHeightForWidth());
        line_3->setSizePolicy(sizePolicy2);
        line_3->setFrameShape(QFrame::HLine);
        line_3->setFrameShadow(QFrame::Sunken);

        gridLayout->addWidget(line_3, 7, 0, 1, 2);

        verticalSpacer_4 = new QSpacerItem(20, 6, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_4, 9, 1, 1, 1);

        verticalSpacer_2 = new QSpacerItem(20, 12, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_2, 5, 1, 1, 1);

        versionLabel = new QLabel(SettingsWidget);
        versionLabel->setObjectName(QStringLiteral("versionLabel"));
        versionLabel->setFont(font);

        gridLayout->addWidget(versionLabel, 0, 0, 1, 2);

        horizontalLayout = new QHBoxLayout();
        horizontalLayout->setObjectName(QStringLiteral("horizontalLayout"));
        extraButton = new QPushButton(SettingsWidget);
        extraButton->setObjectName(QStringLiteral("extraButton"));

        horizontalLayout->addWidget(extraButton);

        horizontalSpacer_2 = new QSpacerItem(40, 20, QSizePolicy::Expanding, QSizePolicy::Minimum);

        horizontalLayout->addItem(horizontalSpacer_2);


        gridLayout->addLayout(horizontalLayout, 17, 1, 1, 1);

        verticalSpacer_7 = new QSpacerItem(0, 28, QSizePolicy::Minimum, QSizePolicy::Fixed);

        gridLayout->addItem(verticalSpacer_7, 17, 0, 1, 1);


        retranslateUi(SettingsWidget);

        QMetaObject::connectSlotsByName(SettingsWidget);
    } // setupUi
```

Here is the call graph for this function:

Here is the caller graph for this function:

12.102.3 Field Documentation

12.102.3.1 QComboBox* Ui_SettingsWidget::altBox

Definition at line 64 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), setupUi(), and SettingsWidget::updateModifiers().

12.102.3.2 QLabel* Ui_SettingsWidget::altLabel

Definition at line 65 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.3 QCheckBox* Ui_SettingsWidget::autoFWBox

Definition at line 50 of file ui_settingswidget.h.

Referenced by retranslateUi(), SettingsWidget::SettingsWidget(), and setupUi().

12.102.3.4 QComboBox* Ui_SettingsWidget::capsBox

Definition at line 57 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), setupUi(), and SettingsWidget::updateModifiers().

12.102.3.5 QLabel* Ui_SettingsWidget::capsLabel

Definition at line 55 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.6 QComboBox* Ui_SettingsWidget::ctrlBox

Definition at line 60 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), setupUi(), and SettingsWidget::updateModifiers().

12.102.3.7 QLabel* Ui_SettingsWidget::ctrlLabel

Definition at line 58 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.8 QLabel* Ui_SettingsWidget::devicesLabel

Definition at line 38 of file ui_settingswidget.h.

Referenced by retranslateUi(), SettingsWidget::setStatus(), and setupUi().

12.102.3.9 QPushButton* Ui_SettingsWidget::extraButton

Definition at line 74 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.10 QGridLayout* Ui_SettingsWidget::gridLayout

Definition at line 32 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.11 QGridLayout* Ui_SettingsWidget::gridLayout_3

Definition at line 53 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.12 QGridLayout* Ui_SettingsWidget::gridLayout_5

Definition at line 36 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.13 QHBoxLayout* Ui_SettingsWidget::horizontalLayout

Definition at line 73 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.14 QHBoxLayout* Ui_SettingsWidget::horizontalLayout_2

Definition at line 42 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.15 QSpacerItem* Ui_SettingsWidget::horizontalSpacer

Definition at line 44 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.16 QSpacerItem* Ui_SettingsWidget::horizontalSpacer_10

Definition at line 56 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.17 QSpacerItem* Ui_SettingsWidget::horizontalSpacer_2

Definition at line 75 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.18 QSpacerItem* Ui_SettingsWidget::horizontalSpacer_7

Definition at line 37 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.19 QSpacerItem* Ui_SettingsWidget::horizontalSpacer_9

Definition at line 59 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.20 QLabel* Ui_SettingsWidget::label

Definition at line 34 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.21 QLabel* Ui_SettingsWidget::label_2

Definition at line 33 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.22 QLabel* Ui_SettingsWidget::label_3

Definition at line 43 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.23 QLabel* Ui_SettingsWidget::label_5

Definition at line 39 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.24 QLabel* Ui_SettingsWidget::label_6

Definition at line 35 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.25 QLabel* Ui_SettingsWidget::label_8

Definition at line 52 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.26 QComboBox* Ui_SettingsWidget::layoutBox

Definition at line 40 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), setupUi(), and SettingsWidget::showLayoutDialog().

12.102.3.27 QFrame* Ui_SettingsWidget::line

Definition at line 66 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.28 QFrame* Ui_SettingsWidget::line_2

Definition at line 51 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.29 QFrame* Ui_SettingsWidget::line_3

Definition at line 69 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.30 QCheckBox* Ui_SettingsWidget::loginItemBox

Definition at line 48 of file ui_settingswidget.h.

Referenced by retranslateUi(), SettingsWidget::SettingsWidget(), and setupUi().

12.102.3.31 QPushButton* Ui_SettingsWidget::pushButton

Definition at line 45 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.32 QComboBox* Ui_SettingsWidget::shiftBox

Definition at line 61 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), setupUi(), and SettingsWidget::updateModifiers().

12.102.3.33 QLabel* Ui_SettingsWidget::shiftLabel

Definition at line 54 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

12.102.3.34 QLabel* Ui_SettingsWidget::versionLabel

Definition at line 72 of file ui_settingswidget.h.

Referenced by retranslateUi(), setupUi(), and SettingsWidget::setVersion().

12.102.3.35 QSpacerItem* Ui_SettingsWidget::verticalSpacer

Definition at line 46 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.36 QSpacerItem* Ui_SettingsWidget::verticalSpacer_10

Definition at line 41 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.37 QSpacerItem* Ui_SettingsWidget::verticalSpacer_2

Definition at line 71 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.38 QSpacerItem* Ui_SettingsWidget::verticalSpacer_3

Definition at line 67 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.39 QSpacerItem* Ui_SettingsWidget::verticalSpacer_4

Definition at line 70 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.40 QSpacerItem* Ui_SettingsWidget::verticalSpacer_5

Definition at line 68 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.41 QSpacerItem* Ui_SettingsWidget::verticalSpacer_6

Definition at line 49 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.42 QSpacerItem* Ui_SettingsWidget::verticalSpacer_7

Definition at line 76 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.43 QSpacerItem* Ui_SettingsWidget::verticalSpacer_8

Definition at line 47 of file ui_settingswidget.h.

Referenced by setupUi().

12.102.3.44 QComboBox* Ui_SettingsWidget::winBox

Definition at line 63 of file ui_settingswidget.h.

Referenced by SettingsWidget::SettingsWidget(), setupUi(), and SettingsWidget::updateModifiers().

12.102.3.45 QLabel* Ui_SettingsWidget::winLabel

Definition at line 62 of file ui_settingswidget.h.

Referenced by retranslateUi(), and setupUi().

The documentation for this class was generated from the following file:

- src/ckb/ui_settingswidget.h

12.103 UsbId Struct Reference

```
#include <src/ckb/kbmode.h>
```

Collaboration diagram for UsbId:

Public Member Functions

- UsbId (const QString &_guid, quint32 _modified)

- UsbId (const QString &_guid, const QString &_modified)
- UsbId ()
- QString guidString () const
- void guidString (const QString &newGuid)
- QString modifiedString () const
- void modifiedString (const QString &newModified)
- QString hwModifiedString () const
- void hwModifiedString (const QString &newModified)
- void newGuid ()
- void newModified ()

Data Fields

- QUuid guid
- quint32 modified
- quint32 hwModified

12.103.1 Detailed Description

Definition at line 11 of file kbmode.h.

12.103.2 Constructor & Destructor Documentation

12.103.2.1 UsbId::UsbId (const QString & *_guid*, quint32 *_modified*) [inline]

Definition at line 16 of file kbmode.h.

```
16 : guid(_guid), modified(_modified), hwModified(_modified) {}
```

12.103.2.2 UsbId::UsbId (const QString & *_guid*, const QString & *_modified*) [inline]

Definition at line 17 of file kbmode.h.

```
17 : guid(_guid), modified(_modified.toUInt(0, 16)), hwModified(
      modified) {}
```

12.103.2.3 UsbId::UsbId ( ) [inline]

Definition at line 18 of file kbmode.h.

```
18 : guid(QUuid::createUuid()),modified(0) {}
```

12.103.3 Member Function Documentation

12.103.3.1 QString UsbId::guidString ( ) const [inline]

Definition at line 20 of file kbmode.h.

References guid.

Referenced by Kb::hwSave(), KbProfile::save(), KbMode::save(), Kb::save(), and Kb::writeProfileHeader().

```
20 { return guid.toString().toUpper(); }
```

Here is the caller graph for this function:

12.103.3.2 void UsbId::guidString (const QString & *newGuid*) [inline]

Definition at line 21 of file kbmode.h.

References guid, and newGuid().

```
21 { guid = newGuid; }
```

Here is the call graph for this function:

12.103.3.3 QString UsbId::hwModifiedString ( ) const [inline]

Definition at line 24 of file kbmode.h.

References hwModified.

Referenced by KbMode::KbMode(), KbProfile::KbProfile(), Kb::readNotify(), KbProfile::save(), and KbMode::save().

```
24 { return QString::number(hwModified, 16); }
```

Here is the caller graph for this function:

12.103.3.4 void UsbId::hwModifiedString (const QString & *newModified*) [inline]

Definition at line 25 of file kbmode.h.

References hwModified.

```
25 { hwModified = newModified.toUInt(0, 16); }
```

12.103.3.5 QString UsbId::modifiedString ( ) const [inline]

Definition at line 22 of file kbmode.h.

References modified.

Referenced by Kb::hwSave(), KbProfile::KbProfile(), Kb::readNotify(), KbProfile::save(), KbMode::save(), and Kb::writeProfileHeader().

```
22 { return QString::number(modified, 16); }
```

Here is the caller graph for this function:

12.103.3.6 void UsbId::modifiedString (const QString & *newModified*) [inline]

Definition at line 23 of file kbmode.h.

References modified.

```
23 { modified = newModified.toUInt(0, 16); }
```

12.103.3.7 void UsbId::newGuid ( ) [inline]

Definition at line 28 of file kbmode.h.

References guid.

Referenced by guidString().

```
28 { guid = QUuid::createUuid(); }
```

Here is the caller graph for this function:

12.103.3.8 void UsbId::newModified ( ) [inline]

Definition at line 29 of file kbmode.h.

References modified.

Referenced by KbProfile::save(), and KbMode::save().

```
29 { quint32 newMod; do { newMod = qrand(); } while(newMod == modified);
     modified = newMod; }
```

Here is the caller graph for this function:

12.103.4 Field Documentation

12.103.4.1 QUuid UsbId::guid

Definition at line 12 of file kbmode.h.

Referenced by KbProfile::find(), Kb::find(), guidString(), KbMode::KbMode(), KbProfile::KbProfile(), newGuid(), KbWidget::on_modesList_customContextMenuRequested(), KbWidget::on_modesList_itemChanged(), KbWidget::on_modesList_itemClicked(), KbProfileDialog::on_profileList_customContextMenuRequested(), KbProfileDialog::on_profileList_itemChanged(), KbProfileDialog::on_profileList_itemClicked(), KbWidget::profileChanged(), Kb::readNotify(), and KbProfileDialog::repopulate().

12.103.4.2 quint32 UsbId::hwModified

Definition at line 14 of file kbmode.h.

Referenced by hwModifiedString(), Kb::hwSave(), KbMode::KbMode(), and KbProfile::KbProfile().

12.103.4.3 quint32 UsbId::modified

Definition at line 13 of file kbmode.h.

Referenced by Kb::hwSave(), KbMode::KbMode(), KbProfile::KbProfile(), modifiedString(), and newModified().

The documentation for this struct was generated from the following file:

- src/ckb/kbmode.h

Chapter 13

File Documentation

13.1 BUILD.md File Reference

13.2 DAEMON.md File Reference

13.3 README.md File Reference

13.4 ROADMAP.md File Reference

13.5 src/ckb-daemon/command.c File Reference

```
#include "command.h"
#include "device.h"
#include "devnode.h"
#include "led.h"
#include "notify.h"
#include "profile.h"
#include "usb.h"
```

Include dependency graph for command.c:

Macros

- #define TRY_WITH_RESET(action)

Functions

- int readcmd (usbdevice *kb, const char *line)

Variables

- static const char *const cmd_strings [(CMD_LAST-CMD_FIRST+2)-1]

13.5.1 Macro Definition Documentation

13.5.1.1 #define TRY_WITH_RESET(*action*)

Value:

```
while(action){                \
        if(usb_tryreset(kb)){    \
            free(word);          \
            return 1;            \
        }                        \
    }
```

Definition at line 58 of file command.c.

Referenced by readcmd().

13.5.2 Function Documentation

13.5.2.1 int readcmd (usbdevice * *kb*, const char * *line*)

Because length of word is length of line + 1, there should be no problem with buffer overflow.

Definition at line 67 of file command.c.

References ACCEL, ACTIVE, usbdevice::active, BIND, CMD_COUNT, CMD_FIRST, cmd_strings, usbprofile::currentmode, DELAY, usbdevice::delay, DITHER, usbdevice::dither, devcmd::do_cmd, devcmd::do_io, devcmd::do_macro, DPI, DPISEL, ERASE, ERASEPROFILE, FEAT_ANSI, FEAT_BIND, FEAT_ISO, FEAT_LMASK, FEAT_MOUSEACCEL, FEAT_NOTIFY, usbdevice::features, lighting::forceupdate, FPS, FWUPDATE, GET, HAS_FEATURES, HWLOAD, HWSAVE, IAUTO, ID, IDLE, INDEX_OF, INOTIFY, IOFF, ION, IS_FULLRANGE, IS_MOUSE_DEV, keymap, LAYOUT, left, LIFT, usbmode::light, MACRO, mknotifynode(), MODE, usbprofile::mode, MODE_COUNT, N_KEYS_EXTENDED, NAME, NEEDS_FW_UPDATE, NONE, NOTIFY, NOTIFYOFF, NOTIFYON, OUTFIFO_MAX, POLLRATE, usbdevice::profile, PROFILEID, PROFILENAME, REBIND, RESTART, RGB, right(), rmnotifynode(), SCROLL_ACCELERATED, SCROLL_MAX, SCROLL_MIN, SCROLLSPEED, SNAP, SWITCH, TRY_WITH_RESET, UNBIND, usbdevice::usbdelay, and usbdevice::vtable.

Referenced by devmain().

```
67                                          {
68     char* word = malloc(strlen(line) + 1);
69     int wordlen;
70     const char* newline = 0;
71     const devcmd* vt = kb->vtable;
72     usbprofile* profile = kb->profile;
73     usbmode* mode = 0;
74     int notifynumber = 0;
75     // Read words from the input
76     cmd command = NONE;
77     while(sscanf(line, "%s%n", word, &wordlen) == 1){
78         line += wordlen;
79         // If we passed a newline, reset the context
80         if(line > newline){
81             mode = profile->currentmode;
82             command = NONE;
83             notifynumber = 0;
84             newline = strchr(line, '\n');
```

```
            if(!newline)
                newline = line + strlen(line);
        }
        // Check for a command word
        for(int i = 0; i < CMD_COUNT - 1; i++){
            if(!strcmp(word, cmd_strings[i])){
                command = i + CMD_FIRST;
#ifndef OS_MAC
                // Layout and mouse acceleration aren't used on Linux; ignore
                if(command == LAYOUT || command == ACCEL || command == SCROLLSPEED)
                    command = NONE;
#endif
                // Most commands require parameters, but a few are actions in and of themselves
                if(command != SWITCH
                        && command != HWLOAD && command != HWSAVE
                         && command != ACTIVE && command != IDLE
                         && command != ERASE && command != ERASEPROFILE
                         && command != RESTART)
                    goto next_loop;
                break;
            }
        }

        // Set current notification node when given @number
        int newnotify;
        if(sscanf(word, "@%u", &newnotify) == 1 && newnotify < OUTFIFO_MAX){
            notifynumber = newnotify;
            continue;
        }

        // Reject unrecognized commands. Reject bind or notify related commands if the keyboard doesn't have the feature enabled.
        if(command == NONE
                || ((!HAS_FEATURES(kb, FEAT_BIND) && (command == BIND || command == UNBIND || command == REBIND || command == MACRO || command == DELAY))
                            || (!HAS_FEATURES(kb, FEAT_NOTIFY) && command == NOTIFY))){
            next_loop:
            continue;
        }
        // Reject anything not related to fwupdate if device has a bricked FW
        if(NEEDS_FW_UPDATE(kb) && command != FWUPDATE && command != NOTIFYON && command != NOTIFYOFF)
            continue;

        // Specially handled commands - these are available even when keyboard is IDLE
        switch(command){
        case NOTIFYON: {
            // Notification node on
            int notify;
            if(sscanf(word, "%u", &notify) == 1)
                mknotifynode(kb, notify);
            continue;
        } case NOTIFYOFF: {
            // Notification node off
            int notify;
            if(sscanf(word, "%u", &notify) == 1 && notify != 0) // notify0 can't be removed
                rmnotifynode(kb, notify);
            continue;
        } case GET:
            // Output data to notification node
            vt->get(kb, mode, notifynumber, 0, word);
            continue;
        case LAYOUT:
            // OSX: switch ANSI/ISO keyboard layout
            if(!strcmp(word, "ansi"))
                kb->features = (kb->features & ~FEAT_LMASK) | FEAT_ANSI;
            else if(!strcmp(word, "iso"))
                kb->features = (kb->features & ~FEAT_LMASK) | FEAT_ISO;
            continue;
#ifdef OS_MAC
        case ACCEL:
            // OSX mouse acceleration on/off
            if(!strcmp(word, "on"))
                kb->features |= FEAT_MOUSEACCEL;
            else if(!strcmp(word, "off"))
                kb->features &= ~FEAT_MOUSEACCEL;
            continue;
        case SCROLLSPEED:{
            int newscroll;
            if(sscanf(word, "%d", &newscroll) != 1)
                break;
            if(newscroll < SCROLL_MIN)
```

```
                newscroll = SCROLL_ACCELERATED;
            if(newscroll > SCROLL_MAX)
                newscroll = SCROLL_MAX;
            kb->scroll_rate = newscroll;
            continue;
        }
#endif
        case MODE: {
            // Select a mode number (1 - 6)
            int newmode;
            if(sscanf(word, "%u", &newmode) == 1 && newmode > 0 && newmode <= MODE_COUNT)
                mode = profile->mode + newmode - 1;
            continue;
        }
        case FPS: {
            // USB command delay (2 - 10ms)
            uint framerate;
            if(sscanf(word, "%u", &framerate) == 1 && framerate > 0){
                // Not all devices require the same number of messages per frame; select delay appropriately
                uint per_frame = IS_MOUSE_DEV(kb) ? 2 : IS_FULLRANGE(kb) ? 14 : 5;
                uint delay = 1000 / framerate / per_frame;
                if(delay < 2)
                    delay = 2;
                else if(delay > 10)
                    delay = 10;
                kb->usbdelay = delay;
            }
            continue;
        }
        case DITHER: {
            // 0: No dither, 1: Ordered dither.
            uint dither;
            if(sscanf(word, "%u", &dither) == 1 && dither <= 1){
                kb->dither = dither;
                profile->currentmode->light.forceupdate = 1;
                mode->light.forceupdate = 1;
            }
            continue;
        }
        case DELAY:
            kb->delay = (!strcmp (word, "on")); // independendant from parameter to handle false commands like "delay off"
            continue;
        case RESTART: {
            char mybuffer[] = "no reason specified";
            if (sscanf(line, " %[^\n]", word) == -1) {
                word = mybuffer;
            }
            vt->do_cmd[command](kb, mode, notifynumber, 0, word);
            continue;
        }

        default:;
        }

        // If a keyboard is inactive, it must be activated before receiving any other commands
        if(!kb->active){
            if(command == ACTIVE)
                TRY_WITH_RESET(vt->active(kb, mode, notifynumber, 0, 0));
            continue;
        }
        // Specially handled commands only available when keyboard is ACTIVE
        switch(command){
        case IDLE:
            TRY_WITH_RESET(vt->idle(kb, mode, notifynumber, 0, 0));
            continue;
        case SWITCH:
            if(profile->currentmode != mode){
                profile->currentmode = mode;
                // Set mode light for non-RGB K95
                int index = INDEX_OF(mode, profile->mode);
                vt->setmodeindex(kb, index);
            }
            continue;
        case HWLOAD: case HWSAVE:{
            char delay = kb->usbdelay;
            // Ensure delay of at least 10ms as the device can get overwhelmed otherwise
            if(delay < 10)
                kb->usbdelay = 10;
            // Try to load/save the hardware profile. Reset on failure, disconnect if reset fails.
            TRY_WITH_RESET(vt->do_io[command](kb, mode, notifynumber, 1, 0));
            // Re-send the current RGB state as it sometimes gets scrambled
            TRY_WITH_RESET(vt->updatergb(kb, 1));
            kb->usbdelay = delay;
            continue;
```

```
        }
        case FWUPDATE:
            // FW update parses a whole word. Unlike hwload/hwsave, there's no try again on failure.
            if(vt->fwupdate(kb, mode, notifynumber, 0, word)){
                free(word);
                return 1;
            }
            continue;
        case POLLRATE: {
            uint rate;
            if(sscanf(word, "%u", &rate) == 1 && (rate == 1 || rate == 2 || rate == 4 || rate == 8))
                TRY_WITH_RESET(vt->pollrate(kb, mode, notifynumber, rate, 0));
            continue;
        }
        case ERASEPROFILE:
            // Erase the current profile
            vt->eraseprofile(kb, mode, notifynumber, 0, 0);
            // Update profile/mode pointers
            profile = kb->profile;
            mode = profile->currentmode;
            continue;
        case ERASE: case NAME: case IOFF: case ION: case IAUTO: case INOTIFY: case PROFILENAME: case ID: case PROFILEID: case DPISEL: case LIFT: case SNAP:
            // All of the above just parse the whole word
            vt->do_cmd[command](kb, mode, notifynumber, 0, word);
            continue;
        case RGB: {
            // RGB command has a special response for a single hex constant
            int r, g, b;
            if(sscanf(word, "%02x%02x%02x", &r, &g, &b) == 3){
                // Set all keys
                for(int i = 0; i < N_KEYS_EXTENDED; i++)
                    vt->rgb(kb, mode, notifynumber, i, word);
                continue;
            }
            break;
        }
        case MACRO:
            if(!strcmp(word, "clear")){
                // Macro has a special clear command
                vt->macro(kb, mode, notifynumber, 0, 0);
                continue;
            }
            break;
        default:;
        }
        // For anything else, split the parameter at the colon
        int left = -1;
        sscanf(word, "%*[^:]%n", &left);
        if(left <= 0)
            continue;
        const char* right = word + left;
        if(right[0] == ':')
            right++;
        // Macros and DPI have a separate left-side handler
        if(command == MACRO || command == DPI){
            word[left] = 0;
            vt->do_macro[command](kb, mode, notifynumber, word, right);
            continue;
        }
        // Scan the left side for key names and run the requested command
        int position = 0, field = 0;
        char keyname[11];
        while(position < left && sscanf(word + position, "%10[^:,]%n", keyname, &field) == 1){
            int keycode;
            if(!strcmp(keyname, "all")){
                // Set all keys
                for(int i = 0; i < N_KEYS_EXTENDED; i++)
                    vt->do_cmd[command](kb, mode, notifynumber, i, right);
            } else if((sscanf(keyname, "#%d", &keycode) && keycode >= 0 && keycode < N_KEYS_EXTENDED)
                        || (sscanf(keyname, "#x%x", &keycode) && keycode >= 0 && keycode < N_KEYS_EXTENDED)){
                // Set a key numerically
                vt->do_cmd[command](kb, mode, notifynumber, keycode, right);
            } else {
                // Find this key in the keymap
                for(unsigned i = 0; i < N_KEYS_EXTENDED; i++){
                    if(keymap[i].name && !strcmp(keyname, keymap[i].name)){
                        vt->do_cmd[command](kb, mode, notifynumber, i, right);
                        break;
                    }
                }
            }
            if(word[position += field] == ',')
```

```
                position++;
        }
    }

    // Finish up
    if(!NEEDS_FW_UPDATE(kb)){
        TRY_WITH_RESET(vt->updatergb(kb, 0));
        TRY_WITH_RESET(vt->updatedpi(kb, 0));
    }
    free(word);
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.5.3 Variable Documentation

13.5.3.1 const char* const cmd_strings[(CMD_LAST-CMD_FIRST+2)-1] [static]

Definition at line 9 of file command.c.

Referenced by readcmd().

13.6 src/ckb-daemon/command.h File Reference

```
#include "includes.h"
```

Include dependency graph for command.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- union devcmd
- struct devcmd.__unnamed__

Macros

- #define CMD_COUNT (CMD_LAST - CMD_FIRST + 2)
- #define CMD_DEV_COUNT (CMD_LAST - CMD_VT_FIRST + 1)

Typedefs

- typedef void(∗ cmdhandler)(usbdevice ∗kb, usbmode ∗modeidx, int notifyidx, int keyindex, const char ∗parameter)
- typedef int(∗ cmdhandler_io)(usbdevice ∗kb, usbmode ∗modeidx, int notifyidx, int keyindex, const char ∗parameter)
- typedef void(∗ cmdhandler_mac)(usbdevice ∗kb, usbmode ∗modeidx, int notifyidx, const char ∗keys, const char ∗assignment)
- typedef union devcmd devcmd

Enumerations

- enum cmd {
  NONE = -11, DELAY = -10, CMD_FIRST = DELAY, MODE = -9,
  SWITCH = -8, LAYOUT = -7, ACCEL = -6, SCROLLSPEED = -5,
  NOTIFYON = -4, NOTIFYOFF = -3, FPS = -2, DITHER = -1,
  HWLOAD = 0, CMD_VT_FIRST = 0, HWSAVE, FWUPDATE,
  POLLRATE, ACTIVE, IDLE, ERASE,
  ERASEPROFILE, NAME, PROFILENAME, ID,
  PROFILEID, RGB, IOFF, ION,
  IAUTO, BIND, UNBIND, REBIND,
  MACRO, DPI, DPISEL, LIFT,
  SNAP, NOTIFY, INOTIFY, GET,
  RESTART, CMD_LAST = RESTART }

Functions

- int readcmd (usbdevice ∗kb, const char ∗line)

13.6.1 Data Structure Documentation

13.6.1.1 union devcmd

Definition at line 73 of file command.h.

Collaboration diagram for devcmd:

Data Fields

struct devcmd	__unnamed__	
cmdhandler	do_cmd[(CMD_LAST-CMD_VT_FIRST+1)]	
cmdhandler_io	do_io[(CMD_LAST-CMD_VT_FIRST+1)]	
cmdhandler_mac	do_macro[(CMD_LAST-CMD_VT_FIRST+1)]	

13.6.2 Macro Definition Documentation

13.6.2.1 #define CMD_COUNT (CMD_LAST - CMD_FIRST + 2)

Definition at line 65 of file command.h.

Referenced by readcmd().

13.6.2.2 #define CMD_DEV_COUNT (CMD_LAST - CMD_VT_FIRST + 1)

Definition at line 66 of file command.h.

13.6.3 Typedef Documentation

13.6.3.1 typedef void(∗ cmdhandler)(usbdevice ∗kb, usbmode ∗modeidx, int notifyidx, int keyindex, const char ∗parameter)

Definition at line 70 of file command.h.

13.6.3.2 typedef int(∗ cmdhandler_io)(usbdevice ∗kb, usbmode ∗modeidx, int notifyidx, int keyindex, const char ∗parameter)

Definition at line 71 of file command.h.

13.6.3.3 typedef void(∗ cmdhandler_mac)(usbdevice ∗kb, usbmode ∗modeidx, int notifyidx, const char ∗keys, const char ∗assignment)

Definition at line 72 of file command.h.

13.6.3.4 typedef union devcmd devcmd

13.6.4 Enumeration Type Documentation

13.6.4.1 enum cmd

Enumerator

NONE

DELAY

CMD_FIRST

MODE

SWITCH

LAYOUT

ACCEL

SCROLLSPEED

NOTIFYON

NOTIFYOFF

FPS

DITHER

HWLOAD

CMD_VT_FIRST

HWSAVE

FWUPDATE

POLLRATE

ACTIVE

IDLE

ERASE

ERASEPROFILE

NAME

PROFILENAME

ID

PROFILEID

RGB

IOFF

ION

IAUTO

BIND

UNBIND

REBIND

MACRO

DPI

DPISEL

LIFT

SNAP

NOTIFY

INOTIFY

GET

RESTART

CMD_LAST

Definition at line 7 of file command.h.

```
7               {
8     // Special - handled by readcmd, no device functions
9     NONE        = -11,
10     DELAY       = -10,   CMD_FIRST = DELAY,
11     MODE        = -9,
12     SWITCH      = -8,
13     LAYOUT      = -7,
14     ACCEL       = -6,
15     SCROLLSPEED = -5,
16     NOTIFYON    = -4,
17     NOTIFYOFF   = -3,
18     FPS         = -2,
19     DITHER      = -1,
20
21     // Hardware data
22     HWLOAD      = 0,    CMD_VT_FIRST = 0,
23     HWSAVE,
24     FWUPDATE,
25     POLLRATE,
26
27     // Software control on/off
28     ACTIVE,
29     IDLE,
30
31     // Profile/mode metadata
32     ERASE,
33     ERASEPROFILE,
34     NAME,
35     PROFILENAME,
36     ID,
37     PROFILEID,
38
39     // LED control
40     RGB,
41     IOFF,
42     ION,
43     IAUTO,
44
45     // Key binding control
46     BIND,
47     UNBIND,
48     REBIND,
```

```
    MACRO,

    // DPI control
    DPI,
    DPISEL,
    LIFT,
    SNAP,

    // Notifications and output
    NOTIFY,
    INOTIFY,
    GET,
    RESTART,

    CMD_LAST = RESTART
} cmd;
```

13.6.5 Function Documentation

13.6.5.1 int readcmd (usbdevice * *kb*, const char * *line*)

Because length of word is length of line + 1, there should be no problem with buffer overflow.

Definition at line 67 of file command.c.

References ACCEL, ACTIVE, usbdevice::active, BIND, CMD_COUNT, CMD_FIRST, cmd_strings, usbprofile::currentmode, DELAY, usbdevice::delay, DITHER, usbdevice::dither, devcmd::do_cmd, devcmd::do_io, devcmd::do_macro, DPI, DPISEL, ERASE, ERASEPROFILE, FEAT_ANSI, FEAT_BIND, FEAT_ISO, FEAT_LMASK, FEAT_MOUSEACCEL, FEAT_NOTIFY, usbdevice::features, lighting::forceupdate, FPS, FWUPDATE, GET, HAS_FEATURES, HWLOAD, HWSAVE, IAUTO, ID, IDLE, INDEX_OF, INOTIFY, IOFF, ION, IS_FULLRANGE, IS_MOUSE_DEV, keymap, LAYOUT, left, LIFT, usbmode::light, MACRO, mknotifynode(), MODE, usbprofile::mode, MODE_COUNT, N_KEYS_EXTENDED, NAME, NEEDS_FW_UPDATE, NONE, NOTIFY, NOTIFYOFF, NOTIFYON, OUTFIFO_MAX, POLLRATE, usbdevice::profile, PROFILEID, PROFILENAME, REBIND, RESTART, RGB, right(), rmnotifynode(), SCROLL_ACCELERATED, SCROLL_MAX, SCROLL_MIN, SCROLLSPEED, SNAP, SWITCH, TRY_WITH_RESET, UNBIND, usbdevice::usbdelay, and usbdevice::vtable.

Referenced by devmain().

```
67                                          {
68     char* word = malloc(strlen(line) + 1);
69     int wordlen;
70     const char* newline = 0;
71     const devcmd* vt = kb->vtable;
72     usbprofile* profile = kb->profile;
73     usbmode* mode = 0;
74     int notifynumber = 0;
75     // Read words from the input
76     cmd command = NONE;
77     while(sscanf(line, "%s%n", word, &wordlen) == 1){
78         line += wordlen;
79         // If we passed a newline, reset the context
80         if(line > newline){
81             mode = profile->currentmode;
82             command = NONE;
83             notifynumber = 0;
84             newline = strchr(line, '\n');
85             if(!newline)
86                 newline = line + strlen(line);
87         }
88         // Check for a command word
89         for(int i = 0; i < CMD_COUNT - 1; i++){
90             if(!strcmp(word, cmd_strings[i])){
91                 command = i + CMD_FIRST;
92 #ifndef OS_MAC
93                 // Layout and mouse acceleration aren't used on Linux; ignore
94                 if(command == LAYOUT || command == ACCEL || command ==
    SCROLLSPEED)
95                     command = NONE;
96 #endif
97                 // Most commands require parameters, but a few are actions in and of themselves
98                 if(command != SWITCH
99                         && command != HWLOAD && command != HWSAVE
100                         && command != ACTIVE && command != IDLE
101                         && command != ERASE && command != ERASEPROFILE
102                         && command != RESTART)
103                     goto next_loop;
```

```
                break;
            }
        }

        // Set current notification node when given @number
        int newnotify;
        if(sscanf(word, "@%u", &newnotify) == 1 && newnotify < OUTFIFO_MAX){
            notifynumber = newnotify;
            continue;
        }

        // Reject unrecognized commands. Reject bind or notify related commands if the keyboard doesn't have the feature enabled.
        if(command == NONE
                || ((!HAS_FEATURES(kb, FEAT_BIND) && (command == BIND || command == UNBIND || command == REBIND || command == MACRO || command == DELAY))
                            || (!HAS_FEATURES(kb, FEAT_NOTIFY) && command == NOTIFY))){
            next_loop:
            continue;
        }
        // Reject anything not related to fwupdate if device has a bricked FW
        if(NEEDS_FW_UPDATE(kb) && command != FWUPDATE && command != NOTIFYON && command != NOTIFYOFF)
            continue;

        // Specially handled commands - these are available even when keyboard is IDLE
        switch(command){
        case NOTIFYON: {
            // Notification node on
            int notify;
            if(sscanf(word, "%u", &notify) == 1)
                mknotifynode(kb, notify);
            continue;
        } case NOTIFYOFF: {
            // Notification node off
            int notify;
            if(sscanf(word, "%u", &notify) == 1 && notify != 0) // notify0 can't be removed
                rmnotifynode(kb, notify);
            continue;
        } case GET:
            // Output data to notification node
            vt->get(kb, mode, notifynumber, 0, word);
            continue;
        case LAYOUT:
            // OSX: switch ANSI/ISO keyboard layout
            if(!strcmp(word, "ansi"))
                kb->features = (kb->features & ~FEAT_LMASK) | FEAT_ANSI;
            else if(!strcmp(word, "iso"))
                kb->features = (kb->features & ~FEAT_LMASK) | FEAT_ISO;
            continue;
#ifdef OS_MAC
        case ACCEL:
            // OSX mouse acceleration on/off
            if(!strcmp(word, "on"))
                kb->features |= FEAT_MOUSEACCEL;
            else if(!strcmp(word, "off"))
                kb->features &= ~FEAT_MOUSEACCEL;
            continue;
        case SCROLLSPEED:{
            int newscroll;
            if(sscanf(word, "%d", &newscroll) != 1)
                break;
            if(newscroll < SCROLL_MIN)
                newscroll = SCROLL_ACCELERATED;
            if(newscroll > SCROLL_MAX)
                newscroll = SCROLL_MAX;
            kb->scroll_rate = newscroll;
            continue;
        }
#endif
        case MODE: {
            // Select a mode number (1 - 6)
            int newmode;
            if(sscanf(word, "%u", &newmode) == 1 && newmode > 0 && newmode <= MODE_COUNT)
                mode = profile->mode + newmode - 1;
            continue;
        }
        case FPS: {
            // USB command delay (2 - 10ms)
            uint framerate;
            if(sscanf(word, "%u", &framerate) == 1 && framerate > 0){
                // Not all devices require the same number of messages per frame; select delay
```

```
appropriately
                uint per_frame = IS_MOUSE_DEV(kb) ? 2 : IS_FULLRANGE(kb) ? 14 : 5;
                uint delay = 1000 / framerate / per_frame;
                if(delay < 2)
                    delay = 2;
                else if(delay > 10)
                    delay = 10;
                kb->usbdelay = delay;
            }
            continue;
        }
        case DITHER: {
            // 0: No dither, 1: Ordered dither.
            uint dither;
            if(sscanf(word, "%u", &dither) == 1 && dither <= 1){
                kb->dither = dither;
                profile->currentmode->light.forceupdate = 1;
                mode->light.forceupdate = 1;
            }
            continue;
        }
        case DELAY:
            kb->delay = (!strcmp (word, "on")); // independendant from parameter to handle false
commands like "delay off"
            continue;
        case RESTART: {
            char mybuffer[] = "no reason specified";
            if (sscanf(line, " %[^\n]", word) == -1) {
                word = mybuffer;
            }
            vt->do_cmd[command](kb, mode, notifynumber, 0, word);
            continue;
        }

        default:;
        }

        // If a keyboard is inactive, it must be activated before receiving any other commands
        if(!kb->active){
            if(command == ACTIVE)
                TRY_WITH_RESET(vt->active(kb, mode, notifynumber, 0, 0));
            continue;
        }
        // Specially handled commands only available when keyboard is ACTIVE
        switch(command){
        case IDLE:
            TRY_WITH_RESET(vt->idle(kb, mode, notifynumber, 0, 0));
            continue;
        case SWITCH:
            if(profile->currentmode != mode){
                profile->currentmode = mode;
                // Set mode light for non-RGB K95
                int index = INDEX_OF(mode, profile->mode);
                vt->setmodeindex(kb, index);
            }
            continue;
        case HWLOAD: case HWSAVE:{
            char delay = kb->usbdelay;
            // Ensure delay of at least 10ms as the device can get overwhelmed otherwise
            if(delay < 10)
                kb->usbdelay = 10;
            // Try to load/save the hardware profile. Reset on failure, disconnect if reset fails.
            TRY_WITH_RESET(vt->do_io[command](kb, mode, notifynumber, 1, 0));
            // Re-send the current RGB state as it sometimes gets scrambled
            TRY_WITH_RESET(vt->updatergb(kb, 1));
            kb->usbdelay = delay;
            continue;
        }
        case FWUPDATE:
            // FW update parses a whole word. Unlike hwload/hwsave, there's no try again on failure.
            if(vt->fwupdate(kb, mode, notifynumber, 0, word)){
                free(word);
                return 1;
            }
            continue;
        case POLLRATE: {
            uint rate;
            if(sscanf(word, "%u", &rate) == 1 && (rate == 1 || rate == 2 || rate == 4 || rate == 8))
                TRY_WITH_RESET(vt->pollrate(kb, mode, notifynumber, rate, 0));
            continue;
        }
        case ERASEPROFILE:
            // Erase the current profile
            vt->eraseprofile(kb, mode, notifynumber, 0, 0);
            // Update profile/mode pointers
            profile = kb->profile;
            mode = profile->currentmode;
```

```
            continue;
        case ERASE: case NAME: case IOFF: case ION: case IAUTO: case INOTIFY: case PROFILENAME: case ID: case PROFILEID: case DPISEL: case LIFT: case SNAP:
            // All of the above just parse the whole word
            vt->do_cmd[command](kb, mode, notifynumber, 0, word);
            continue;
        case RGB: {
            // RGB command has a special response for a single hex constant
            int r, g, b;
            if(sscanf(word, "%02x%02x%02x", &r, &g, &b) == 3){
                // Set all keys
                for(int i = 0; i < N_KEYS_EXTENDED; i++)
                    vt->rgb(kb, mode, notifynumber, i, word);
                continue;
            }
            break;
        }
        case MACRO:
            if(!strcmp(word, "clear")){
                // Macro has a special clear command
                vt->macro(kb, mode, notifynumber, 0, 0);
                continue;
            }
            break;
        default:;
        }
        // For anything else, split the parameter at the colon
        int left = -1;
        sscanf(word, "%*[^:]%n", &left);
        if(left <= 0)
            continue;
        const char* right = word + left;
        if(right[0] == ':')
            right++;
        // Macros and DPI have a separate left-side handler
        if(command == MACRO || command == DPI){
            word[left] = 0;
            vt->do_macro[command](kb, mode, notifynumber, word, right);
            continue;
        }
        // Scan the left side for key names and run the requested command
        int position = 0, field = 0;
        char keyname[11];
        while(position < left && sscanf(word + position, "%10[^:,]%n", keyname, &field) == 1){
            int keycode;
            if(!strcmp(keyname, "all")){
                // Set all keys
                for(int i = 0; i < N_KEYS_EXTENDED; i++)
                    vt->do_cmd[command](kb, mode, notifynumber, i, right);
            } else if((sscanf(keyname, "#%d", &keycode) && keycode >= 0 && keycode < N_KEYS_EXTENDED)
                    || (sscanf(keyname, "#x%x", &keycode) && keycode >= 0 && keycode < N_KEYS_EXTENDED)){
                // Set a key numerically
                vt->do_cmd[command](kb, mode, notifynumber, keycode, right);
            } else {
                // Find this key in the keymap
                for(unsigned i = 0; i < N_KEYS_EXTENDED; i++){
                    if(keymap[i].name && !strcmp(keyname, keymap[i].name)){
                        vt->do_cmd[command](kb, mode, notifynumber, i, right);
                        break;
                    }
                }
            }
            if(word[position += field] == ',')
                position++;
        }
    }

    // Finish up
    if(!NEEDS_FW_UPDATE(kb)){
        TRY_WITH_RESET(vt->updatergb(kb, 0));
        TRY_WITH_RESET(vt->updatedpi(kb, 0));
    }
    free(word);
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.7 src/ckb-daemon/device.c File Reference

```
#include "command.h"
#include "device.h"
#include "firmware.h"
#include "profile.h"
#include "usb.h"
```

Include dependency graph for device.c:

Functions

- int _start_dev (usbdevice *kb, int makeactive)
- int start_dev (usbdevice *kb, int makeactive)

Variables

- int hwload_mode = 1
- usbdevice keyboard [9]
- pthread_mutex_t devlistmutex = PTHREAD_MUTEX_INITIALIZER
- pthread_mutex_t devmutex [9] = { [0 ... 9 -1] = PTHREAD_MUTEX_INITIALIZER }
- pthread_mutex_t inputmutex [9] = { [0 ... 9 -1] = PTHREAD_MUTEX_INITIALIZER }

13.7.1 Function Documentation

13.7.1.1 int _start_dev (usbdevice * *kb*, int *makeactive*)

Definition at line 15 of file device.c.

References usbdevice::active, ckb_info, ckb_warn, FEAT_ADJRATE, FEAT_FWUPDATE, FEAT_FWVERSION, FEAT_HWLOAD, FEAT_POLLRATE, FEAT_RGB, usbdevice::features, usbdevice::fwversion, getfwversion(), HAS_FEATURES, usbdevice::hw, hwload_mode, hwloadprofile, NEEDS_FW_UPDATE, usbdevice::pollrate, and setactive.

Referenced by start_dev().

```
15                                                  {
16     // Get the firmware version from the device
17     if(kb->pollrate == 0){
18         if(!hwload_mode || (HAS_FEATURES(kb, FEAT_HWLOAD) &&
       getfwversion(kb))){
19             if(hwload_mode == 2)
20                 // hwload=always. Report setup failure.
21                 return -1;
22             else if(hwload_mode){
23                 // hwload=once. Log failure, prevent trying again, and continue.
24                 ckb_warn("Unable to load firmware version/poll rate\n");
25                 kb->features &= ~FEAT_HWLOAD;
26             }
27             kb->pollrate = 0;
28             kb->features &= ~(FEAT_POLLRATE | FEAT_ADJRATE);
29             if(kb->fwversion == 0)
30                 kb->features &= ~(FEAT_FWVERSION |
       FEAT_FWUPDATE);
31         }
32     }
33     if(NEEDS_FW_UPDATE(kb)){
34         // Device needs a firmware update. Finish setting up but don't do anything.
35         ckb_info("Device needs a firmware update. Please issue a fwupdate command.\n");
36         kb->features = FEAT_RGB | FEAT_FWVERSION |
       FEAT_FWUPDATE;
37         kb->active = 1;
38         return 0;
39     }
40     // Load profile from device
41     if(!kb->hw && hwload_mode && HAS_FEATURES(kb,
       FEAT_HWLOAD)){
42         if(hwloadprofile(kb, 1)){
43             if(hwload_mode == 2)
44                 return -1;
45             ckb_warn("Unable to load hardware profile\n");
46             kb->features &= ~FEAT_HWLOAD;
47         }
48     }
49     // Active software mode if requested
50     if(makeactive)
51         return setactive(kb, 1);
52     return 0;
53 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.7.1.2 int start_dev (usbdevice * *kb*, int *makeactive*)

Definition at line 55 of file device.c.

References _start_dev(), USB_DELAY_DEFAULT, and usbdevice::usbdelay.

```
55                                                  {
56     // Force USB interval to 10ms during initial setup phase; return to nominal 5ms after setup completes.
57     kb->usbdelay = 10;
58     int res = _start_dev(kb, makeactive);
59     kb->usbdelay = USB_DELAY_DEFAULT;
60     return res;
61 }
```

Here is the call graph for this function:

13.7.2 Variable Documentation

13.7.2.1 pthread_mutex_t devlistmutex = PTHREAD_MUTEX_INITIALIZER

Definition at line 11 of file device.c.

13.7.2.2 pthread_mutex_t devmutex[9] = { [0 ... 9 -1] = PTHREAD_MUTEX_INITIALIZER }

Definition at line 12 of file device.c.

Referenced by _updateconnected(), quitWithLock(), and usb_rm_device().

13.7.2.3 int hwload_mode = 1

Definition at line 7 of file device.c.

Referenced by _start_dev(), _usbrecv(), _usbsend(), and main().

13.7.2.4 pthread_mutex_t inputmutex[9] = { [0 ... 9 -1] = PTHREAD_MUTEX_INITIALIZER }

Definition at line 13 of file device.c.

13.7.2.5 usbdevice keyboard[9]

Definition at line 10 of file device.c.

Referenced by _mkdevpath(), _mknotifynode(), _rmnotifynode(), _setupusb(), _updateconnected(), closeusb(), main(), mkfwnode(), os_closeusb(), os_inputmain(), os_inputopen(), os_setupusb(), quitWithLock(), rmdevpath(), usb_rm_device(), and usbadd().

13.8 src/ckb-daemon/device.h File Reference

```
#include "includes.h"
#include "keymap.h"
```

Include dependency graph for device.h:

This graph shows which files directly or indirectly include this file:

Macros

- #define DEV_MAX 9
- #define IS_CONNECTED(kb) ((kb) && (kb)->handle && (kb)->uinput_kb && (kb)->uinput_mouse)
- #define dmutex(kb) (devmutex + INDEX_OF(kb, keyboard))
- #define imutex(kb) (inputmutex + INDEX_OF(kb, keyboard))

- #define setactive(kb, makeactive) ((makeactive) ? (kb)->vtable->active((kb), 0, 0, 0, 0) : (kb)->vtable->idle((kb), 0, 0, 0, 0))
- #define IN_HID 0x80
- #define IN_CORSAIR 0x40
- #define ACT_LIGHT 1
- #define ACT_NEXT 3
- #define ACT_NEXT_NOWRAP 5
- #define ACT_LOCK 8
- #define ACT_MR_RING 9
- #define ACT_M1 10
- #define ACT_M2 11
- #define ACT_M3 12

Functions

- int start_dev (usbdevice *kb, int makeactive)
- int start_kb_nrgb (usbdevice *kb, int makeactive)
- int setactive_kb (usbdevice *kb, int active)
- int setactive_mouse (usbdevice *kb, int active)
- int cmd_active_kb (usbdevice *kb, usbmode *dummy1, int dummy2, int dummy3, const char *dummy4)
- int cmd_active_mouse (usbdevice *kb, usbmode *dummy1, int dummy2, int dummy3, const char *dummy4)
- int cmd_idle_kb (usbdevice *kb, usbmode *dummy1, int dummy2, int dummy3, const char *dummy4)
- int cmd_idle_mouse (usbdevice *kb, usbmode *dummy1, int dummy2, int dummy3, const char *dummy4)
- int cmd_pollrate (usbdevice *kb, usbmode *dummy1, int dummy2, int rate, const char *dummy3)
- void setmodeindex_nrgb (usbdevice *kb, int index)

Variables

- usbdevice keyboard [9]
- pthread_mutex_t devmutex [9]
- pthread_mutex_t inputmutex [9]

13.8.1 Macro Definition Documentation

13.8.1.1 #define ACT_LIGHT 1

Definition at line 56 of file device.h.

Referenced by setactive_kb().

13.8.1.2 #define ACT_LOCK 8

Definition at line 59 of file device.h.

Referenced by setactive_kb().

13.8.1.3 #define ACT_M1 10

Definition at line 61 of file device.h.

Referenced by setactive_kb().

13.8.1.4 #define ACT_M2 11

Definition at line 62 of file device.h.

Referenced by setactive_kb().

13.8.1.5 #define ACT_M3 12

Definition at line 63 of file device.h.

Referenced by setactive_kb().

13.8.1.6 #define ACT_MR_RING 9

Definition at line 60 of file device.h.

Referenced by setactive_kb().

13.8.1.7 #define ACT_NEXT 3

Definition at line 57 of file device.h.

13.8.1.8 #define ACT_NEXT_NOWRAP 5

Definition at line 58 of file device.h.

13.8.1.9 #define DEV_MAX 9

Definition at line 8 of file device.h.

Referenced by _updateconnected(), quitWithLock(), usb_rm_device(), and usbadd().

13.8.1.10 #define dmutex(*kb*) (devmutex + INDEX_OF(kb, keyboard))

Definition at line 18 of file device.h.

Referenced by _ledthread(), _setupusb(), closeusb(), devmain(), and usbadd().

13.8.1.11 #define imutex(*kb*) (inputmutex + INDEX_OF(kb, keyboard))

Definition at line 22 of file device.h.

Referenced by _setupusb(), closeusb(), cmd_bind(), cmd_erase(), cmd_eraseprofile(), cmd_get(), cmd_macro(), cmd_notify(), cmd_rebind(), cmd_unbind(), os_inputmain(), setactive_kb(), setactive_mouse(), and setupusb().

13.8.1.12 #define IN_CORSAIR 0x40

Definition at line 53 of file device.h.

Referenced by setactive_kb(), and setactive_mouse().

13.8.1.13 #define IN_HID 0x80

Definition at line 52 of file device.h.

Referenced by setactive_kb(), and setactive_mouse().

13.8.1.14 #define IS_CONNECTED(*kb*) ((kb) && (kb)->handle && (kb)->uinput_kb && (kb)->uinput_mouse)

Definition at line 12 of file device.h.

Referenced by _updateconnected(), devmain(), quitWithLock(), and usbadd().

13.8.1.15 #define setactive(*kb, makeactive*) ((makeactive) ? (kb)->vtable->active((kb), 0, 0, 0, 0) : (kb)->vtable->idle((kb), 0, 0, 0, 0))

Definition at line 32 of file device.h.

Referenced by _start_dev(), and revertusb().

13.8.2 Function Documentation

13.8.2.1 int cmd_active_kb (usbdevice * *kb,* usbmode * *dummy1,* int *dummy2,* int *dummy3,* const char * *dummy4*)

Definition at line 112 of file device_keyboard.c.

References setactive_kb().

```
112                                                                                                    {
113     return setactive_kb(kb, 1);
114 }
```

Here is the call graph for this function:

13.8.2.2 int cmd_active_mouse (usbdevice * *kb,* usbmode * *dummy1,* int *dummy2,* int *dummy3,* const char * *dummy4*)

Definition at line 44 of file device_mouse.c.

References setactive_mouse().

```
44                                                                                                     {
45     return setactive_mouse(kb, 1);
46 }
```

Here is the call graph for this function:

13.8.2.3 int cmd_idle_kb (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *dummy4*)

Definition at line 116 of file device_keyboard.c.

References setactive_kb().

```
116                                                                                                                 {
117     return setactive_kb(kb, 0);
118 }
```

Here is the call graph for this function:

13.8.2.4 int cmd_idle_mouse (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *dummy4*)

Definition at line 48 of file device_mouse.c.

References setactive_mouse().

```
48                                                                                                                  {
49     return setactive_mouse(kb, 0);
50 }
```

Here is the call graph for this function:

13.8.2.5 int cmd_pollrate (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *rate*, const char * *dummy3*)

Definition at line 52 of file device_mouse.c.

References MSG_SIZE, usbdevice::pollrate, and usbsend.

```
52                                                                                                                  {
53     uchar msg[MSG_SIZE] = {
54         0x07, 0x0a, 0, 0, (uchar)rate
55     };
56     if(!usbsend(kb, msg, 1))
57         return -1;
58     // Device should disconnect+reconnect, but update the poll rate field in case it doesn't
59     kb->pollrate = rate;
60     return 0;
61 }
```

13.8.2.6 int setactive_kb (usbdevice * *kb*, int *active*)

Definition at line 18 of file device_keyboard.c.

References ACT_LIGHT, ACT_LOCK, ACT_M1, ACT_M2, ACT_M3, ACT_MR_RING, usbdevice::active, DELAY_-MEDIUM, lighting::forceupdate, imutex, IN_CORSAIR, IN_HID, usbdevice::input, inputupdate(), keymap, usbinput-::keys, usbprofile::lastlight, MSG_SIZE, N_KEYS_HW, NEEDS_FW_UPDATE, usbdevice::profile, usbsend, and usbdevice::vtable.

Referenced by cmd_active_kb(), and cmd_idle_kb().

```
18                                          {
19     if(NEEDS_FW_UPDATE(kb))
20         return 0;
21
22     pthread_mutex_lock(imutex(kb));
23     kb->active = !!active;
24     kb->profile->lastlight.forceupdate = 1;
25     // Clear input
26     memset(&kb->input.keys, 0, sizeof(kb->input.keys));
27     inputupdate(kb);
28     pthread_mutex_unlock(imutex(kb));
29
30     uchar msg[3][MSG_SIZE] = {
31         { 0x07, 0x04, 0 },                  // Disables or enables HW control for top row
32         { 0x07, 0x40, 0 },                  // Selects key input
33         { 0x07, 0x05, 2, 0, 0x03, 0x00 }    // Commits key input selection
34     };
35     if(active){
36         // Put the M-keys (K95) as well as the Brightness/Lock keys into software-controlled mode.
37         msg[0][2] = 2;
38         if(!usbsend(kb, msg[0], 1))
39             return -1;
40         DELAY_MEDIUM(kb);
41         // Set input mode on the keys. They must be grouped into packets of 60 bytes (+ 4 bytes header)
42         // Keys are referenced in byte pairs, with the first byte representing the key and the second byte
       representing the mode.
43         for(int key = 0; key < N_KEYS_HW; ){
44             int pair;
45             for(pair = 0; pair < 30 && key < N_KEYS_HW; pair++, key++){
46                 // Select both standard and Corsair input. The standard input will be ignored except in
       BIOS mode.
47                 uchar action = IN_HID | IN_CORSAIR;
48                 // Additionally, make MR activate the MR ring (this is disabled for now, may be back later)
49                 //if(keymap[key].name && !strcmp(keymap[key].name, "mr"))
50                 //    action |= ACT_MR_RING;
51                 msg[1][4 + pair * 2] = key;
52                 msg[1][5 + pair * 2] = action;
53             }
54             // Byte 2 = pair count (usually 30, less on final message)
55             msg[1][2] = pair;
56             if(!usbsend(kb, msg[1], 1))
57                 return -1;
58         }
59         // Commit new input settings
60         if(!usbsend(kb, msg[2], 1))
61             return -1;
62         DELAY_MEDIUM(kb);
63     } else {
64         // Set the M-keys back into hardware mode, restore hardware RGB profile. It has to be sent twice
       for some reason.
65         msg[0][2] = 1;
66         if(!usbsend(kb, msg[0], 1))
67             return -1;
68         DELAY_MEDIUM(kb);
69         if(!usbsend(kb, msg[0], 1))
70             return -1;
71         DELAY_MEDIUM(kb);
72 #ifdef OS_LINUX
73         // On OSX the default key mappings are fine. On Linux, the G keys will freeze the keyboard. Set the
       keyboard entirely to HID input.
74         for(int key = 0; key < N_KEYS_HW; ){
75             int pair;
76             for(pair = 0; pair < 30 && key < N_KEYS_HW; pair++, key++){
77                 uchar action = IN_HID;
78                 // Enable hardware actions
79                 if(keymap[key].name){
80                     if(!strcmp(keymap[key].name, "mr"))
81                         action = ACT_MR_RING;
82                     else if(!strcmp(keymap[key].name, "m1"))
83                         action = ACT_M1;
84                     else if(!strcmp(keymap[key].name, "m2"))
85                         action = ACT_M2;
86                     else if(!strcmp(keymap[key].name, "m3"))
```

```
                        action = ACT_M3;
                    else if(!strcmp(keymap[key].name, "light"))
                        action = ACT_LIGHT;
                    else if(!strcmp(keymap[key].name, "lock"))
                        action = ACT_LOCK;
                }
                msg[1][4 + pair * 2] = key;
                msg[1][5 + pair * 2] = action;
            }
            // Byte 2 = pair count (usually 30, less on final message)
            msg[1][2] = pair;
            if(!usbsend(kb, msg[1], 1))
                return -1;
        }
        // Commit new input settings
        if(!usbsend(kb, msg[2], 1))
            return -1;
        DELAY_MEDIUM(kb);
#endif
    }
    // Update indicator LEDs if the profile contains settings for them
    kb->vtable->updateindicators(kb, 0);
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.8.2.7 int setactive_mouse (usbdevice * *kb*, int *active*)

Definition at line 9 of file device_mouse.c.

References usbdevice::active, lighting::forceupdate, imutex, IN_CORSAIR, IN_HID, usbdevice::input, inputupdate(), usbinput::keys, usbprofile::lastlight, MSG_SIZE, NEEDS_FW_UPDATE, usbdevice::profile, and usbsend.

Referenced by cmd_active_mouse(), and cmd_idle_mouse().

```
9                                                   {
```

```
    if(NEEDS_FW_UPDATE(kb))
        return 0;
    const int keycount = 20;
    uchar msg[2][MSG_SIZE] = {
        { 0x07, 0x04, 0 },                  // Disables or enables HW control for DPI and Sniper button
        { 0x07, 0x40, keycount, 0 },        // Select button input (simlilar to the packet sent to keyboards, but lacks a commit packet)
    };
    if(active)
        // Put the mouse into SW mode
        msg[0][2] = 2;
    else
        // Restore HW mode
        msg[0][2] = 1;
    pthread_mutex_lock(imutex(kb));
    kb->active = !!active;
    kb->profile->lastlight.forceupdate = 1;
    // Clear input
    memset(&kb->input.keys, 0, sizeof(kb->input.keys));
    inputupdate(kb);
    pthread_mutex_unlock(imutex(kb));
    if(!usbsend(kb, msg[0], 1))
        return -1;
    if(active){
        // Set up key input
        if(!usbsend(kb, msg[1], 1))
            return -1;
        for(int i = 0; i < keycount; i++){
            msg[1][i * 2 + 4] = i + 1;
            msg[1][i * 2 + 5] = (i < 6 ? IN_HID : IN_CORSAIR);
        }
    }
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.8.2.8 void setmodeindex_nrgb (usbdevice * *kb*, int *index*)

Definition at line 120 of file device_keyboard.c.

References NK95_M1, NK95_M2, NK95_M3, and nk95cmd.

```
{
    switch(index % 3){
    case 0:
        nk95cmd(kb, NK95_M1);
        break;
    case 1:
        nk95cmd(kb, NK95_M2);
        break;
    case 2:
        nk95cmd(kb, NK95_M3);
        break;
    }
}
```

13.8.2.9 int start_dev (usbdevice * *kb*, int *makeactive*)

Definition at line 55 of file device.c.

References _start_dev(), USB_DELAY_DEFAULT, and usbdevice::usbdelay.

```
{
    // Force USB interval to 10ms during initial setup phase; return to nominal 5ms after setup completes.
    kb->usbdelay = 10;
    int res = _start_dev(kb, makeactive);
    kb->usbdelay = USB_DELAY_DEFAULT;
    return res;
}
```

Here is the call graph for this function:

13.8.2.10 int start_kb_nrgb (usbdevice * *kb*, int *makeactive*)

Definition at line 9 of file device_keyboard.c.

References usbdevice::active, NK95_HWOFF, nk95cmd, and usbdevice::pollrate.

```
{
    // Put the non-RGB K95 into software mode. Nothing else needs to be done hardware wise
    nk95cmd(kb, NK95_HWOFF);
    // Fill out RGB features for consistency, even though the keyboard doesn't have them
    kb->active = 1;
    kb->pollrate = -1;
    return 0;
}
```

13.8.3 Variable Documentation

13.8.3.1 pthread_mutex_t devmutex[9]

Definition at line 12 of file device.c.

Referenced by _updateconnected(), quitWithLock(), and usb_rm_device().

13.8.3.2 pthread_mutex_t inputmutex[9]

Definition at line 13 of file device.c.

13.8.3.3 usbdevice keyboard[9]

Definition at line 10 of file device.c.

Referenced by _mkdevpath(), _mknotifynode(), _rmnotifynode(), _setupusb(), _updateconnected(), closeusb(), main(), mkfwnode(), os_closeusb(), os_inputmain(), os_inputopen(), os_setupusb(), quitWithLock(), rmdevpath(), usb_rm_device(), and usbadd().

13.9 src/ckb-daemon/device_keyboard.c File Reference

```
#include "command.h"
#include "device.h"
#include "devnode.h"
#include "firmware.h"
#include "input.h"
#include "profile.h"
#include "usb.h"
```

Include dependency graph for device_keyboard.c:

Functions

- int start_kb_nrgb (usbdevice ∗kb, int makeactive)
- int setactive_kb (usbdevice ∗kb, int active)
- int cmd_active_kb (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int dummy3, const char ∗dummy4)
- int cmd_idle_kb (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int dummy3, const char ∗dummy4)
- void setmodeindex_nrgb (usbdevice ∗kb, int index)

13.9.1 Function Documentation

13.9.1.1 int cmd_active_kb (usbdevice ∗ *kb*, usbmode ∗ *dummy1*, int *dummy2*, int *dummy3*, const char ∗ *dummy4*)

Definition at line 112 of file device_keyboard.c.

References setactive_kb().

```
112                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
{
113     return setactive_kb(kb, 1);
114 }
```

Here is the call graph for this function:

13.9.1.2 int cmd_idle_kb (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *dummy4*)

Definition at line 116 of file device_keyboard.c.

References setactive_kb().

```
116                                                                                 {
117     return setactive_kb(kb, 0);
118 }
```

Here is the call graph for this function:

13.9.1.3 int setactive_kb (usbdevice * *kb*, int *active*)

Definition at line 18 of file device_keyboard.c.

References ACT_LIGHT, ACT_LOCK, ACT_M1, ACT_M2, ACT_M3, ACT_MR_RING, usbdevice::active, DELAY_-MEDIUM, lighting::forceupdate, imutex, IN_CORSAIR, IN_HID, usbdevice::input, inputupdate(), keymap, usbinput-::keys, usbprofile::lastlight, MSG_SIZE, N_KEYS_HW, NEEDS_FW_UPDATE, usbdevice::profile, usbsend, and usbdevice::vtable.

Referenced by cmd_active_kb(), and cmd_idle_kb().

```
18                                          {
19     if(NEEDS_FW_UPDATE(kb))
20         return 0;
21
22     pthread_mutex_lock(imutex(kb));
23     kb->active = !!active;
24     kb->profile->lastlight.forceupdate = 1;
25     // Clear input
26     memset(&kb->input.keys, 0, sizeof(kb->input.keys));
27     inputupdate(kb);
28     pthread_mutex_unlock(imutex(kb));
29
30     uchar msg[3][MSG_SIZE] = {
31         { 0x07, 0x04, 0 },                  // Disables or enables HW control for top row
32         { 0x07, 0x40, 0 },                  // Selects key input
```

```
        { 0x07, 0x05, 2, 0, 0x03, 0x00 }    // Commits key input selection
    };
    if(active){
        // Put the M-keys (K95) as well as the Brightness/Lock keys into software-controlled mode.
        msg[0][2] = 2;
        if(!usbsend(kb, msg[0], 1))
            return -1;
        DELAY_MEDIUM(kb);
        // Set input mode on the keys. They must be grouped into packets of 60 bytes (+ 4 bytes header)
        // Keys are referenced in byte pairs, with the first byte representing the key and the second byte representing the mode.
        for(int key = 0; key < N_KEYS_HW; ){
            int pair;
            for(pair = 0; pair < 30 && key < N_KEYS_HW; pair++, key++){
                // Select both standard and Corsair input. The standard input will be ignored except in BIOS mode.
                uchar action = IN_HID | IN_CORSAIR;
                // Additionally, make MR activate the MR ring (this is disabled for now, may be back later)
                //if(keymap[key].name && !strcmp(keymap[key].name, "mr"))
                //    action |= ACT_MR_RING;
                msg[1][4 + pair * 2] = key;
                msg[1][5 + pair * 2] = action;
            }
            // Byte 2 = pair count (usually 30, less on final message)
            msg[1][2] = pair;
            if(!usbsend(kb, msg[1], 1))
                return -1;
        }
        // Commit new input settings
        if(!usbsend(kb, msg[2], 1))
            return -1;
        DELAY_MEDIUM(kb);
    } else {
        // Set the M-keys back into hardware mode, restore hardware RGB profile. It has to be sent twice for some reason.
        msg[0][2] = 1;
        if(!usbsend(kb, msg[0], 1))
            return -1;
        DELAY_MEDIUM(kb);
        if(!usbsend(kb, msg[0], 1))
            return -1;
        DELAY_MEDIUM(kb);
#ifdef OS_LINUX
        // On OSX the default key mappings are fine. On Linux, the G keys will freeze the keyboard. Set the keyboard entirely to HID input.
        for(int key = 0; key < N_KEYS_HW; ){
            int pair;
            for(pair = 0; pair < 30 && key < N_KEYS_HW; pair++, key++){
                uchar action = IN_HID;
                // Enable hardware actions
                if(keymap[key].name){
                    if(!strcmp(keymap[key].name, "mr"))
                        action = ACT_MR_RING;
                    else if(!strcmp(keymap[key].name, "m1"))
                        action = ACT_M1;
                    else if(!strcmp(keymap[key].name, "m2"))
                        action = ACT_M2;
                    else if(!strcmp(keymap[key].name, "m3"))
                        action = ACT_M3;
                    else if(!strcmp(keymap[key].name, "light"))
                        action = ACT_LIGHT;
                    else if(!strcmp(keymap[key].name, "lock"))
                        action = ACT_LOCK;
                }
                msg[1][4 + pair * 2] = key;
                msg[1][5 + pair * 2] = action;
            }
            // Byte 2 = pair count (usually 30, less on final message)
            msg[1][2] = pair;
            if(!usbsend(kb, msg[1], 1))
                return -1;
        }
        // Commit new input settings
        if(!usbsend(kb, msg[2], 1))
            return -1;
        DELAY_MEDIUM(kb);
#endif
    }
    // Update indicator LEDs if the profile contains settings for them
    kb->vtable->updateindicators(kb, 0);
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.9.1.4 void setmodeindex_nrgb (usbdevice * *kb*, int *index*)

Definition at line 120 of file device_keyboard.c.

References NK95_M1, NK95_M2, NK95_M3, and nk95cmd.

```
120                                                 {
121     switch(index % 3){
122     case 0:
123         nk95cmd(kb, NK95_M1);
124         break;
125     case 1:
126         nk95cmd(kb, NK95_M2);
127         break;
128     case 2:
129         nk95cmd(kb, NK95_M3);
130         break;
131     }
132 }
```

13.9.1.5 int start_kb_nrgb (usbdevice * *kb*, int *makeactive*)

Definition at line 9 of file device_keyboard.c.

References usbdevice::active, NK95_HWOFF, nk95cmd, and usbdevice::pollrate.

```
9                                                   {
10     // Put the non-RGB K95 into software mode. Nothing else needs to be done hardware wise
11     nk95cmd(kb, NK95_HWOFF);
12     // Fill out RGB features for consistency, even though the keyboard doesn't have them
13     kb->active = 1;
```

```
    kb->pollrate = -1;
    return 0;
}
```

13.10 src/ckb-daemon/device_mouse.c File Reference

```
#include "command.h"
#include "device.h"
#include "devnode.h"
#include "firmware.h"
#include "input.h"
#include "profile.h"
#include "usb.h"
```

Include dependency graph for device_mouse.c:

Functions

- int setactive_mouse (usbdevice ∗kb, int active)
- int cmd_active_mouse (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int dummy3, const char ∗dummy4)
- int cmd_idle_mouse (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int dummy3, const char ∗dummy4)
- int cmd_pollrate (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int rate, const char ∗dummy3)

13.10.1 Function Documentation

13.10.1.1 int cmd_active_mouse (usbdevice ∗ *kb*, usbmode ∗ *dummy1*, int *dummy2*, int *dummy3*, const char ∗ *dummy4*)

Definition at line 44 of file device_mouse.c.

References setactive_mouse().

```
44                                                                                                                  {
45     return setactive_mouse(kb, 1);
46 }
```

Here is the call graph for this function:

13.10.1.2 int cmd_idle_mouse (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *dummy4*)

Definition at line 48 of file device_mouse.c.

References setactive_mouse().

```
48                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
{
49     return setactive_mouse(kb, 0);
50 }
```

Here is the call graph for this function:

13.10.1.3 int cmd_pollrate (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *rate*, const char * *dummy3*)

Definition at line 52 of file device_mouse.c.

References MSG_SIZE, usbdevice::pollrate, and usbsend.

```
52                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
{
53     uchar msg[MSG_SIZE] = {
54         0x07, 0x0a, 0, 0, (uchar)rate
55     };
56     if(!usbsend(kb, msg, 1))
57         return -1;
58     // Device should disconnect+reconnect, but update the poll rate field in case it doesn't
59     kb->pollrate = rate;
60     return 0;
61 }
```

13.10.1.4 int setactive_mouse (usbdevice * *kb*, int *active*)

Definition at line 9 of file device_mouse.c.

References usbdevice::active, lighting::forceupdate, imutex, IN_CORSAIR, IN_HID, usbdevice::input, inputupdate(), usbinput::keys, usbprofile::lastlight, MSG_SIZE, NEEDS_FW_UPDATE, usbdevice::profile, and usbsend.

Referenced by cmd_active_mouse(), and cmd_idle_mouse().

```
{
    if(NEEDS_FW_UPDATE(kb))
        return 0;
    const int keycount = 20;
    uchar msg[2][MSG_SIZE] = {
        { 0x07, 0x04, 0 },                  // Disables or enables HW control for DPI and Sniper button
        { 0x07, 0x40, keycount, 0 },        // Select button input (simlilar to the packet sent to keyboards, but lacks a commit packet)
    };
    if(active)
        // Put the mouse into SW mode
        msg[0][2] = 2;
    else
        // Restore HW mode
        msg[0][2] = 1;
    pthread_mutex_lock(imutex(kb));
    kb->active = !!active;
    kb->profile->lastlight.forceupdate = 1;
    // Clear input
    memset(&kb->input.keys, 0, sizeof(kb->input.keys));
    inputupdate(kb);
    pthread_mutex_unlock(imutex(kb));
    if(!usbsend(kb, msg[0], 1))
        return -1;
    if(active){
        // Set up key input
        if(!usbsend(kb, msg[1], 1))
            return -1;
        for(int i = 0; i < keycount; i++){
            msg[1][i * 2 + 4] = i + 1;
            msg[1][i * 2 + 5] = (i < 6 ? IN_HID : IN_CORSAIR);
        }
    }
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.11 src/ckb-daemon/device_vtable.c File Reference

```
#include "command.h"
#include "device.h"
#include "dpi.h"
#include "firmware.h"
#include "input.h"
#include "led.h"
#include "notify.h"
#include "profile.h"
```

Include dependency graph for device_vtable.c:

Functions

- static void cmd_none (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int dummy3, const char ∗dummy4)
- static int cmd_io_none (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int dummy3, const char ∗dummy4)
- static void cmd_macro_none (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, const char ∗dummy3, const char ∗dummy4)
- static int loadprofile_none (usbdevice ∗kb)
- static void int1_void_none (usbdevice ∗kb, int dummy)
- static int int1_int_none (usbdevice ∗kb, int dummy)

Variables

- const devcmd vtable_keyboard
- const devcmd vtable_keyboard_nonrgb
- const devcmd vtable_mouse

13.11.1 Function Documentation

13.11.1.1 static int cmd_io_none (usbdevice ∗ *kb*, usbmode ∗ *dummy1*, int *dummy2*, int *dummy3*, const char ∗ *dummy4*) [static]

Definition at line 13 of file device_vtable.c.

```
13                                                                                                  {
14     return 0;
15 }
```

13.11.1.2 static void cmd_macro_none (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, const char * *dummy3*, const char * *dummy4*) [static]

Definition at line 16 of file device_vtable.c.

```
16
        {
17 }
```

13.11.1.3 static void cmd_none (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *dummy4*) [static]

Definition at line 11 of file device_vtable.c.

```
11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                {
12 }
```

13.11.1.4 static int int1_int_none (usbdevice * *kb*, int *dummy*) [static]

Definition at line 23 of file device_vtable.c.

```
23                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
```

13.11.1.5 static void int1_void_none (usbdevice * *kb*, int *dummy*) [static]

Definition at line 21 of file device_vtable.c.

```
21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
```

13.11.1.6 static int loadprofile_none (usbdevice * *kb*) [static]

Definition at line 18 of file device_vtable.c.

```
18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
```

13.11.2 Variable Documentation

13.11.2.1 const devcmd vtable_keyboard

Definition at line 28 of file device_vtable.c.

Referenced by get_vtable().

13.11.2.2 const devcmd vtable_keyboard_nonrgb

Definition at line 75 of file device_vtable.c.

Referenced by get_vtable().

13.11.2.3 const devcmd vtable_mouse

Definition at line 122 of file device_vtable.c.

Referenced by get_vtable().

13.12 src/ckb-daemon/devnode.c File Reference

```
#include "device.h"
#include "devnode.h"
#include "firmware.h"
#include "input.h"
#include "led.h"
#include "notify.h"
#include "profile.h"
```

Include dependency graph for devnode.c:

Data Structures

- struct _readlines_ctx

Macros

- #define S_GID_READ (gid >= 0 ? S_CUSTOM_R : S_READ)
- #define MAX_BUFFER (1024 ∗ 1024 - 1)

Functions

- int rm_recursive (const char ∗path)
- void _updateconnected ()
- void updateconnected ()
- int _mknotifynode (usbdevice ∗kb, int notify)
- int mknotifynode (usbdevice ∗kb, int notify)
- int _rmnotifynode (usbdevice ∗kb, int notify)
- int rmnotifynode (usbdevice ∗kb, int notify)
- static int _mkdevpath (usbdevice ∗kb)
- int mkdevpath (usbdevice ∗kb)
- int rmdevpath (usbdevice ∗kb)
- int mkfwnode (usbdevice ∗kb)
- void readlines_ctx_init (readlines_ctx ∗ctx)

- void readlines_ctx_free (readlines_ctx ctx)
- unsigned readlines (int fd, readlines_ctx ctx, const char **input)

Variables

- const char *const devpath = "/dev/input/ckb"
- long gid = -1

13.12.1 Data Structure Documentation

13.12.1.1 struct _readlines_ctx

Definition at line 318 of file devnode.c.

Collaboration diagram for _readlines_ctx:

Data Fields

char *	buffer	
int	buffersize	
int	leftover	
int	leftoverlen	

13.12.2 Macro Definition Documentation

13.12.2.1 #define MAX_BUFFER (1024 * 1024 - 1)

Definition at line 317 of file devnode.c.

Referenced by readlines().

13.12.2.2 #define S_GID_READ (gid >= 0 ? S_CUSTOM_R : S_READ)

Definition at line 17 of file devnode.c.

Referenced by _mkdevpath(), _mknotifynode(), _updateconnected(), and mkfwnode().

13.12.3 Function Documentation

13.12.3.1 static int _mkdevpath (usbdevice * kb) [static]

Definition at line 119 of file devnode.c.

References _mknotifynode(), _updateconnected(), ckb_err, ckb_warn, devpath, FEAT_ADJRATE, FEAT_BIND, FEAT_FWUPDATE, FEAT_FWVERSION, FEAT_MONOCHROME, FEAT_NOTIFY, FEAT_POLLRATE, FEAT_RGB, gid, HAS_FEATURES, INDEX_OF, usbdevice::infifo, keyboard, mkfwnode(), usbdevice::name, usbdevice::product, product_str(), rm_recursive(), S_CUSTOM, S_GID_READ, S_READ, S_READDIR, S_READWRITE, usbdevice::serial, usbdevice::vendor, and vendor_str().

Referenced by mkdevpath().

```
119                                     {
120     int index = INDEX_OF(kb, keyboard);
121     // Create the control path
122     char path[strlen(devpath) + 2];
123     snprintf(path, sizeof(path), "%s%d", devpath, index);
124     if(rm_recursive(path) != 0 && errno != ENOENT){
125         ckb_err("Unable to delete %s: %s\n", path, strerror(errno));
126         return -1;
127     }
128     if(mkdir(path, S_READDIR) != 0){
129         ckb_err("Unable to create %s: %s\n", path, strerror(errno));
130         rm_recursive(path);
131         return -1;
132     }
133     if(gid >= 0)
134         chown(path, 0, gid);
135 
136     if(kb == keyboard + 0){
137         // Root keyboard: write a list of devices
138         _updateconnected();
139         // Write version number
140         char vpath[sizeof(path) + 8];
141         snprintf(vpath, sizeof(vpath), "%s/version", path);
142         FILE* vfile = fopen(vpath, "w");
143         if(vfile){
144             fprintf(vfile, "%s\n", CKB_VERSION_STR);
145             fclose(vfile);
146             chmod(vpath, S_GID_READ);
147             if(gid >= 0)
148                 chown(vpath, 0, gid);
149         } else {
150             ckb_warn("Unable to create %s: %s\n", vpath, strerror(errno));
151             remove(vpath);
152         }
153         // Write PID
154         char ppath[sizeof(path) + 4];
155         snprintf(ppath, sizeof(ppath), "%s/pid", path);
156         FILE* pfile = fopen(ppath, "w");
157         if(pfile){
158             fprintf(pfile, "%u\n", getpid());
159             fclose(pfile);
160             chmod(ppath, S_READ);
161             if(gid >= 0)
162                 chown(vpath, 0, gid);
163         } else {
164             ckb_warn("Unable to create %s: %s\n", ppath, strerror(errno));
165             remove(ppath);
166         }
167     } else {
168         // Create command FIFO
169         char inpath[sizeof(path) + 4];
170         snprintf(inpath, sizeof(inpath), "%s/cmd", path);
171         if(mkfifo(inpath, gid >= 0 ? S_CUSTOM : S_READWRITE) != 0
172                 // Open the node in RDWR mode because RDONLY will lock the thread
173                 || (kb->infifo = open(inpath, O_RDWR) + 1) == 0){
174             // Add one to the FD because 0 is a valid descriptor, but ckb uses 0 for uninitialized devices
175             ckb_err("Unable to create %s: %s\n", inpath, strerror(errno));
176             rm_recursive(path);
```

```
            kb->infifo = 0;
            return -1;
        }
        if(gid >= 0)
            fchown(kb->infifo - 1, 0, gid);

        // Create notification FIFO
        _mknotifynode(kb, 0);

        // Write the model and serial to files
        char mpath[sizeof(path) + 6], spath[sizeof(path) + 7];
        snprintf(mpath, sizeof(mpath), "%s/model", path);
        snprintf(spath, sizeof(spath), "%s/serial", path);
        FILE* mfile = fopen(mpath, "w");
        if(mfile){
            fputs(kb->name, mfile);
            fputc('\n', mfile);
            fclose(mfile);
            chmod(mpath, S_GID_READ);
            if(gid >= 0)
                chown(mpath, 0, gid);
        } else {
            ckb_warn("Unable to create %s: %s\n", mpath, strerror(errno));
            remove(mpath);
        }
        FILE* sfile = fopen(spath, "w");
        if(sfile){
            fputs(kb->serial, sfile);
            fputc('\n', sfile);
            fclose(sfile);
            chmod(spath, S_GID_READ);
            if(gid >= 0)
                chown(spath, 0, gid);
        } else {
            ckb_warn("Unable to create %s: %s\n", spath, strerror(errno));
            remove(spath);
        }
        // Write the keyboard's features
        char fpath[sizeof(path) + 9];
        snprintf(fpath, sizeof(fpath), "%s/features", path);
        FILE* ffile = fopen(fpath, "w");
        if(ffile){
            fprintf(ffile, "%s %s", vendor_str(kb->vendor),
    product_str(kb->product));
            if(HAS_FEATURES(kb, FEAT_MONOCHROME))
                fputs(" monochrome", ffile);
            if(HAS_FEATURES(kb, FEAT_RGB))
                fputs(" rgb", ffile);
            if(HAS_FEATURES(kb, FEAT_POLLRATE))
                fputs(" pollrate", ffile);
            if(HAS_FEATURES(kb, FEAT_ADJRATE))
                fputs(" adjrate", ffile);
            if(HAS_FEATURES(kb, FEAT_BIND))
                fputs(" bind", ffile);
            if(HAS_FEATURES(kb, FEAT_NOTIFY))
                fputs(" notify", ffile);
            if(HAS_FEATURES(kb, FEAT_FWVERSION))
                fputs(" fwversion", ffile);
            if(HAS_FEATURES(kb, FEAT_FWUPDATE))
                fputs(" fwupdate", ffile);
            fputc('\n', ffile);
            fclose(ffile);
            chmod(fpath, S_GID_READ);
            if(gid >= 0)
                chown(fpath, 0, gid);
        } else {
            ckb_warn("Unable to create %s: %s\n", fpath, strerror(errno));
            remove(fpath);
        }
        // Write firmware version and poll rate
        mkfwnode(kb);
    }
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.12.3.2 int _mknotifynode (usbdevice * *kb*, int *notify*)

Definition at line 70 of file devnode.c.

References ckb_warn, devpath, gid, INDEX_OF, keyboard, usbdevice::outfifo, OUTFIFO_MAX, and S_GID_READ.

Referenced by _mkdevpath(), and mknotifynode().

```
70                                          {
71     if(notify < 0 || notify >= OUTFIFO_MAX)
72         return -1;
73     if(kb->outfifo[notify] != 0)
74         return 0;
75     // Create the notification node
76     int index = INDEX_OF(kb, keyboard);
77     char outpath[strlen(devpath) + 10];
78     snprintf(outpath, sizeof(outpath), "%s%d/notify%d", devpath, index, notify);
79     if(mkfifo(outpath, S_GID_READ) != 0 || (kb->outfifo[notify] = open(outpath, O_RDWR |
      O_NONBLOCK) + 1) == 0){
80         // Add one to the FD because 0 is a valid descriptor, but ckb uses 0 for uninitialized devices
81         ckb_warn("Unable to create %s: %s\n", outpath, strerror(errno));
82         kb->outfifo[notify] = 0;
83         remove(outpath);
84         return -1;
85     }
86     if(gid >= 0)
87         fchown(kb->outfifo[notify] - 1, 0, gid);
88     return 0;
89 }
```

Here is the caller graph for this function:

13.12.3.3 int _rmnotifynode (usbdevice * kb, int notify)

Definition at line 98 of file devnode.c.

References devpath, INDEX_OF, keyboard, usbdevice::outfifo, and OUTFIFO_MAX.

Referenced by rmdevpath(), and rmnotifynode().

```
98                                                  {
99      if(notify < 0 || notify >= OUTFIFO_MAX || !kb->outfifo[notify])
100         return -1;
101      int index = INDEX_OF(kb, keyboard);
102      char outpath[strlen(devpath) + 10];
103      snprintf(outpath, sizeof(outpath), "%s%d/notify%d", devpath, index, notify);
104      // Close FIFO
105      close(kb->outfifo[notify] - 1);
106      kb->outfifo[notify] = 0;
107      // Delete node
108      int res = remove(outpath);
109      return res;
110 }
```

Here is the caller graph for this function:

13.12.3.4 void _updateconnected ( )

Definition at line 38 of file devnode.c.

References ckb_warn, DEV_MAX, devmutex, devpath, gid, IS_CONNECTED, keyboard, and S_GID_READ.

Referenced by _mkdevpath(), and updateconnected().

```
38                                  {
39      pthread_mutex_lock(devmutex);
40      char cpath[strlen(devpath) + 12];
41      snprintf(cpath, sizeof(cpath), "%s0/connected", devpath);
42      FILE* cfile = fopen(cpath, "w");
43      if(!cfile){
44          ckb_warn("Unable to update %s: %s\n", cpath, strerror(errno));
45          pthread_mutex_unlock(devmutex);
46          return;
47      }
48      int written = 0;
49      for(int i = 1; i < DEV_MAX; i++){
50          if(IS_CONNECTED(keyboard + i)){
51              written = 1;
52              fprintf(cfile, "%s%d %s %s\n", devpath, i, keyboard[i].serial,
        keyboard[i].name);
53          }
54      }
55      if(!written)
```

```
        fputc('\n', cfile);
    fclose(cfile);
    chmod(cpath, S_GID_READ);
    if(gid >= 0)
        chown(cpath, 0, gid);
    pthread_mutex_unlock(devmutex);
}
```

Here is the caller graph for this function:

13.12.3.5 int mkdevpath (usbdevice * *kb*)

Definition at line 251 of file devnode.c.

References _mkdevpath(), euid_guard_start, and euid_guard_stop.

Referenced by _setupusb(), and main().

```
251                                 {
252     euid_guard_start;
253     int res = _mkdevpath(kb);
254     euid_guard_stop;
255     return res;
256 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.12.3.6 int mkfwnode (usbdevice * *kb*)

Definition at line 282 of file devnode.c.

References ckb_warn, devpath, usbdevice::fwversion, gid, INDEX_OF, keyboard, usbdevice::pollrate, and S_GID_-READ.

Referenced by _mkdevpath(), and fwupdate().

```
282                             {
283     int index = INDEX_OF(kb, keyboard);
284     char fwpath[strlen(devpath) + 12];
285     snprintf(fwpath, sizeof(fwpath), "%s%d/fwversion", devpath, index);
286     FILE* fwfile = fopen(fwpath, "w");
287     if(fwfile){
288         fprintf(fwfile, "%04x", kb->fwversion);
289         fputc('\n', fwfile);
290         fclose(fwfile);
291         chmod(fwpath, S_GID_READ);
292         if(gid >= 0)
293             chown(fwpath, 0, gid);
294     } else {
295         ckb_warn("Unable to create %s: %s\n", fwpath, strerror(errno));
296         remove(fwpath);
297         return -1;
298     }
299     char ppath[strlen(devpath) + 11];
300     snprintf(ppath, sizeof(ppath), "%s%d/pollrate", devpath, index);
301     FILE* pfile = fopen(ppath, "w");
302     if(pfile){
303         fprintf(pfile, "%d ms", kb->pollrate);
304         fputc('\n', pfile);
305         fclose(pfile);
306         chmod(ppath, S_GID_READ);
307         if(gid >= 0)
308             chown(ppath, 0, gid);
309     } else {
310         ckb_warn("Unable to create %s: %s\n", fwpath, strerror(errno));
311         remove(ppath);
312         return -2;
313     }
314     return 0;
315 }
```

Here is the caller graph for this function:

13.12.3.7 int mknotifynode (usbdevice * *kb*, int *notify*)

Definition at line 91 of file devnode.c.

References _mknotifynode(), euid_guard_start, and euid_guard_stop.

Referenced by readcmd().

```
                                                {
    euid_guard_start;
    int res = _mknotifynode(kb, notify);
    euid_guard_stop;
    return res;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.12.3.8 unsigned readlines (int *fd*, readlines_ctx *ctx*, const char ** *input*)

Definition at line 336 of file devnode.c.

References _readlines_ctx::buffer, _readlines_ctx::buffersize, ckb_warn, _readlines_ctx::leftover, _readlines_ctx::leftoverlen, and MAX_BUFFER.

Referenced by devmain().

```
336                                                                 {
337     // Move any data left over from a previous read to the start of the buffer
338     char* buffer = ctx->buffer;
339     int buffersize = ctx->buffersize;
340     int leftover = ctx->leftover, leftoverlen = ctx->leftoverlen;
341     memcpy(buffer, buffer + leftover, leftoverlen);
342     // Read data from the file
343     ssize_t length = read(fd, buffer + leftoverlen, buffersize - leftoverlen);
344     length = (length < 0 ? 0 : length) + leftoverlen;
345     leftover = ctx->leftover = leftoverlen = ctx->leftoverlen = 0;
346     if(length <= 0){
347         *input = 0;
348         return 0;
349     }
350     // Continue buffering until all available input is read or there's no room left
351     while(length == buffersize){
352         if(buffersize == MAX_BUFFER)
353             break;
354         int oldsize = buffersize;
355         buffersize += 4096;
356         ctx->buffersize = buffersize;
357         buffer = ctx->buffer = realloc(buffer, buffersize + 1);
358         ssize_t length2 = read(fd, buffer + oldsize, buffersize - oldsize);
359         if(length2 <= 0)
360             break;
361         length += length2;
362     }
363     buffer[length] = 0;
364     // Input should be issued one line at a time and should end with a newline.
365     char* lastline = memrchr(buffer, '\n', length);
366     if(lastline == buffer + length - 1){
367         // If the buffer ends in a newline, process the whole string
368         *input = buffer;
369         return length;
370     } else if(lastline){
```

```
        // Otherwise, chop off the last line but process everything else
        *lastline = 0;
        leftover = ctx->leftover = lastline + 1 - buffer;
        leftoverlen = ctx->leftoverlen = length - leftover;
        *input = buffer;
        return leftover - 1;
    } else {
        // If a newline wasn't found at all, process the whole buffer next time
        *input = 0;
        if(length == MAX_BUFFER){
            // Unless the buffer is completely full, in which case discard it
            ckb_warn("Too much input (1MB). Dropping.\n");
            return 0;
        }
        leftoverlen = ctx->leftoverlen = length;
        return 0;
    }
}
```

Here is the caller graph for this function:

13.12.3.9 void readlines_ctx_free (readlines_ctx *ctx*)

Definition at line 331 of file devnode.c.

References _readlines_ctx::buffer.

Referenced by devmain().

```
331                                         {
332     free(ctx->buffer);
333     free(ctx);
334 }
```

Here is the caller graph for this function:

13.12.3.10 void readlines_ctx_init (readlines_ctx * *ctx*)

Definition at line 324 of file devnode.c.

Referenced by devmain().

```
324                                         {
325     // Allocate buffers to store data
326     *ctx = calloc(1, sizeof(struct _readlines_ctx));
327     int buffersize = (*ctx)->buffersize = 4095;
328     (*ctx)->buffer = malloc(buffersize + 1);
329 }
```

Here is the caller graph for this function:

13.12.3.11 int rm_recursive (const char * *path*)

Definition at line 19 of file devnode.c.

Referenced by _mkdevpath(), and rmdevpath().

```
19                                  {
20     DIR* dir = opendir(path);
21     if(!dir)
22         return remove(path);
23     struct dirent* file;
24     while((file = readdir(dir)))
25     {
26         if(!strcmp(file->d_name, ".") || !strcmp(file->d_name, ".."))
27             continue;
28         char path2[FILENAME_MAX];
29         snprintf(path2, FILENAME_MAX, "%s/%s", path, file->d_name);
30         int stat = rm_recursive(path2);
31         if(stat != 0)
32             return stat;
33     }
34     closedir(dir);
35     return remove(path);
36 }
```

Here is the caller graph for this function:

13.12.3.12 int rmdevpath (usbdevice * *kb*)

Definition at line 258 of file devnode.c.

References _rmnotifynode(), ckb_info, ckb_warn, devpath, euid_guard_start, euid_guard_stop, INDEX_OF, usbdevice::infifo, keyboard, OUTFIFO_MAX, and rm_recursive().

Referenced by closeusb(), and quitWithLock().

```
258                                 {
259     euid_guard_start;
260     int index = INDEX_OF(kb, keyboard);
261     if(kb->infifo != 0){
262 #ifdef OS_LINUX
263         write(kb->infifo - 1, "\n", 1); // hack to prevent the FIFO thread from perma-blocking
264 #endif
265         close(kb->infifo - 1);
266         kb->infifo = 0;
267     }
268     for(int i = 0; i < OUTFIFO_MAX; i++)
269         _rmnotifynode(kb, i);
270     char path[strlen(devpath) + 2];
271     snprintf(path, sizeof(path), "%s%d", devpath, index);
272     if(rm_recursive(path) != 0 && errno != ENOENT){
273         ckb_warn("Unable to delete %s: %s\n", path, strerror(errno));
274         euid_guard_stop;
275         return -1;
276     }
277     ckb_info("Removed device path %s\n", path);
278     euid_guard_stop;
279     return 0;
280 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.12.3.13 int rmnotifynode (usbdevice * *kb*, int *notify*)

Definition at line 112 of file devnode.c.

References _rmnotifynode(), euid_guard_start, and euid_guard_stop.

Referenced by readcmd().

```
112                                                 {
113     euid_guard_start;
114     int res = _rmnotifynode(kb, notify);
115     euid_guard_stop;
116     return res;
117 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.12.3.14 void updateconnected ( )

Definition at line 64 of file devnode.c.

References _updateconnected(), euid_guard_start, and euid_guard_stop.

Referenced by _setupusb(), and closeusb().

```
64                          {
65      euid_guard_start;
66      _updateconnected();
67      euid_guard_stop;
68  }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.12.4 Variable Documentation

13.12.4.1 const char∗ const devpath = "/dev/input/ckb"

Definition at line 11 of file devnode.c.

Referenced by _mkdevpath(), _mknotifynode(), _rmnotifynode(), _updateconnected(), mkfwnode(), and rmdevpath().

13.12.4.2 long gid = -1

Definition at line 16 of file devnode.c.

Referenced by _mkdevpath(), _mknotifynode(), _updateconnected(), main(), and mkfwnode().

13.13 src/ckb-daemon/devnode.h File Reference

```
#include "includes.h"
#include "usb.h"
```

Include dependency graph for devnode.h:

This graph shows which files directly or indirectly include this file:

Macros

- #define S_READDIR (S_IRWXU | S_IRGRP | S_IROTH | S_IXGRP | S_IXOTH)
- #define S_READ (S_IRUSR | S_IRGRP | S_IROTH | S_IWUSR)
- #define S_READWRITE (S_IRUSR | S_IRGRP | S_IROTH | S_IWUSR | S_IWGRP | S_IWOTH)
- #define S_CUSTOM (S_IRUSR | S_IWUSR | S_IRGRP | S_IWGRP)
- #define S_CUSTOM_R (S_IRUSR | S_IWUSR | S_IRGRP)

Typedefs

- typedef struct _readlines_ctx * readlines_ctx

Functions

- void updateconnected ()
- int mkdevpath (usbdevice *kb)
- int rmdevpath (usbdevice *kb)
- int mknotifynode (usbdevice *kb, int notify)
- int rmnotifynode (usbdevice *kb, int notify)
- int mkfwnode (usbdevice *kb)
- void readlines_ctx_init (readlines_ctx *ctx)
- void readlines_ctx_free (readlines_ctx ctx)
- unsigned readlines (int fd, readlines_ctx ctx, const char **input)

Variables

- const char *const devpath
- long gid

13.13.1 Macro Definition Documentation

13.13.1.1 #define S_CUSTOM (S_IRUSR | S_IWUSR | S_IRGRP | S_IWGRP)

Definition at line 17 of file devnode.h.

Referenced by _mkdevpath().

13.13.1.2 #define S_CUSTOM_R (S_IRUSR | S_IWUSR | S_IRGRP)

Definition at line 18 of file devnode.h.

13.13.1.3 #define S_READ (S_IRUSR | S_IRGRP | S_IROTH | S_IWUSR)

Definition at line 15 of file devnode.h.

Referenced by _mkdevpath().

13.13.1.4 #define S_READDIR (S_IRWXU | S_IRGRP | S_IROTH | S_IXGRP | S_IXOTH)

Definition at line 14 of file devnode.h.

Referenced by _mkdevpath().

13.13.1.5 #define S_READWRITE (S_IRUSR | S_IRGRP | S_IROTH | S_IWUSR | S_IWGRP | S_IWOTH)

Definition at line 16 of file devnode.h.

Referenced by _mkdevpath().

13.13.2 Typedef Documentation

13.13.2.1 typedef struct _readlines_ctx* readlines_ctx

Definition at line 36 of file devnode.h.

13.13.3 Function Documentation

13.13.3.1 int mkdevpath (usbdevice * *kb*)

Definition at line 251 of file devnode.c.

References _mkdevpath(), euid_guard_start, and euid_guard_stop.

Referenced by _setupusb(), and main().

```
251                                 {
252     euid_guard_start;
253     int res = _mkdevpath(kb);
254     euid_guard_stop;
255     return res;
256 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.13.3.2 int mkfwnode (usbdevice * *kb*)

Definition at line 282 of file devnode.c.

References ckb_warn, devpath, usbdevice::fwversion, gid, INDEX_OF, keyboard, usbdevice::pollrate, and S_GID_READ.

Referenced by _mkdevpath(), and fwupdate().

```
282                                 {
283     int index = INDEX_OF(kb, keyboard);
284     char fwpath[strlen(devpath) + 12];
285     snprintf(fwpath, sizeof(fwpath), "%s%d/fwversion", devpath, index);
286     FILE* fwfile = fopen(fwpath, "w");
287     if(fwfile){
288         fprintf(fwfile, "%04x", kb->fwversion);
289         fputc('\n', fwfile);
290         fclose(fwfile);
291         chmod(fwpath, S_GID_READ);
292         if(gid >= 0)
293             chown(fwpath, 0, gid);
294     } else {
295         ckb_warn("Unable to create %s: %s\n", fwpath, strerror(errno));
296         remove(fwpath);
297         return -1;
298     }
299     char ppath[strlen(devpath) + 11];
300     snprintf(ppath, sizeof(ppath), "%s%d/pollrate", devpath, index);
301     FILE* pfile = fopen(ppath, "w");
```

```
    if(pfile){
        fprintf(pfile, "%d ms", kb->pollrate);
        fputc('\n', pfile);
        fclose(pfile);
        chmod(ppath, S_GID_READ);
        if(gid >= 0)
            chown(ppath, 0, gid);
    } else {
        ckb_warn("Unable to create %s: %s\n", fwpath, strerror(errno));
        remove(ppath);
        return -2;
    }
    return 0;
}
```

Here is the caller graph for this function:

13.13.3.3 int mknotifynode (usbdevice * *kb*, int *notify*)

Definition at line 91 of file devnode.c.

References _mknotifynode(), euid_guard_start, and euid_guard_stop.

Referenced by readcmd().

```
91                                          {
92     euid_guard_start;
93     int res = _mknotifynode(kb, notify);
94     euid_guard_stop;
95     return res;
96 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.13.3.4 unsigned readlines (int *fd*, readlines_ctx *ctx*, const char ** *input*)

Definition at line 336 of file devnode.c.

References _readlines_ctx::buffer, _readlines_ctx::buffersize, ckb_warn, _readlines_ctx::leftover, _readlines_ctx::leftoverlen, and MAX_BUFFER.

Referenced by devmain().

```
336                                                                 {
337     // Move any data left over from a previous read to the start of the buffer
338     char* buffer = ctx->buffer;
339     int buffersize = ctx->buffersize;
340     int leftover = ctx->leftover, leftoverlen = ctx->leftoverlen;
341     memcpy(buffer, buffer + leftover, leftoverlen);
342     // Read data from the file
343     ssize_t length = read(fd, buffer + leftoverlen, buffersize - leftoverlen);
344     length = (length < 0 ? 0 : length) + leftoverlen;
345     leftover = ctx->leftover = leftoverlen = ctx->leftoverlen = 0;
346     if(length <= 0){
347         *input = 0;
348         return 0;
349     }
350     // Continue buffering until all available input is read or there's no room left
351     while(length == buffersize){
352         if(buffersize == MAX_BUFFER)
353             break;
354         int oldsize = buffersize;
355         buffersize += 4096;
356         ctx->buffersize = buffersize;
357         buffer = ctx->buffer = realloc(buffer, buffersize + 1);
358         ssize_t length2 = read(fd, buffer + oldsize, buffersize - oldsize);
359         if(length2 <= 0)
360             break;
361         length += length2;
362     }
363     buffer[length] = 0;
364     // Input should be issued one line at a time and should end with a newline.
365     char* lastline = memrchr(buffer, '\n', length);
366     if(lastline == buffer + length - 1){
367         // If the buffer ends in a newline, process the whole string
368         *input = buffer;
369         return length;
370     } else if(lastline){
371         // Otherwise, chop off the last line but process everything else
372         *lastline = 0;
373         leftover = ctx->leftover = lastline + 1 - buffer;
374         leftoverlen = ctx->leftoverlen = length - leftover;
375         *input = buffer;
376         return leftover - 1;
377     } else {
378         // If a newline wasn't found at all, process the whole buffer next time
379         *input = 0;
380         if(length == MAX_BUFFER){
381             // Unless the buffer is completely full, in which case discard it
382             ckb_warn("Too much input (1MB). Dropping.\n");
383             return 0;
384         }
385         leftoverlen = ctx->leftoverlen = length;
386         return 0;
387     }
388 }
```

Here is the caller graph for this function:

13.13.3.5 void readlines_ctx_free (readlines_ctx *ctx*)

Definition at line 331 of file devnode.c.

References _readlines_ctx::buffer.

Referenced by devmain().

```
331                                                 {
```

```
    free(ctx->buffer);
    free(ctx);
}
```

Here is the caller graph for this function:

13.13.3.6 void readlines_ctx_init (readlines_ctx * *ctx*)

Definition at line 324 of file devnode.c.

Referenced by devmain().

```
                                        {
    // Allocate buffers to store data
    *ctx = calloc(1, sizeof(struct _readlines_ctx));
    int buffersize = (*ctx)->buffersize = 4095;
    (*ctx)->buffer = malloc(buffersize + 1);
}
```

Here is the caller graph for this function:

13.13.3.7 int rmdevpath (usbdevice * *kb*)

Definition at line 258 of file devnode.c.

References _rmnotifynode(), ckb_info, ckb_warn, devpath, euid_guard_start, euid_guard_stop, INDEX_OF, usbdevice::infifo, keyboard, OUTFIFO_MAX, and rm_recursive().

Referenced by closeusb(), and quitWithLock().

```
                            {
    euid_guard_start;
    int index = INDEX_OF(kb, keyboard);
    if(kb->infifo != 0){
#ifdef OS_LINUX
        write(kb->infifo - 1, "\n", 1); // hack to prevent the FIFO thread from perma-blocking
#endif
        close(kb->infifo - 1);
        kb->infifo = 0;
    }
    for(int i = 0; i < OUTFIFO_MAX; i++)
        _rmnotifynode(kb, i);
    char path[strlen(devpath) + 2];
    snprintf(path, sizeof(path), "%s%d", devpath, index);
    if(rm_recursive(path) != 0 && errno != ENOENT){
        ckb_warn("Unable to delete %s: %s\n", path, strerror(errno));
        euid_guard_stop;
        return -1;
    }
    ckb_info("Removed device path %s\n", path);
    euid_guard_stop;
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.13.3.8 int rmnotifynode (usbdevice * *kb*, int *notify*)

Definition at line 112 of file devnode.c.

References _rmnotifynode(), euid_guard_start, and euid_guard_stop.

Referenced by readcmd().

```
112                                                 {
113     euid_guard_start;
114     int res = _rmnotifynode(kb, notify);
115     euid_guard_stop;
116     return res;
117 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.13.3.9 void updateconnected ( )

Definition at line 64 of file devnode.c.

References _updateconnected(), euid_guard_start, and euid_guard_stop.

Referenced by _setupusb(), and closeusb().

```
64                      {
65     euid_guard_start;
66     _updateconnected();
67     euid_guard_stop;
68 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.13.4 Variable Documentation

13.13.4.1 const char* const devpath

Definition at line 8 of file devnode.h.

13.13.4.2 long gid

Definition at line 16 of file devnode.c.

Referenced by _mkdevpath(), _mknotifynode(), _updateconnected(), main(), and mkfwnode().

13.14 src/ckb-daemon/dpi.c File Reference

```
#include "dpi.h"
#include "usb.h"
```

Include dependency graph for dpi.c:

Functions

- void cmd_dpi (usbdevice ∗kb, usbmode ∗mode, int dummy, const char ∗stages, const char ∗values)
- void cmd_dpisel (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗stage)
- void cmd_lift (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗height)
- void cmd_snap (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗enable)
- char ∗ printdpi (const dpiset ∗dpi, const usbdevice ∗kb)
- int updatedpi (usbdevice ∗kb, int force)
- int savedpi (usbdevice ∗kb, dpiset ∗dpi, lighting ∗light)
- int loaddpi (usbdevice ∗kb, dpiset ∗dpi, lighting ∗light)

13.14.1 Function Documentation

13.14.1.1 void cmd_dpi (usbdevice ∗ *kb*, usbmode ∗ *mode*, int *dummy*, const char ∗ *stages*, const char ∗ *values*)

Definition at line 4 of file dpi.c.

References usbmode::dpi, DPI_COUNT, dpiset::enabled, left, dpiset::x, x, dpiset::y, and y.

```
4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                {
5     int disable = 0;
6     ushort x, y;
7     // Try to scan X,Y values
8     if(sscanf(values, "%hu,%hu", &x, &y) != 2){
9         // If that doesn't work, scan single number
10         if(sscanf(values, "%hu", &x) == 1)
11             y = x;
12         else if(!strncmp(values, "off", 3))
13             // If the right side says "off", disable the level(s)
14             disable = 1;
15         else
16             // Otherwise, quit
17             return;
18     }
19     if((x == 0 || y == 0) && !disable)
20         return;
21     // Scan the left side for stage numbers (comma-separated)
22     int left = strlen(stages);
23     int position = 0, field = 0;
24     char stagename[3];
25     while(position < left && sscanf(stages + position, "%2[^,]%n", stagename, &field) == 1){
26         uchar stagenum;
27         if(sscanf(stagename, "%hhu", &stagenum) && stagenum < DPI_COUNT){
28             // Set DPI for this stage
29             if(disable){
30                 mode->dpi.enabled &= ~(1 << stagenum);
31                 mode->dpi.x[stagenum] = 0;
32                 mode->dpi.y[stagenum] = 0;
33             } else {
34                 mode->dpi.enabled |= 1 << stagenum;
35                 mode->dpi.x[stagenum] = x;
```

```
                mode->dpi.y[stagenum] = y;
            }
        }
        if(stages[position += field] == ',')
            position++;
    }
}
```

13.14.1.2 void cmd_dpisel (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *stage*)

Definition at line 44 of file dpi.c.

References dpiset::current, usbmode::dpi, and DPI_COUNT.

```
44                                                                                                  {
45     uchar stagenum;
46     if(sscanf(stage, "%hhu", &stagenum) != 1)
47         return;
48     if(stagenum > DPI_COUNT)
49         return;
50     mode->dpi.current = stagenum;
51 }
```

13.14.1.3 void cmd_lift (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *height*)

Definition at line 53 of file dpi.c.

References usbmode::dpi, dpiset::lift, LIFT_MAX, and LIFT_MIN.

```
53                                                                                                  {
54     uchar heightnum;
55     if(sscanf(height, "%hhu", &heightnum) != 1)
56         return;
57     if(heightnum > LIFT_MAX || heightnum < LIFT_MIN)
58         return;
59     mode->dpi.lift = heightnum;
60 }
```

13.14.1.4 void cmd_snap (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *enable*)

Definition at line 62 of file dpi.c.

References usbmode::dpi, and dpiset::snap.

```
62                                                                                                  {
63     if(!strcmp(enable, "on"))
64         mode->dpi.snap = 1;
65     if(!strcmp(enable, "off"))
66         mode->dpi.snap = 0;
67 }
```

13.14.1.5 int loaddpi (usbdevice * *kb*, dpiset * *dpi*, lighting * *light*)

Definition at line 152 of file dpi.c.

References lighting::b, ckb_err, dpiset::current, DPI_COUNT, dpiset::enabled, lighting::g, LED_MOUSE, dpiset::lift, LIFT_MAX, LIFT_MIN, MSG_SIZE, N_MOUSE_ZONES, lighting::r, dpiset::snap, usbrecv, dpiset::x, and dpiset::y.

Referenced by cmd_hwload_mouse().

```
152                                                                                                 {
153     // Ask for settings
154     uchar data_pkt[4][MSG_SIZE] = {
155         { 0x0e, 0x13, 0x05, 1, },
156         { 0x0e, 0x13, 0x02, 1, },
```

```
        { 0x0e, 0x13, 0x03, 1, },
        { 0x0e, 0x13, 0x04, 1, }
    };
    uchar in_pkt[4][MSG_SIZE];
    for(int i = 0; i < 4; i++){
        if(!usbrecv(kb, data_pkt[i], in_pkt[i]))
            return -2;
        if(memcmp(in_pkt[i], data_pkt[i], 4)){
            ckb_err("Bad input header\n");
            return -3;
        }
    }
    // Copy data from device
    dpi->enabled = in_pkt[0][4];
    dpi->enabled &= (1 << DPI_COUNT) - 1;
    dpi->current = in_pkt[1][4];
    if(dpi->current >= DPI_COUNT)
        dpi->current = 0;
    dpi->lift = in_pkt[2][4];
    if(dpi->lift < LIFT_MIN || dpi->lift > LIFT_MAX)
        dpi->lift = LIFT_MIN;
    dpi->snap = !!in_pkt[3][4];

    // Get X/Y DPIs
    for(int i = 0; i < DPI_COUNT; i++){
        uchar data_pkt[MSG_SIZE] = { 0x0e, 0x13, 0xd0, 1 };
        uchar in_pkt[MSG_SIZE];
        data_pkt[2] |= i;
        if(!usbrecv(kb, data_pkt, in_pkt))
            return -2;
        if(memcmp(in_pkt, data_pkt, 4)){
            ckb_err("Bad input header\n");
            return -3;
        }
        // Copy to profile
        dpi->x[i] = *(ushort*)(in_pkt + 5);
        dpi->y[i] = *(ushort*)(in_pkt + 7);
        light->r[LED_MOUSE + N_MOUSE_ZONES + i] = in_pkt[9];
        light->g[LED_MOUSE + N_MOUSE_ZONES + i] = in_pkt[10];
        light->b[LED_MOUSE + N_MOUSE_ZONES + i] = in_pkt[11];
    }
    // Finished. Set SW DPI light to the current hardware level
    light->r[LED_MOUSE + 2] = light->r[LED_MOUSE + N_MOUSE_ZONES + dpi->current];
    light->g[LED_MOUSE + 2] = light->g[LED_MOUSE + N_MOUSE_ZONES + dpi->current];
    light->b[LED_MOUSE + 2] = light->b[LED_MOUSE + N_MOUSE_ZONES + dpi->current];
    return 0;
}
```

Here is the caller graph for this function:

13.14.1.6 char* printdpi (const dpiset * *dpi*, const usbdevice * *kb*)

Definition at line 69 of file dpi.c.

References _readlines_ctx::buffer, DPI_COUNT, dpiset::enabled, dpiset::x, and dpiset::y.

Referenced by _cmd_get().

```
69                                                  {
70     // Print all DPI settings
71     const int BUFFER_LEN = 100;
```

```
    char* buffer = malloc(BUFFER_LEN);
    int length = 0;
    for(int i = 0; i < DPI_COUNT; i++){
        // Print the stage number
        int newlen = 0;
        snprintf(buffer + length, BUFFER_LEN - length, length == 0 ? "%d%n" : " %d%n", i, &newlen);
        length += newlen;
        // Print the DPI settings
        if(!(dpi->enabled & (1 << i)))
            snprintf(buffer + length, BUFFER_LEN - length, ":off%n", &newlen);
        else
            snprintf(buffer + length, BUFFER_LEN - length, ":%u,%u%n", dpi->x[i], dpi->y[i], &newlen);
        length += newlen;
    }
    return buffer;
}
```

Here is the caller graph for this function:

13.14.1.7 int savedpi (usbdevice * *kb*, dpiset * *dpi*, lighting * *light*)

Definition at line 124 of file dpi.c.

References lighting::b, dpiset::current, DPI_COUNT, dpiset::enabled, lighting::g, LED_MOUSE, dpiset::lift, MSG_SIZE, N_MOUSE_ZONES, lighting::r, dpiset::snap, usbsend, dpiset::x, and dpiset::y.

Referenced by cmd_hwsave_mouse().

```
124                                                         {
125     // Send X/Y DPIs
126     for(int i = 0; i < DPI_COUNT; i++){
127         uchar data_pkt[MSG_SIZE] = { 0x07, 0x13, 0xd0, 1 };
128         data_pkt[2] |= i;
129         *(ushort*)(data_pkt + 5) = dpi->x[i];
130         *(ushort*)(data_pkt + 7) = dpi->y[i];
131         // Save the RGB value for this setting too
132         data_pkt[9] = light->r[LED_MOUSE + N_MOUSE_ZONES + i];
133         data_pkt[10] = light->g[LED_MOUSE + N_MOUSE_ZONES + i];
134         data_pkt[11] = light->b[LED_MOUSE + N_MOUSE_ZONES + i];
135         if(!usbsend(kb, data_pkt, 1))
136             return -1;
137     }
138
139     // Send settings
140     uchar data_pkt[4][MSG_SIZE] = {
141         { 0x07, 0x13, 0x05, 1, dpi->enabled },
142         { 0x07, 0x13, 0x02, 1, dpi->current },
143         { 0x07, 0x13, 0x03, 1, dpi->lift },
144         { 0x07, 0x13, 0x04, 1, dpi->snap, 0x05 }
145     };
146     if(!usbsend(kb, data_pkt[0], 4))
147         return -2;
148     // Finished
149     return 0;
150 }
```

Here is the caller graph for this function:

13.14.1.8 int updatedpi (usbdevice * *kb*, int *force*)

Definition at line 89 of file dpi.c.

References usbdevice::active, dpiset::current, usbprofile::currentmode, usbmode::dpi, DPI_COUNT, dpiset::enabled, dpiset::forceupdate, usbprofile::lastdpi, dpiset::lift, MSG_SIZE, usbdevice::profile, dpiset::snap, usbsend, dpiset::x, and dpiset::y.

```
89                                          {
90      if(!kb->active)
91          return 0;
92      dpiset* lastdpi = &kb->profile->lastdpi;
93      dpiset* newdpi = &kb->profile->currentmode->dpi;
94      // Don't do anything if the settings haven't changed
95      if(!force && !lastdpi->forceupdate && !newdpi->forceupdate
96              && !memcmp(lastdpi, newdpi, sizeof(dpiset)))
97          return 0;
98      lastdpi->forceupdate = newdpi->forceupdate = 0;
99
100      // Send X/Y DPIs
101      for(int i = 0; i < DPI_COUNT; i++){
102          uchar data_pkt[MSG_SIZE] = { 0x07, 0x13, 0xd0, 0 };
103          data_pkt[2] |= i;
104          *(ushort*)(data_pkt + 5) = newdpi->x[i];
105          *(ushort*)(data_pkt + 7) = newdpi->y[i];
106          if(!usbsend(kb, data_pkt, 1))
107              return -1;
108      }
109
110      // Send settings
111      uchar data_pkt[4][MSG_SIZE] = {
112          { 0x07, 0x13, 0x05, 0, newdpi->enabled },
113          { 0x07, 0x13, 0x02, 0, newdpi->current },
114          { 0x07, 0x13, 0x03, 0, newdpi->lift },
115          { 0x07, 0x13, 0x04, 0, newdpi->snap, 0x05 }
116      };
117      if(!usbsend(kb, data_pkt[0], 4))
118          return -2;
119      // Finished
120      memcpy(lastdpi, newdpi, sizeof(dpiset));
121      return 0;
122  }
```

13.15 src/ckb-daemon/dpi.h File Reference

```
#include "includes.h"
#include "device.h"
```

Include dependency graph for dpi.h:

This graph shows which files directly or indirectly include this file:

Functions

- int updatedpi (usbdevice ∗kb, int force)
- int savedpi (usbdevice ∗kb, dpiset ∗dpi, lighting ∗light)
- int loaddpi (usbdevice ∗kb, dpiset ∗dpi, lighting ∗light)
- char ∗ printdpi (const dpiset ∗dpi, const usbdevice ∗kb)
- void cmd_dpi (usbdevice ∗kb, usbmode ∗mode, int dummy, const char ∗stages, const char ∗values)
- void cmd_dpisel (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗stage)
- void cmd_lift (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗height)
- void cmd_snap (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗enable)

13.15.1 Function Documentation

13.15.1.1 void cmd_dpi (usbdevice ∗ *kb*, usbmode ∗ *mode*, int *dummy*, const char ∗ *stages*, const char ∗ *values*)

Definition at line 4 of file dpi.c.

References usbmode::dpi, DPI_COUNT, dpiset::enabled, left, dpiset::x, x, dpiset::y, and y.

```
4                                                                                                                    {
5     int disable = 0;
6     ushort x, y;
7     // Try to scan X,Y values
8     if(sscanf(values, "%hu,%hu", &x, &y) != 2){
9         // If that doesn't work, scan single number
10         if(sscanf(values, "%hu", &x) == 1)
11             y = x;
12         else if(!strncmp(values, "off", 3))
13             // If the right side says "off", disable the level(s)
14             disable = 1;
15         else
16             // Otherwise, quit
17             return;
```

```
    }
    if((x == 0 || y == 0) && !disable)
        return;
    // Scan the left side for stage numbers (comma-separated)
    int left = strlen(stages);
    int position = 0, field = 0;
    char stagename[3];
    while(position < left && sscanf(stages + position, "%2[^,]%n", stagename, &field) == 1){
        uchar stagenum;
        if(sscanf(stagename, "%hhu", &stagenum) && stagenum < DPI_COUNT){
            // Set DPI for this stage
            if(disable){
                mode->dpi.enabled &= ~(1 << stagenum);
                mode->dpi.x[stagenum] = 0;
                mode->dpi.y[stagenum] = 0;
            } else {
                mode->dpi.enabled |= 1 << stagenum;
                mode->dpi.x[stagenum] = x;
                mode->dpi.y[stagenum] = y;
            }
        }
        if(stages[position += field] == ',')
            position++;
    }
}
```

13.15.1.2 void cmd_dpisel (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *stage*)

Definition at line 44 of file dpi.c.

References dpiset::current, usbmode::dpi, and DPI_COUNT.

```
44                                                                                  {
45     uchar stagenum;
46     if(sscanf(stage, "%hhu", &stagenum) != 1)
47         return;
48     if(stagenum > DPI_COUNT)
49         return;
50     mode->dpi.current = stagenum;
51 }
```

13.15.1.3 void cmd_lift (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *height*)

Definition at line 53 of file dpi.c.

References usbmode::dpi, dpiset::lift, LIFT_MAX, and LIFT_MIN.

```
53                                                                                  {
54     uchar heightnum;
55     if(sscanf(height, "%hhu", &heightnum) != 1)
56         return;
57     if(heightnum > LIFT_MAX || heightnum < LIFT_MIN)
58         return;
59     mode->dpi.lift = heightnum;
60 }
```

13.15.1.4 void cmd_snap (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *enable*)

Definition at line 62 of file dpi.c.

References usbmode::dpi, and dpiset::snap.

```
62                                                                                  {
63     if(!strcmp(enable, "on"))
64         mode->dpi.snap = 1;
65     if(!strcmp(enable, "off"))
66         mode->dpi.snap = 0;
67 }
```

13.15.1.5 int loaddpi (usbdevice * *kb*, dpiset * *dpi*, lighting * *light*)

Definition at line 152 of file dpi.c.

References lighting::b, ckb_err, dpiset::current, DPI_COUNT, dpiset::enabled, lighting::g, LED_MOUSE, dpiset::lift, LIFT_MAX, LIFT_MIN, MSG_SIZE, N_MOUSE_ZONES, lighting::r, dpiset::snap, usbrecv, dpiset::x, and dpiset::y.

Referenced by cmd_hwload_mouse().

```
152                                                     {
153     // Ask for settings
154     uchar data_pkt[4][MSG_SIZE] = {
155         { 0x0e, 0x13, 0x05, 1, },
156         { 0x0e, 0x13, 0x02, 1, },
157         { 0x0e, 0x13, 0x03, 1, },
158         { 0x0e, 0x13, 0x04, 1, }
159     };
160     uchar in_pkt[4][MSG_SIZE];
161     for(int i = 0; i < 4; i++){
162         if(!usbrecv(kb, data_pkt[i], in_pkt[i]))
163             return -2;
164         if(memcmp(in_pkt[i], data_pkt[i], 4)){
165             ckb_err("Bad input header\n");
166             return -3;
167         }
168     }
169     // Copy data from device
170     dpi->enabled = in_pkt[0][4];
171     dpi->enabled &= (1 << DPI_COUNT) - 1;
172     dpi->current = in_pkt[1][4];
173     if(dpi->current >= DPI_COUNT)
174         dpi->current = 0;
175     dpi->lift = in_pkt[2][4];
176     if(dpi->lift < LIFT_MIN || dpi->lift > LIFT_MAX)
177         dpi->lift = LIFT_MIN;
178     dpi->snap = !!in_pkt[3][4];
179
180     // Get X/Y DPIs
181     for(int i = 0; i < DPI_COUNT; i++){
182         uchar data_pkt[MSG_SIZE] = { 0x0e, 0x13, 0xd0, 1 };
183         uchar in_pkt[MSG_SIZE];
184         data_pkt[2] |= i;
185         if(!usbrecv(kb, data_pkt, in_pkt))
186             return -2;
187         if(memcmp(in_pkt, data_pkt, 4)){
188             ckb_err("Bad input header\n");
189             return -3;
190         }
191         // Copy to profile
192         dpi->x[i] = *(ushort*)(in_pkt + 5);
193         dpi->y[i] = *(ushort*)(in_pkt + 7);
194         light->r[LED_MOUSE + N_MOUSE_ZONES + i] = in_pkt[9];
195         light->g[LED_MOUSE + N_MOUSE_ZONES + i] = in_pkt[10];
196         light->b[LED_MOUSE + N_MOUSE_ZONES + i] = in_pkt[11];
197     }
198     // Finished. Set SW DPI light to the current hardware level
199     light->r[LED_MOUSE + 2] = light->r[LED_MOUSE +
      N_MOUSE_ZONES + dpi->current];
200     light->g[LED_MOUSE + 2] = light->g[LED_MOUSE +
      N_MOUSE_ZONES + dpi->current];
201     light->b[LED_MOUSE + 2] = light->b[LED_MOUSE +
      N_MOUSE_ZONES + dpi->current];
202     return 0;
203 }
```

Here is the caller graph for this function:

13.15.1.6 char* printdpi (const dpiset * *dpi*, const usbdevice * *kb*)

Definition at line 69 of file dpi.c.

References _readlines_ctx::buffer, DPI_COUNT, dpiset::enabled, dpiset::x, and dpiset::y.

Referenced by _cmd_get().

```
69                                                  {
70     // Print all DPI settings
71     const int BUFFER_LEN = 100;
72     char* buffer = malloc(BUFFER_LEN);
73     int length = 0;
74     for(int i = 0; i < DPI_COUNT; i++){
75         // Print the stage number
76         int newlen = 0;
77         snprintf(buffer + length, BUFFER_LEN - length, length == 0 ? "%d%n" : " %d%n", i, &newlen);
78         length += newlen;
79         // Print the DPI settings
80         if(!(dpi->enabled & (1 << i)))
81             snprintf(buffer + length, BUFFER_LEN - length, ":off%n", &newlen);
82         else
83             snprintf(buffer + length, BUFFER_LEN - length, ":%u,%u%n", dpi->x[i], dpi->
      y[i], &newlen);
84         length += newlen;
85     }
86     return buffer;
87 }
```

Here is the caller graph for this function:

13.15.1.7 int savedpi (usbdevice * *kb*, dpiset * *dpi*, lighting * *light*)

Definition at line 124 of file dpi.c.

References lighting::b, dpiset::current, DPI_COUNT, dpiset::enabled, lighting::g, LED_MOUSE, dpiset::lift, MSG_-SIZE, N_MOUSE_ZONES, lighting::r, dpiset::snap, usbsend, dpiset::x, and dpiset::y.

Referenced by cmd_hwsave_mouse().

```
124                                                     {
125     // Send X/Y DPIs
126     for(int i = 0; i < DPI_COUNT; i++){
127         uchar data_pkt[MSG_SIZE] = { 0x07, 0x13, 0xd0, 1 };
128         data_pkt[2] |= i;
129         *(ushort*)(data_pkt + 5) = dpi->x[i];
130         *(ushort*)(data_pkt + 7) = dpi->y[i];
131         // Save the RGB value for this setting too
132         data_pkt[9] = light->r[LED_MOUSE + N_MOUSE_ZONES + i];
133         data_pkt[10] = light->g[LED_MOUSE + N_MOUSE_ZONES + i];
134         data_pkt[11] = light->b[LED_MOUSE + N_MOUSE_ZONES + i];
135         if(!usbsend(kb, data_pkt, 1))
136             return -1;
137     }
138
139     // Send settings
140     uchar data_pkt[4][MSG_SIZE] = {
141         { 0x07, 0x13, 0x05, 1, dpi->enabled },
142         { 0x07, 0x13, 0x02, 1, dpi->current },
143         { 0x07, 0x13, 0x03, 1, dpi->lift },
144         { 0x07, 0x13, 0x04, 1, dpi->snap, 0x05 }
145     };
```

```
    if(!usbsend(kb, data_pkt[0], 4))
        return -2;
    // Finished
    return 0;
}
```

Here is the caller graph for this function:

13.15.1.8 int updatedpi (usbdevice * *kb*, int *force*)

Definition at line 89 of file dpi.c.

References usbdevice::active, dpiset::current, usbprofile::currentmode, usbmode::dpi, DPI_COUNT, dpiset::enabled, dpiset::forceupdate, usbprofile::lastdpi, dpiset::lift, MSG_SIZE, usbdevice::profile, dpiset::snap, usbsend, dpiset::x, and dpiset::y.

```
89                                          {
90      if(!kb->active)
91          return 0;
92      dpiset* lastdpi = &kb->profile->lastdpi;
93      dpiset* newdpi = &kb->profile->currentmode->dpi;
94      // Don't do anything if the settings haven't changed
95      if(!force && !lastdpi->forceupdate && !newdpi->forceupdate
96              && !memcmp(lastdpi, newdpi, sizeof(dpiset)))
97          return 0;
98      lastdpi->forceupdate = newdpi->forceupdate = 0;
99
100     // Send X/Y DPIs
101     for(int i = 0; i < DPI_COUNT; i++){
102         uchar data_pkt[MSG_SIZE] = { 0x07, 0x13, 0xd0, 0 };
103         data_pkt[2] |= i;
104         *(ushort*)(data_pkt + 5) = newdpi->x[i];
105         *(ushort*)(data_pkt + 7) = newdpi->y[i];
106         if(!usbsend(kb, data_pkt, 1))
107             return -1;
108     }
109
110     // Send settings
111     uchar data_pkt[4][MSG_SIZE] = {
112         { 0x07, 0x13, 0x05, 0, newdpi->enabled },
113         { 0x07, 0x13, 0x02, 0, newdpi->current },
114         { 0x07, 0x13, 0x03, 0, newdpi->lift },
115         { 0x07, 0x13, 0x04, 0, newdpi->snap, 0x05 }
116     };
117     if(!usbsend(kb, data_pkt[0], 4))
118         return -2;
119     // Finished
120     memcpy(lastdpi, newdpi, sizeof(dpiset));
121     return 0;
122 }
```

13.16 src/ckb-daemon/extra_mac.c File Reference

```
#include "includes.h"
```

Include dependency graph for extra_mac.c:

13.17 src/ckb-daemon/firmware.c File Reference

```
#include "devnode.h"
#include "firmware.h"
#include "notify.h"
#include "usb.h"
```

Include dependency graph for firmware.c:

Macros

- #define FW_OK 0
- #define FW_NOFILE -1
- #define FW_WRONGDEV -2
- #define FW_USBFAIL -3
- #define FW_MAXSIZE (255 ∗ 256)

Functions

- int getfwversion (usbdevice ∗kb)
- int fwupdate (usbdevice ∗kb, const char ∗path, int nnumber)
- int cmd_fwupdate (usbdevice ∗kb, usbmode ∗dummy1, int nnumber, int dummy2, const char ∗path)

13.17.1 Macro Definition Documentation

13.17.1.1 #define FW_MAXSIZE (255 ∗ 256)

Definition at line 51 of file firmware.c.

Referenced by fwupdate().

13.17.1.2 #define FW_NOFILE -1

Definition at line 7 of file firmware.c.

Referenced by cmd_fwupdate(), and fwupdate().

13.17.1.3 #define FW_OK 0

Definition at line 6 of file firmware.c.

Referenced by cmd_fwupdate(), and fwupdate().

13.17.1.4 #define FW_USBFAIL -3

Definition at line 9 of file firmware.c.

Referenced by cmd_fwupdate(), and fwupdate().

13.17.1.5 #define FW_WRONGDEV -2

Definition at line 8 of file firmware.c.

Referenced by cmd_fwupdate(), and fwupdate().

13.17.2 Function Documentation

13.17.2.1 int cmd_fwupdate (usbdevice ∗ *kb*, usbmode ∗ *dummy1*, int *nnumber*, int *dummy2*, const char ∗ *path*)

Definition at line 154 of file firmware.c.

References FEAT_FWUPDATE, FW_NOFILE, FW_OK, FW_USBFAIL, FW_WRONGDEV, fwupdate(), HAS_FEATURES, nprintf(), and usb_tryreset().

```
154                                                                                                    {
155     if(!HAS_FEATURES(kb, FEAT_FWUPDATE))
156         return 0;
157     // Update the firmware
158     int ret = fwupdate(kb, path, nnumber);
159     while(ret == FW_USBFAIL){
160         // Try to reset the device if it fails
161         if(usb_tryreset(kb))
162             break;
163         ret = fwupdate(kb, path, nnumber);
164     }
165     switch(ret){
166     case FW_OK:
167         nprintf(kb, nnumber, 0, "fwupdate %s ok\n", path);
168         break;
169     case FW_NOFILE:
170     case FW_WRONGDEV:
171         nprintf(kb, nnumber, 0, "fwupdate %s invalid\n", path);
172         break;
173     case FW_USBFAIL:
174         nprintf(kb, nnumber, 0, "fwupdate %s fail\n", path);
175         return -1;
176     }
177     return 0;
178 }
```

Here is the call graph for this function:

13.17.2.2 int fwupdate (usbdevice * *kb*, const char * *path*, int *nnumber*)

Definition at line 55 of file firmware.c.

References ckb_err, ckb_info, FW_MAXSIZE, FW_NOFILE, FW_OK, FW_USBFAIL, FW_WRONGDEV, usbdevice::fwversion, mkfwnode(), MSG_SIZE, nprintf(), usbdevice::product, usbdevice::usbdelay, usbsend, and usbdevice::vendor.

Referenced by cmd_fwupdate().

```
55                                                          {
56     // Read the firmware from the given path
57     char* fwdata = calloc(1, FW_MAXSIZE + 256);
58     int fd = open(path, O_RDONLY);
59     if(fd == -1){
60         ckb_err("Failed to open firmware file %s: %s\n", path, strerror(errno));
61         return FW_NOFILE;
62     }
63     ssize_t length = read(fd, fwdata, FW_MAXSIZE + 1);
64     if(length <= 0x108 || length > FW_MAXSIZE){
65         ckb_err("Failed to read firmware file %s: %s\n", path, length <= 0 ? strerror(errno) : "
    Wrong size");
66         close(fd);
67         return FW_NOFILE;
68     }
69     close(fd);
70
71     short vendor, product, version;
72     // Copy the vendor ID, product ID, and version from the firmware file
73     memcpy(&vendor, fwdata + 0x102, 2);
74     memcpy(&product, fwdata + 0x104, 2);
75     memcpy(&version, fwdata + 0x106, 2);
76     // Check against the actual device
77     if(vendor != kb->vendor || product != kb->product){
78         ckb_err("Firmware file %s doesn't match device (V: %04x P: %04x)\n", path, vendor, product);
79         return FW_WRONGDEV;
80     }
81     ckb_info("Loading firmware version %04x from %s\n", version, path);
82     nprintf(kb, nnumber, 0, "fwupdate %s 0/%d\n", path, (int)length);
83     // Force the device to 10ms delay (we need to deliver packets very slowly to make sure it doesn't get
    overwhelmed)
84     kb->usbdelay = 10;
85     // Send the firmware messages (256 bytes at a time)
86     uchar data_pkt[7][MSG_SIZE] = {
87         { 0x07, 0x0c, 0xf0, 0x01, 0 },
88         { 0x07, 0x0d, 0xf0, 0 },
89         { 0x7f, 0x01, 0x3c, 0 },
90         { 0x7f, 0x02, 0x3c, 0 },
91         { 0x7f, 0x03, 0x3c, 0 },
92         { 0x7f, 0x04, 0x3c, 0 },
93         { 0x7f, 0x05, 0x10, 0 }
94     };
95     int output = 0, last = 0;
96     int index = 0;
```

```
    while(output < length){
        int npackets = 1;
        // Packet 1: data position
         data_pkt[1][6] = index++;
         while(output < length){
             npackets++;
             if(npackets != 6){
                 // Packets 2-5: 60 bytes of data
                 memcpy(data_pkt[npackets] + 4, fwdata + output, 60);
                 last = output;
                 output += 60;
             } else {
                 // Packet 6: 16 bytes
                 memcpy(data_pkt[npackets] + 4, fwdata + output, 16);
                 last = output;
                 output += 16;
                 break;
             }
         }
         if(index == 1){
             if(!usbsend(kb, data_pkt[0], 1)){
                 ckb_err("Firmware update failed\n");
                 return FW_USBFAIL;
             }
             // The above packet can take a lot longer to process, so wait for a while
             sleep(3);
             if(!usbsend(kb, data_pkt[2], npackets - 1)){
                 ckb_err("Firmware update failed\n");
                 return FW_USBFAIL;
             }
         } else {
             // If the output ends here, set the length byte appropriately
             if(output >= length)
                 data_pkt[npackets][2] = length - last;
             if(!usbsend(kb, data_pkt[1], npackets)){
                 ckb_err("Firmware update failed\n");
                 return FW_USBFAIL;
             }
         }
         nprintf(kb, nnumber, 0, "fwupdate %s %d/%d\n", path, output, (int)length);
    }
    // Send the final pair of messages
    uchar data_pkt2[2][MSG_SIZE] = {
        { 0x07, 0x0d, 0xf0, 0x00, 0x00, 0x00, index },
        { 0x07, 0x02, 0xf0, 0 }
    };
    if(!usbsend(kb, data_pkt2[0], 2)){
        ckb_err("Firmware update failed\n");
        return FW_USBFAIL;
    }
    // Updated successfully
    kb->fwversion = version;
    mkfwnode(kb);
    ckb_info("Firmware update complete\n");
    return FW_OK;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.17.2.3 int getfwversion (usbdevice * *kb*)

Definition at line 11 of file firmware.c.

References ckb_err, ckb_warn, FEAT_POLLRATE, usbdevice::features, usbdevice::fwversion, MSG_SIZE, usbdevice::pollrate, usbdevice::product, usbrecv, and usbdevice::vendor.

Referenced by _start_dev().

```
11                                {
12     // Ask board for firmware info
13     uchar data_pkt[MSG_SIZE] = { 0x0e, 0x01, 0 };
14     uchar in_pkt[MSG_SIZE];
15     if(!usbrecv(kb, data_pkt, in_pkt))
16         return -1;
17     if(in_pkt[0] != 0x0e || in_pkt[1] != 0x01){
18         ckb_err("Bad input header\n");
19         return -1;
20     }
21     short vendor, product, version, bootloader;
22     // Copy the vendor ID, product ID, version, and poll rate from the firmware data
23     memcpy(&version, in_pkt + 8, 2);
24     memcpy(&bootloader, in_pkt + 10, 2);
25     memcpy(&vendor, in_pkt + 12, 2);
26     memcpy(&product, in_pkt + 14, 2);
27     char poll = in_pkt[16];
28     if(poll <= 0){
29         poll = -1;
30         kb->features &= ~FEAT_POLLRATE;
31     }
32     // Print a warning if the message didn't match the expected data
33     if(vendor != kb->vendor)
34         ckb_warn("Got vendor ID %04x (expected %04x)\n", vendor, kb->
      vendor);
35     if(product != kb->product)
36         ckb_warn("Got product ID %04x (expected %04x)\n", product, kb->
      product);
37     // Set firmware version and poll rate
38     if(version == 0 || bootloader == 0){
39         // Needs firmware update
40         kb->fwversion = 0;
41         kb->pollrate = -1;
42     } else {
43         if(version != kb->fwversion && kb->fwversion != 0)
44             ckb_warn("Got firmware version %04x (expected %04x)\n", version, kb->
      fwversion);
45         kb->fwversion = version;
46         kb->pollrate = poll;
47     }
48     return 0;
49 }
```

Here is the caller graph for this function:

13.18 src/ckb-daemon/firmware.h File Reference

`#include "includes.h"`
Include dependency graph for firmware.h:

This graph shows which files directly or indirectly include this file:

Functions

- int getfwversion (usbdevice ∗kb)
- int cmd_fwupdate (usbdevice ∗kb, usbmode ∗dummy1, int nnumber, int dummy2, const char ∗path)

13.18.1 Function Documentation

13.18.1.1 int cmd_fwupdate (usbdevice ∗ *kb*, usbmode ∗ *dummy1*, int *nnumber*, int *dummy2*, const char ∗ *path*)

Definition at line 154 of file firmware.c.

References FEAT_FWUPDATE, FW_NOFILE, FW_OK, FW_USBFAIL, FW_WRONGDEV, fwupdate(), HAS_FEATURES, nprintf(), and usb_tryreset().

```
154                                                                                 {
155     if(!HAS_FEATURES(kb, FEAT_FWUPDATE))
156         return 0;
```

```
    // Update the firmware
    int ret = fwupdate(kb, path, nnumber);
    while(ret == FW_USBFAIL){
        // Try to reset the device if it fails
        if(usb_tryreset(kb))
            break;
        ret = fwupdate(kb, path, nnumber);
    }
    switch(ret){
    case FW_OK:
        nprintf(kb, nnumber, 0, "fwupdate %s ok\n", path);
        break;
    case FW_NOFILE:
    case FW_WRONGDEV:
        nprintf(kb, nnumber, 0, "fwupdate %s invalid\n", path);
        break;
    case FW_USBFAIL:
        nprintf(kb, nnumber, 0, "fwupdate %s fail\n", path);
        return -1;
    }
    return 0;
}
```

Here is the call graph for this function:

13.18.1.2 int getfwversion (usbdevice * *kb*)

Definition at line 11 of file firmware.c.

References ckb_err, ckb_warn, FEAT_POLLRATE, usbdevice::features, usbdevice::fwversion, MSG_SIZE, usbdevice::pollrate, usbdevice::product, usbrecv, and usbdevice::vendor.

Referenced by _start_dev().

```
11                                  {
12      // Ask board for firmware info
13      uchar data_pkt[MSG_SIZE] = { 0x0e, 0x01, 0 };
14      uchar in_pkt[MSG_SIZE];
15      if(!usbrecv(kb, data_pkt, in_pkt))
16          return -1;
17      if(in_pkt[0] != 0x0e || in_pkt[1] != 0x01){
18          ckb_err("Bad input header\n");
19          return -1;
20      }
21      short vendor, product, version, bootloader;
22      // Copy the vendor ID, product ID, version, and poll rate from the firmware data
23      memcpy(&version, in_pkt + 8, 2);
24      memcpy(&bootloader, in_pkt + 10, 2);
25      memcpy(&vendor, in_pkt + 12, 2);
26      memcpy(&product, in_pkt + 14, 2);
27      char poll = in_pkt[16];
28      if(poll <= 0){
29          poll = -1;
30          kb->features &= ~FEAT_POLLRATE;
31      }
```

```
    // Print a warning if the message didn't match the expected data
    if(vendor != kb->vendor)
        ckb_warn("Got vendor ID %04x (expected %04x)\n", vendor, kb->vendor);
    if(product != kb->product)
        ckb_warn("Got product ID %04x (expected %04x)\n", product, kb->product);
    // Set firmware version and poll rate
    if(version == 0 || bootloader == 0){
        // Needs firmware update
        kb->fwversion = 0;
        kb->pollrate = -1;
    } else {
        if(version != kb->fwversion && kb->fwversion != 0)
            ckb_warn("Got firmware version %04x (expected %04x)\n", version, kb->fwversion);
        kb->fwversion = version;
        kb->pollrate = poll;
    }
    return 0;
}
```

Here is the caller graph for this function:

13.19 src/ckb-daemon/includes.h File Reference

```
#include "os.h"
#include <ctype.h>
#include <dirent.h>
#include <fcntl.h>
#include <iconv.h>
#include <pthread.h>
#include <stdlib.h>
#include <stdio.h>
#include <string.h>
#include <time.h>
#include <unistd.h>
#include <sys/errno.h>
#include <sys/ioctl.h>
#include <sys/signal.h>
#include <sys/stat.h>
#include <sys/time.h>
#include "structures.h"
```

Include dependency graph for includes.h:

This graph shows which files directly or indirectly include this file:

Macros

- #define INDEX_OF(entry, array) (int)(entry - array)
- #define ckb_s_out stdout
- #define ckb_s_err stdout
- #define __FILE_NOPATH__ (strrchr(__FILE__, '/') ? strrchr(__FILE__, '/') + 1 : __FILE__)
- #define ckb_fatal_nofile(fmt, args...) fprintf(ckb_s_err, "[F] " fmt, ## args)
- #define ckb_fatal_fn(fmt, file, line, args...) fprintf(ckb_s_err, "[F] %s (via %s:%d): " fmt, __func__, file, line, ## args)
- #define ckb_fatal(fmt, args...) fprintf(ckb_s_err, "[F] %s (%s:%d): " fmt, __func__, __FILE_NOPATH__, __LINE__, ## args)
- #define ckb_err_nofile(fmt, args...) fprintf(ckb_s_err, "[E] " fmt, ## args)
- #define ckb_err_fn(fmt, file, line, args...) fprintf(ckb_s_err, "[E] %s (via %s:%d): " fmt, __func__, file, line, ## args)
- #define ckb_err(fmt, args...) fprintf(ckb_s_err, "[E] %s (%s:%d): " fmt, __func__, __FILE_NOPATH__, __LINE__, ## args)
- #define ckb_warn_nofile(fmt, args...) fprintf(ckb_s_out, "[W] " fmt, ## args)
- #define ckb_warn_fn(fmt, file, line, args...) fprintf(ckb_s_out, "[W] %s (via %s:%d): " fmt, __func__, file, line, ## args)
- #define ckb_warn(fmt, args...) fprintf(ckb_s_out, "[W] %s (%s:%d): " fmt, __func__, __FILE_NOPATH__, __LINE__, ## args)
- #define ckb_info_nofile(fmt, args...) fprintf(ckb_s_out, "[I] " fmt, ## args)
- #define ckb_info_fn(fmt, file, line, args...) fprintf(ckb_s_out, "[I] " fmt, ## args)
- #define ckb_info(fmt, args...) fprintf(ckb_s_out, "[I] " fmt, ## args)
- #define timespec_gt(left, right) ((left).tv_sec > (right).tv_sec || ((left).tv_sec == (right).tv_sec && (left).tv_nsec > (right).tv_nsec))
- #define timespec_eq(left, right) ((left).tv_sec == (right).tv_sec && (left).tv_nsec == (right).tv_nsec)
- #define timespec_ge(left, right) ((left).tv_sec > (right).tv_sec || ((left).tv_sec == (right).tv_sec && (left).tv_nsec >= (right).tv_nsec))
- #define timespec_lt(left, right) (!timespec_ge(left, right))
- #define timespec_le(left, right) (!timespec_gt(left, right))

Typedefs

- typedef unsigned char uchar
- typedef unsigned short ushort

Functions

- void timespec_add (struct timespec *timespec, long nanoseconds)

13.19.1 Macro Definition Documentation

13.19.1.1 #define __FILE_NOPATH__ (strrchr(__FILE__, '/') ? strrchr(__FILE__, '/') + 1 : __FILE__)

Definition at line 40 of file includes.h.

13.19.1.2 #define ckb_err(*fmt, args...*) fprintf(ckb_s_err, "[E] %s (%s:%d): " fmt, __func__, __FILE_NOPATH__, __LINE__, ## args)

Definition at line 49 of file includes.h.

Referenced by _mkdevpath(), fwupdate(), getfwversion(), loaddpi(), loadrgb_kb(), loadrgb_mouse(), os_sendindicators(), os_setupusb(), restart(), setupusb(), uinputopen(), usb_tryreset(), and usbadd().

13.19.1.3 #define ckb_err_fn(*fmt, file, line, args...*) fprintf(ckb_s_err, "[E] %s (via %s:%d): " fmt, __func__, file, line, ## args)

Definition at line 48 of file includes.h.

Referenced by _nk95cmd(), _usbrecv(), os_usbrecv(), and os_usbsend().

13.19.1.4 #define ckb_err_nofile(*fmt, args...*) fprintf(ckb_s_err, "[E] " fmt, ## args)

Definition at line 47 of file includes.h.

13.19.1.5 #define ckb_fatal(*fmt, args...*) fprintf(ckb_s_err, "[F] %s (%s:%d): " fmt, __func__, __FILE_NOPATH__, __LINE__, ## args)

Definition at line 46 of file includes.h.

Referenced by usbmain().

13.19.1.6 #define ckb_fatal_fn(*fmt, file, line, args...*) fprintf(ckb_s_err, "[F] %s (via %s:%d): " fmt, __func__, file, line, ## args)

Definition at line 45 of file includes.h.

13.19.1.7 #define ckb_fatal_nofile(*fmt, args...*) fprintf(ckb_s_err, "[F] " fmt, ## args)

Definition at line 44 of file includes.h.

Referenced by main().

13.19.1.8 #define ckb_info(*fmt, args...*) fprintf(ckb_s_out, "[I] " fmt, ## args)

Definition at line 55 of file includes.h.

Referenced by _setupusb(), _start_dev(), closeusb(), cmd_restart(), fwupdate(), os_inputmain(), os_setupusb(), rmdevpath(), and usb_tryreset().

13.19.1.9 #define ckb_info_fn(*fmt, file, line, args...*) fprintf(ckb_s_out, "[I] " fmt, ## args)

Definition at line 54 of file includes.h.

13.19.1.10 #define ckb_info_nofile(*fmt, args...*) fprintf(ckb_s_out, "[I] " fmt, ## args)

Definition at line 53 of file includes.h.

Referenced by main().

13.19.1.11 #define ckb_s_err stdout

Definition at line 36 of file includes.h.

13.19.1.12 #define ckb_s_out stdout

Definition at line 35 of file includes.h.

13.19.1.13 #define ckb_warn(*fmt, args...*) fprintf(ckb_s_out, "[W] %s (%s:%d): " fmt, __func__, __FILE_NOPATH__, __LINE__, ## args)

Definition at line 52 of file includes.h.

Referenced by _mkdevpath(), _mknotifynode(), _start_dev(), _updateconnected(), getfwversion(), hid_kb_translate(), isync(), mkfwnode(), os_inputclose(), os_keypress(), os_mousemove(), os_setupusb(), readlines(), rmdevpath(), uinputopen(), and usbmain().

13.19.1.14 #define ckb_warn_fn(*fmt, file, line, args...*) fprintf(ckb_s_out, "[W] %s (via %s:%d): " fmt, __func__, file, line, ## args)

Definition at line 51 of file includes.h.

Referenced by os_usbrecv(), and os_usbsend().

13.19.1.15 #define ckb_warn_nofile(*fmt, args...*) fprintf(ckb_s_out, "[W] " fmt, ## args)

Definition at line 50 of file includes.h.

Referenced by main().

13.19.1.16 #define INDEX_OF(*entry, array*) (int)(entry - array)

Definition at line 27 of file includes.h.

Referenced by _mkdevpath(), _mknotifynode(), _rmnotifynode(), _setupusb(), closeusb(), mkfwnode(), nprintf(), os_closeusb(), os_inputmain(), os_inputopen(), os_setupusb(), readcmd(), and rmdevpath().

13.19.1.17 #define timespec_eq(left, right) ((left).tv_sec == (right).tv_sec && (left).tv_nsec == (right).tv_nsec)

Definition at line 60 of file includes.h.

13.19.1.18 #define timespec_ge(left, right) ((left).tv_sec > (right).tv_sec || ((left).tv_sec == (right).tv_sec && (left).tv_nsec >= (right).tv_nsec))

Definition at line 61 of file includes.h.

13.19.1.19 #define timespec_gt(left, right) ((left).tv_sec > (right).tv_sec || ((left).tv_sec == (right).tv_sec && (left).tv_nsec > (right).tv_nsec))

Definition at line 59 of file includes.h.

13.19.1.20 #define timespec_le(left, right) (!timespec_gt(left, right))

Definition at line 63 of file includes.h.

13.19.1.21 #define timespec_lt(left, right) (!timespec_ge(left, right))

Definition at line 62 of file includes.h.

13.19.2 Typedef Documentation

13.19.2.1 typedef unsigned char uchar

Definition at line 24 of file includes.h.

13.19.2.2 typedef unsigned short ushort

Definition at line 25 of file includes.h.

13.19.3 Function Documentation

13.19.3.1 void timespec_add (struct timespec * *timespec*, long *nanoseconds*)

Definition at line 19 of file main.c.

```
19                                                                  {
20     nanoseconds += timespec->tv_nsec;
21     timespec->tv_sec += nanoseconds / 1000000000;
22     timespec->tv_nsec = nanoseconds % 1000000000;
23 }
```

13.20 src/ckb-daemon/input.c File Reference

```
#include "device.h"
#include "input.h"
#include "notify.h"
```

Include dependency graph for input.c:

Macros

- #define IS_WHEEL(scan, kb) (((scan) == KEY_VOLUMEUP || (scan) == KEY_VOLUMEDOWN || (scan) == BTN_WHEELUP || (scan) == BTN_WHEELDOWN) && !IS_K65(kb))

Functions

- int macromask (const uchar ∗key1, const uchar ∗key2)
- static void inputupdate_keys (usbdevice ∗kb)
- void inputupdate (usbdevice ∗kb)
- void updateindicators_kb (usbdevice ∗kb, int force)
- void initbind (binding ∗bind)
- void freebind (binding ∗bind)
- void cmd_bind (usbdevice ∗kb, usbmode ∗mode, int dummy, int keyindex, const char ∗to)
- void cmd_unbind (usbdevice ∗kb, usbmode ∗mode, int dummy, int keyindex, const char ∗to)
- void cmd_rebind (usbdevice ∗kb, usbmode ∗mode, int dummy, int keyindex, const char ∗to)
- static void _cmd_macro (usbmode ∗mode, const char ∗keys, const char ∗assignment)
- void cmd_macro (usbdevice ∗kb, usbmode ∗mode, const int notifynumber, const char ∗keys, const char ∗assignment)

13.20.1 Macro Definition Documentation

13.20.1.1 #define IS_WHEEL(*scan, kb*) (((scan) == KEY_VOLUMEUP || (scan) == KEY_VOLUMEDOWN || (scan) == BTN_WHEELUP || (scan) == BTN_WHEELDOWN) && !IS_K65(kb))

Referenced by inputupdate_keys().

13.20.2 Function Documentation

13.20.2.1 static void _cmd_macro (usbmode ∗ *mode,* const char ∗ *keys,* const char ∗ *assignment*) [static]

Definition at line 226 of file input.c.

References keymacro::actioncount, keymacro::actions, usbmode::bind, keymacro::combo, macroaction::down, keymap, left, MACRO_MAX, binding::macrocap, binding::macrocount, binding::macros, N_KEYBYTES_INPUT, N_KEYS_INPUT, right(), macroaction::scan, key::scan, and SET_KEYBIT.

Referenced by cmd_macro().

```
                                                                                {
    binding* bind = &mode->bind;
    if(!keys && !assignment){
        // Null strings = "macro clear" -> erase the whole thing
        for(int i = 0; i < bind->macrocount; i++)
            free(bind->macros[i].actions);
        bind->macrocount = 0;
        return;
    }
    if(bind->macrocount >= MACRO_MAX)
        return;
    // Create a key macro
    keymacro macro;
    memset(&macro, 0, sizeof(macro));
    // Scan the left side for key names, separated by +
    int empty = 1;
    int left = strlen(keys), right = strlen(assignment);
    int position = 0, field = 0;
    char keyname[12];
    while(position < left && sscanf(keys + position, "%10[^+]%n", keyname, &field) == 1){
        int keycode;
        if((sscanf(keyname, "#%d", &keycode) && keycode >= 0 && keycode < N_KEYS_INPUT)
                || (sscanf(keyname, "#x%x", &keycode) && keycode >= 0 && keycode < N_KEYS_INPUT)){
            // Set a key numerically
            SET_KEYBIT(macro.combo, keycode);
            empty = 0;
        } else {
            // Find this key in the keymap
            for(unsigned i = 0; i < N_KEYS_INPUT; i++){
                if(keymap[i].name && !strcmp(keyname, keymap[i].name)){
                    macro.combo[i / 8] |= 1 << (i % 8);
                    empty = 0;
                    break;
                }
            }
        }
        if(keys[position += field] == '+')
            position++;
    }
    if(empty)
        return;
    // Count the number of actions (comma separated)
    int count = 1;
    for(const char* c = assignment; *c != 0; c++){
        if(*c == ',')
            count++;
    }
    // Allocate a buffer for them
    macro.actions = calloc(count, sizeof(macroaction));
    macro.actioncount = 0;
    // Scan the actions
    position = 0;
    field = 0;
    while(position < right && sscanf(assignment + position, "%11[^,]%n", keyname, &field) == 1){
        if(!strcmp(keyname, "clear"))
            break;
        int down = (keyname[0] == '+');
        if(down || keyname[0] == '-'){
            int keycode;
            if((sscanf(keyname + 1, "#%d", &keycode) && keycode >= 0 && keycode < N_KEYS_INPUT)
                    || (sscanf(keyname + 1, "#x%x", &keycode) && keycode >= 0 && keycode < N_KEYS_INPUT)){
                // Set a key numerically
                macro.actions[macro.actioncount].scan = keymap[keycode].scan;
                macro.actions[macro.actioncount].down = down;
                macro.actioncount++;
            } else {
                // Find this key in the keymap
                for(unsigned i = 0; i < N_KEYS_INPUT; i++){
                    if(keymap[i].name && !strcmp(keyname + 1, keymap[i].name)){
                        macro.actions[macro.actioncount].scan = keymap[i].scan;
                        macro.actions[macro.actioncount].down = down;
                        macro.actioncount++;
                        break;
                    }
                }
            }
        }
        if(assignment[position += field] == ',')
            position++;
    }

    // See if there's already a macro with this trigger
```

```
    keymacro* macros = bind->macros;
    for(int i = 0; i < bind->macrocount; i++){
        if(!memcmp(macros[i].combo, macro.combo, N_KEYBYTES_INPUT)){
            free(macros[i].actions);
            // If the new macro has no actions, erase the existing one
            if(!macro.actioncount){
                for(int j = i + 1; j < bind->macrocount; j++)
                    memcpy(macros + j - 1, macros + j, sizeof(keymacro));
                bind->macrocount--;
            } else
                // If there are actions, replace the existing with the new
                memcpy(macros + i, &macro, sizeof(keymacro));
            return;
        }
    }

    // Add the macro to the device settings if not empty
    if(macro.actioncount < 1)
        return;
    memcpy(bind->macros + (bind->macrocount++), &macro, sizeof(keymacro));
    if(bind->macrocount >= bind->macrocap)
        bind->macros = realloc(bind->macros, (bind->macrocap += 16) * sizeof(keymacro));
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.20.2.2 void cmd_bind (usbdevice * *kb*, usbmode * *mode*, int *dummy*, int *keyindex*, const char * *to*)

Definition at line 188 of file input.c.

References binding::base, usbmode::bind, imutex, keymap, N_KEYS_INPUT, and key::scan.

```
188                                                                                 {
189     if(keyindex >= N_KEYS_INPUT)
190         return;
191     // Find the key to bind to
192     int tocode = 0;
193     if(sscanf(to, "#x%ux", &tocode) != 1 && sscanf(to, "#%u", &tocode) == 1 && tocode < N_KEYS_INPUT){
194         pthread_mutex_lock(imutex(kb));
195         mode->bind.base[keyindex] = tocode;
196         pthread_mutex_unlock(imutex(kb));
197         return;
```

```
    }
    // If not numeric, look it up
    for(int i = 0; i < N_KEYS_INPUT; i++){
        if(keymap[i].name && !strcmp(to, keymap[i].name)){
            pthread_mutex_lock(imutex(kb));
            mode->bind.base[keyindex] = keymap[i].scan;
            pthread_mutex_unlock(imutex(kb));
            return;
        }
    }
}
```

13.20.2.3 void cmd_macro (usbdevice * *kb*, usbmode * *mode*, const int *notifynumber*, const char * *keys*, const char * *assignment*)

Definition at line 332 of file input.c.

References _cmd_macro(), and imutex.

```
332
         {
333     pthread_mutex_lock(imutex(kb));
334     _cmd_macro(mode, keys, assignment);
335     pthread_mutex_unlock(imutex(kb));
336 }
```

Here is the call graph for this function:

13.20.2.4 void cmd_rebind (usbdevice * *kb*, usbmode * *mode*, int *dummy*, int *keyindex*, const char * *to*)

Definition at line 218 of file input.c.

References binding::base, usbmode::bind, imutex, keymap, N_KEYS_INPUT, and key::scan.

```
218                                                                                 {
219     if(keyindex >= N_KEYS_INPUT)
220         return;
221     pthread_mutex_lock(imutex(kb));
222     mode->bind.base[keyindex] = keymap[keyindex].scan;
223     pthread_mutex_unlock(imutex(kb));
224 }
```

13.20.2.5 void cmd_unbind (usbdevice * *kb*, usbmode * *mode*, int *dummy*, int *keyindex*, const char * *to*)

Definition at line 210 of file input.c.

References binding::base, usbmode::bind, imutex, KEY_UNBOUND, and N_KEYS_INPUT.

```
210                                                                                 {
211     if(keyindex >= N_KEYS_INPUT)
212         return;
213     pthread_mutex_lock(imutex(kb));
214     mode->bind.base[keyindex] = KEY_UNBOUND;
215     pthread_mutex_unlock(imutex(kb));
216 }
```

13.20.2.6 void freebind (binding * *bind*)

Definition at line 181 of file input.c.

References keymacro::actions, binding::macrocount, and binding::macros.

Referenced by freemode().

```
181                                 {
182     for(int i = 0; i < bind->macrocount; i++)
183         free(bind->macros[i].actions);
184     free(bind->macros);
185     memset(bind, 0, sizeof(*bind));
186 }
```

Here is the caller graph for this function:

13.20.2.7 void initbind (binding * *bind*)

Definition at line 173 of file input.c.

References binding::base, keymap, binding::macrocap, binding::macrocount, binding::macros, N_KEYS_INPUT, and key::scan.

Referenced by initmode().

```
173                                 {
174     for(int i = 0; i < N_KEYS_INPUT; i++)
175         bind->base[i] = keymap[i].scan;
176     bind->macros = calloc(32, sizeof(keymacro));
177     bind->macrocap = 32;
178     bind->macrocount = 0;
179 }
```

Here is the caller graph for this function:

13.20.2.8 void inputupdate (usbdevice * *kb*)

Definition at line 122 of file input.c.

References usbdevice::input, inputupdate_keys(), os_mousemove(), usbdevice::profile, usbinput::rel_x, usbinput::rel_y, usbdevice::uinput_kb, and usbdevice::uinput_mouse.

Referenced by os_inputmain(), setactive_kb(), and setactive_mouse().

```
122                                 {
123 #ifdef OS_LINUX
124     if((!kb->uinput_kb || !kb->uinput_mouse)
125 #else
126     if(!kb->event
127 #endif
128             || !kb->profile)
129         return;
130     // Process key/button input
131     inputupdate_keys(kb);
132     // Process mouse movement
133     usbinput* input = &kb->input;
134     if(input->rel_x != 0 || input->rel_y != 0){
135         os_mousemove(kb, input->rel_x, input->rel_y);
136         input->rel_x = input->rel_y = 0;
137     }
138     // Finish up
139     memcpy(input->prevkeys, input->keys, N_KEYBYTES_INPUT);
140 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.20.2.9 static void inputupdate_keys (usbdevice * *kb*) [static]

Definition at line 15 of file input.c.

References keymacro::actioncount, keymacro::actions, usbdevice::active, binding::base, usbmode::bind, keymacro::combo, usbprofile::currentmode, usbdevice::delay, macroaction::down, usbdevice::input, IS_MOD, IS_WHEEL,

keymap, usbinput::keys, binding::macrocount, macromask(), binding::macros, N_KEYBYTES_INPUT, N_KEYS_INPUT, usbmode::notify, nprintkey(), os_keypress(), os_mousemove(), OUTFIFO_MAX, usbinput::prevkeys, usbdevice::profile, macroaction::rel_x, macroaction::rel_y, macroaction::scan, key::scan, SCAN_SILENT, and keymacro::triggered.

Referenced by inputupdate().

```
{
    usbmode* mode = kb->profile->currentmode;
    binding* bind = &mode->bind;
    usbinput* input = &kb->input;
    // Don't do anything if the state hasn't changed
    if(!memcmp(input->prevkeys, input->keys, N_KEYBYTES_INPUT))
        return;
    // Look for macros matching the current state
    int macrotrigger = 0;
    if(kb->active){
        for(int i = 0; i < bind->macrocount; i++){
            keymacro* macro = &bind->macros[i];
            if(macromask(input->keys, macro->combo)){
                if(!macro->triggered){
                    macrotrigger = 1;
                    macro->triggered = 1;
                    // Send events for each keypress in the macro
                    for(int a = 0; a < macro->actioncount; a++){
                        macroaction* action = macro->actions + a;
                        if(action->rel_x != 0 || action->rel_y != 0)
                            os_mousemove(kb, action->rel_x, action->rel_y);
                        else {
                            os_keypress(kb, action->scan, action->down);
                            if (kb->delay) {
                                if (a > 200) usleep (100);
                                else if (a > 20) usleep(30);
                            }
                        }
                    }
                }
            } else {
                macro->triggered = 0;
            }
        }
    }
    // Make a list of keycodes to send. Rearrange them so that modifier keydowns always come first
    // and modifier keyups always come last. This ensures that shortcut keys will register properly
    // even if both keydown events happen at once.
    // N_KEYS + 4 is used because the volume wheel generates keydowns and keyups at the same time
    // (it's currently impossible to press all four at once, but safety first)
    int events[N_KEYS_INPUT + 4];
    int modcount = 0, keycount = 0, rmodcount = 0;
    for(int byte = 0; byte < N_KEYBYTES_INPUT; byte++){
        char oldb = input->prevkeys[byte], newb = input->keys[byte];
        if(oldb == newb)
            continue;
        for(int bit = 0; bit < 8; bit++){
            int keyindex = byte * 8 + bit;
            if(keyindex >= N_KEYS_INPUT)
                break;
            const key* map = keymap + keyindex;
            int scancode = (kb->active) ? bind->base[keyindex] : map->scan;
            char mask = 1 << bit;
            char old = oldb & mask, new = newb & mask;
            // If the key state changed, send it to the input device
            if(old != new){
                // Don't echo a key press if a macro was triggered or if there's no scancode associated
                if(!macrotrigger && !(scancode & SCAN_SILENT)){
                    if(IS_MOD(scancode)){
                        if(new){
                            // Modifier down: Add to the end of modifier keys
                            for(int i = keycount + rmodcount; i > 0; i--)
                                events[modcount + i] = events[modcount + i - 1];
                            // Add 1 to the scancode because A is zero on OSX
                            // Positive code = keydown, negative code = keyup
                            events[modcount++] = scancode + 1;
                        } else {
                            // Modifier up: Add to the end of everything
                            events[modcount + keycount + rmodcount++] = -(scancode + 1);
                        }
                    } else {
                        // Regular keypress: add to the end of regular keys
                        for(int i = rmodcount; i > 0; i--)
                            events[modcount + keycount + i] = events[modcount + keycount + i - 1];
                        events[modcount + keycount++] = new ? (scancode + 1) : -(scancode + 1);
```

```
                        // The volume wheel and the mouse wheel don't generate keyups, so create them automatically
#define IS_WHEEL(scan, kb)  (((scan) == KEY_VOLUMEUP || (scan) == KEY_VOLUMEDOWN || (scan) == BTN_WHEELUP || (scan) == BTN_WHEELDOWN) && !IS_K65(kb))
                        if(new && IS_WHEEL(map->scan, kb)){
                            for(int i = rmodcount; i > 0; i--)
                                events[modcount + keycount + i] = events[modcount + keycount + i - 1];
                            events[modcount + keycount++] = -(scancode + 1);
                            input->keys[byte] &= ~mask;
                        }
                    }
                }
                // Print notifications if desired
                if(kb->active){
                    for(int notify = 0; notify < OUTFIFO_MAX; notify++){
                        if(mode->notify[notify][byte] & mask){
                            nprintkey(kb, notify, keyindex, new);
                            // Wheels doesn't generate keyups
                            if(new && IS_WHEEL(map->scan, kb))
                                nprintkey(kb, notify, keyindex, 0);
                        }
                    }
                }
            }
        }
    }
    // Process all queued keypresses
    int totalkeys = modcount + keycount + rmodcount;
    for(int i = 0; i < totalkeys; i++){
        int scancode = events[i];
        os_keypress(kb, (scancode < 0 ? -scancode : scancode) - 1, scancode > 0);
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.20.2.10 int macromask (const uchar * *key1*, const uchar * *key2*)

Definition at line 5 of file input.c.

References N_KEYBYTES_INPUT.

Referenced by inputupdate_keys().

```
{
    // Scan a macro against key input. Return 0 if any of them don't match
    for(int i = 0; i < N_KEYBYTES_INPUT; i++){
        // if((key1[i] & key2[i]) != key2[i])
        if(key1[i] != key2[i])  // Changed to detect G-keys + modifiers
            return 0;
    }
    return 1;
}
```

Here is the caller graph for this function:

13.20.2.11 void updateindicators_kb (usbdevice * *kb*, int *force*)

Definition at line 142 of file input.c.

References usbdevice::active, usbprofile::currentmode, DELAY_SHORT, usbdevice::hw_ileds, usbdevice::hw_ileds_old, I_CAPS, I_NUM, I_SCROLL, usbdevice::ileds, usbmode::inotify, usbmode::ioff, usbmode::ion, nprintind(), os_sendindicators(), OUTFIFO_MAX, and usbdevice::profile.

```
{
    // Read current hardware indicator state (set externally)
    uchar old = kb->ileds, hw_old = kb->hw_ileds_old;
    uchar new = kb->hw_ileds, hw_new = new;
    // Update them if needed
    if(kb->active){
        usbmode* mode = kb->profile->currentmode;
        new = (new & ~mode->ioff) | mode->ion;
    }
    kb->ileds = new;
    kb->hw_ileds_old = hw_new;
    if(old != new || force){
        DELAY_SHORT(kb);
        os_sendindicators(kb);
    }
    // Print notifications if desired
    if(!kb->active)
        return;
    usbmode* mode = kb->profile->currentmode;
    uchar indicators[] = { I_NUM, I_CAPS, I_SCROLL };
    for(unsigned i = 0; i < sizeof(indicators) / sizeof(uchar); i++){
        uchar mask = indicators[i];
        if((hw_old & mask) == (hw_new & mask))
            continue;
        for(int notify = 0; notify < OUTFIFO_MAX; notify++){
            if(mode->inotify[notify] & mask)
                nprintind(kb, notify, mask, hw_new & mask);
        }
    }
}
```

Here is the call graph for this function:

13.21 src/ckb-daemon/input.h File Reference

```
#include "includes.h"
#include "usb.h"
```

Include dependency graph for input.h:

This graph shows which files directly or indirectly include this file:

Macros

- #define IS_MOD(s) ((s) == KEY_CAPSLOCK || (s) == KEY_NUMLOCK || (s) == KEY_SCROLLLOCK || (s) == KEY_LEFTSHIFT || (s) == KEY_RIGHTSHIFT || (s) == KEY_LEFTCTRL || (s) == KEY_RIGHTCTRL || (s) == KEY_LEFTMETA || (s) == KEY_RIGHTMETA || (s) == KEY_LEFTALT || (s) == KEY_RIGHTALT || (s) == KEY_FN)

Functions

- int os_inputopen (usbdevice *kb)
- void os_inputclose (usbdevice *kb)
- void inputupdate (usbdevice *kb)
- void updateindicators_kb (usbdevice *kb, int force)
- void initbind (binding *bind)

- void freebind (binding *bind)
- void cmd_bind (usbdevice *kb, usbmode *mode, int dummy, int keyindex, const char *to)
- void cmd_unbind (usbdevice *kb, usbmode *mode, int dummy, int keyindex, const char *ignored)
- void cmd_rebind (usbdevice *kb, usbmode *mode, int dummy, int keyindex, const char *ignored)
- void cmd_macro (usbdevice *kb, usbmode *mode, const int notifynumber, const char *keys, const char *assignment)
- void os_keypress (usbdevice *kb, int scancode, int down)
- void os_mousemove (usbdevice *kb, int x, int y)
- int os_setupindicators (usbdevice *kb)

13.21.1 Macro Definition Documentation

13.21.1.1 #define IS_MOD(s) ((s) == KEY_CAPSLOCK || (s) == KEY_NUMLOCK || (s) == KEY_SCROLLLOCK || (s) == KEY_LEFTSHIFT || (s) == KEY_RIGHTSHIFT || (s) == KEY_LEFTCTRL || (s) == KEY_RIGHTCTRL || (s) == KEY_LEFTMETA || (s) == KEY_RIGHTMETA || (s) == KEY_LEFTALT || (s) == KEY_RIGHTALT || (s) == KEY_FN)

Definition at line 34 of file input.h.

Referenced by inputupdate_keys().

13.21.2 Function Documentation

13.21.2.1 void cmd_bind (usbdevice * *kb*, usbmode * *mode*, int *dummy*, int *keyindex*, const char * *to*)

Definition at line 188 of file input.c.

References binding::base, usbmode::bind, imutex, keymap, N_KEYS_INPUT, and key::scan.

```
188                                                                                                    {
189     if(keyindex >= N_KEYS_INPUT)
190         return;
191     // Find the key to bind to
192     int tocode = 0;
193     if(sscanf(to, "#x%ux", &tocode) != 1 && sscanf(to, "#%u", &tocode) == 1 && tocode <
      N_KEYS_INPUT){
194         pthread_mutex_lock(imutex(kb));
195         mode->bind.base[keyindex] = tocode;
196         pthread_mutex_unlock(imutex(kb));
197         return;
198     }
199     // If not numeric, look it up
200     for(int i = 0; i < N_KEYS_INPUT; i++){
201         if(keymap[i].name && !strcmp(to, keymap[i].name)){
202             pthread_mutex_lock(imutex(kb));
203             mode->bind.base[keyindex] = keymap[i].scan;
204             pthread_mutex_unlock(imutex(kb));
205             return;
206         }
207     }
208 }
```

13.21.2.2 void cmd_macro (usbdevice * *kb*, usbmode * *mode*, const int *notifynumber*, const char * *keys*, const char * *assignment*)

Definition at line 332 of file input.c.

References _cmd_macro(), and imutex.

```
332                                                                                                    {
333     pthread_mutex_lock(imutex(kb));
334     _cmd_macro(mode, keys, assignment);
335     pthread_mutex_unlock(imutex(kb));
336 }
```

Here is the call graph for this function:

13.21.2.3 void cmd_rebind (usbdevice * *kb*, usbmode * *mode*, int *dummy*, int *keyindex*, const char * *ignored*)

Definition at line 218 of file input.c.

References binding::base, usbmode::bind, imutex, keymap, N_KEYS_INPUT, and key::scan.

```
218                                                                                 {
219     if(keyindex >= N_KEYS_INPUT)
220         return;
221     pthread_mutex_lock(imutex(kb));
222     mode->bind.base[keyindex] = keymap[keyindex].scan;
223     pthread_mutex_unlock(imutex(kb));
224 }
```

13.21.2.4 void cmd_unbind (usbdevice * *kb*, usbmode * *mode*, int *dummy*, int *keyindex*, const char * *ignored*)

Definition at line 210 of file input.c.

References binding::base, usbmode::bind, imutex, KEY_UNBOUND, and N_KEYS_INPUT.

```
210                                                                                 {
211     if(keyindex >= N_KEYS_INPUT)
212         return;
213     pthread_mutex_lock(imutex(kb));
214     mode->bind.base[keyindex] = KEY_UNBOUND;
215     pthread_mutex_unlock(imutex(kb));
216 }
```

13.21.2.5 void freebind (binding * *bind*)

Definition at line 181 of file input.c.

References keymacro::actions, binding::macrocount, and binding::macros.

Referenced by freemode().

```
181                                 {
182     for(int i = 0; i < bind->macrocount; i++)
183         free(bind->macros[i].actions);
184     free(bind->macros);
185     memset(bind, 0, sizeof(*bind));
186 }
```

Here is the caller graph for this function:

13.21.2.6 void initbind (binding * *bind*)

Definition at line 173 of file input.c.

References binding::base, keymap, binding::macrocap, binding::macrocount, binding::macros, N_KEYS_INPUT, and key::scan.

Referenced by initmode().

```
173                                 {
174     for(int i = 0; i < N_KEYS_INPUT; i++)
175         bind->base[i] = keymap[i].scan;
176     bind->macros = calloc(32, sizeof(keymacro));
177     bind->macrocap = 32;
178     bind->macrocount = 0;
179 }
```

Here is the caller graph for this function:

13.21.2.7 void inputupdate (usbdevice * *kb*)

Definition at line 122 of file input.c.

References usbdevice::input, inputupdate_keys(), os_mousemove(), usbdevice::profile, usbinput::rel_x, usbinput::rel_y, usbdevice::uinput_kb, and usbdevice::uinput_mouse.

Referenced by os_inputmain(), setactive_kb(), and setactive_mouse().

```
122                                 {
123 #ifdef OS_LINUX
124     if((!kb->uinput_kb || !kb->uinput_mouse)
125 #else
126     if(!kb->event
127 #endif
128             || !kb->profile)
129         return;
```

```
    // Process key/button input
    inputupdate_keys(kb);
    // Process mouse movement
    usbinput* input = &kb->input;
    if(input->rel_x != 0 || input->rel_y != 0){
        os_mousemove(kb, input->rel_x, input->rel_y);
        input->rel_x = input->rel_y = 0;
    }
    // Finish up
    memcpy(input->prevkeys, input->keys, N_KEYBYTES_INPUT);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.21.2.8 void os_inputclose (usbdevice * *kb*)

Definition at line 70 of file input_linux.c.

References ckb_warn, usbdevice::uinput_kb, and usbdevice::uinput_mouse.

Referenced by closeusb().

```
70                                  {
71     if(kb->uinput_kb <= 0 || kb->uinput_mouse <= 0)
72         return;
73     // Set all keys released
74     struct input_event event;
75     memset(&event, 0, sizeof(event));
76     event.type = EV_KEY;
77     for(int key = 0; key < KEY_CNT; key++){
78         event.code = key;
79         if(write(kb->uinput_kb - 1, &event, sizeof(event)) <= 0)
80             ckb_warn("uinput write failed: %s\n", strerror(errno));
81         if(write(kb->uinput_mouse - 1, &event, sizeof(event)) <= 0)
82             ckb_warn("uinput write failed: %s\n", strerror(errno));
83     }
84     event.type = EV_SYN;
85     event.code = SYN_REPORT;
86     if(write(kb->uinput_kb - 1, &event, sizeof(event)) <= 0)
87         ckb_warn("uinput write failed: %s\n", strerror(errno));
```

```
    if(write(kb->uinput_mouse - 1, &event, sizeof(event)) <= 0)
        ckb_warn("uinput write failed: %s\n", strerror(errno));
    // Close the keyboard
    ioctl(kb->uinput_kb - 1, UI_DEV_DESTROY);
    close(kb->uinput_kb - 1);
    kb->uinput_kb = 0;
    // Close the mouse
    ioctl(kb->uinput_mouse - 1, UI_DEV_DESTROY);
    close(kb->uinput_mouse - 1);
    kb->uinput_mouse = 0;
}
```

Here is the caller graph for this function:

13.21.2.9 int os_inputopen (usbdevice * *kb*)

Definition at line 49 of file input_linux.c.

References usbdevice::fwversion, INDEX_OF, keyboard, usbdevice::name, usbdevice::product, usbdevice::uinput_kb, usbdevice::uinput_mouse, uinputopen(), and usbdevice::vendor.

Referenced by _setupusb().

```
                                {
    // Create the new input device
    int index = INDEX_OF(kb, keyboard);
    struct uinput_user_dev indev;
    memset(&indev, 0, sizeof(indev));
    snprintf(indev.name, UINPUT_MAX_NAME_SIZE, "ckb%d: %s", index, kb->name);
    indev.id.bustype = BUS_USB;
    indev.id.vendor = kb->vendor;
    indev.id.product = kb->product;
    indev.id.version = kb->fwversion;
    // Open keyboard
    int fd = uinputopen(&indev, 0);
    kb->uinput_kb = fd;
    if(fd <= 0)
        return 0;
    // Open mouse
    fd = uinputopen(&indev, 1);
    kb->uinput_mouse = fd;
    return fd <= 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.21.2.10 void os_keypress (usbdevice * *kb*, int *scancode*, int *down*)

Definition at line 112 of file input_linux.c.

References BTN_WHEELDOWN, BTN_WHEELUP, ckb_warn, isync(), SCAN_MOUSE, usbdevice::uinput_kb, and usbdevice::uinput_mouse.

Referenced by inputupdate_keys().

```
112                                                         {
113     struct input_event event;
114     memset(&event, 0, sizeof(event));
115     int is_mouse = 0;
116     if(scancode == BTN_WHEELUP || scancode == BTN_WHEELDOWN){
117         // The mouse wheel is a relative axis
118         if(!down)
119             return;
120         event.type = EV_REL;
121         event.code = REL_WHEEL;
122         event.value = (scancode == BTN_WHEELUP ? 1 : -1);
123         is_mouse = 1;
124     } else {
125         // Mouse buttons and key events are both EV_KEY. The scancodes are already correct, just remove the
      ckb bit
126         event.type = EV_KEY;
127         event.code = scancode & ~SCAN_MOUSE;
128         event.value = down;
129         is_mouse = !!(scancode & SCAN_MOUSE);
130     }
131     if(write((is_mouse ? kb->uinput_mouse : kb->uinput_kb) - 1, &event, sizeof(event))
      <= 0)
132         ckb_warn("uinput write failed: %s\n", strerror(errno));
133     else
134         isync(kb);
135 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.21.2.11 void os_mousemove (usbdevice * *kb*, int *x*, int *y*)

Definition at line 137 of file input_linux.c.

References ckb_warn, isync(), usbdevice::uinput_mouse, x, and y.

Referenced by inputupdate(), and inputupdate_keys().

```
137                                                 {
138     struct input_event event;
139     memset(&event, 0, sizeof(event));
140     event.type = EV_REL;
141     if(x != 0){
142         event.code = REL_X;
143         event.value = x;
144         if(write(kb->uinput_mouse - 1, &event, sizeof(event)) <= 0)
145             ckb_warn("uinput write failed: %s\n", strerror(errno));
146         else
147             isync(kb);
148     }
149     if(y != 0){
150         event.code = REL_Y;
151         event.value = y;
152         if(write(kb->uinput_mouse - 1, &event, sizeof(event)) <= 0)
153             ckb_warn("uinput write failed: %s\n", strerror(errno));
154         else
155             isync(kb);
156     }
157 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.21.2.12 int os_setupindicators (usbdevice * *kb*)

Definition at line 183 of file input_linux.c.

References _ledthread(), usbdevice::hw_ileds, usbdevice::hw_ileds_old, and usbdevice::ileds.

Referenced by _setupusb().

```
183                                         {
184     // Initialize LEDs to all off
185     kb->hw_ileds = kb->hw_ileds_old = kb->ileds = 0;
186     // Create and detach thread to read LED events
187     pthread_t thread;
188     int err = pthread_create(&thread, 0, _ledthread, kb);
189     if(err != 0)
```

```
        return err;
    pthread_detach(thread);
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.21.2.13 void updateindicators_kb (usbdevice * *kb*, int *force*)

Definition at line 142 of file input.c.

References usbdevice::active, usbprofile::currentmode, DELAY_SHORT, usbdevice::hw_ileds, usbdevice::hw_ileds_old, I_CAPS, I_NUM, I_SCROLL, usbdevice::ileds, usbmode::inotify, usbmode::ioff, usbmode::ion, nprintind(), os_sendindicators(), OUTFIFO_MAX, and usbdevice::profile.

```
142                                                 {
143     // Read current hardware indicator state (set externally)
144     uchar old = kb->ileds, hw_old = kb->hw_ileds_old;
145     uchar new = kb->hw_ileds, hw_new = new;
146     // Update them if needed
147     if(kb->active){
148         usbmode* mode = kb->profile->currentmode;
149         new = (new & ~mode->ioff) | mode->ion;
150     }
151     kb->ileds = new;
152     kb->hw_ileds_old = hw_new;
153     if(old != new || force){
154         DELAY_SHORT(kb);
155         os_sendindicators(kb);
156     }
157     // Print notifications if desired
158     if(!kb->active)
159         return;
160     usbmode* mode = kb->profile->currentmode;
161     uchar indicators[] = { I_NUM, I_CAPS, I_SCROLL };
162     for(unsigned i = 0; i < sizeof(indicators) / sizeof(uchar); i++){
163         uchar mask = indicators[i];
164         if((hw_old & mask) == (hw_new & mask))
165             continue;
166         for(int notify = 0; notify < OUTFIFO_MAX; notify++){
167             if(mode->inotify[notify] & mask)
168                 nprintind(kb, notify, mask, hw_new & mask);
169         }
170     }
171 }
```

Here is the call graph for this function:

13.22 src/ckb-daemon/input_linux.c File Reference

```
#include "command.h"
#include "device.h"
#include "input.h"
```

Include dependency graph for input_linux.c:

Functions

- int uinputopen (struct uinput_user_dev ∗indev, int mouse)
- int os_inputopen (usbdevice ∗kb)
- void os_inputclose (usbdevice ∗kb)
- static void isync (usbdevice ∗kb)
- void os_keypress (usbdevice ∗kb, int scancode, int down)
- void os_mousemove (usbdevice ∗kb, int x, int y)
- void ∗ _ledthread (void ∗ctx)
- int os_setupindicators (usbdevice ∗kb)

13.22.1 Function Documentation

13.22.1.1 void∗ _ledthread (void ∗ *ctx*)

Definition at line 159 of file input_linux.c.

References dmutex, usbdevice::hw_ileds, usbdevice::uinput_kb, and usbdevice::vtable.

Referenced by os_setupindicators().

```
                                {
    usbdevice* kb = ctx;
    uchar ileds = 0;
    // Read LED events from the uinput device
    struct input_event event;
    while(read(kb->uinput_kb - 1, &event, sizeof(event)) > 0){
        if(event.type == EV_LED && event.code < 8){
            char which = 1 << event.code;
            if(event.value)
                ileds |= which;
            else
                ileds &= ~which;
        }
        // Update them if needed
        pthread_mutex_lock(dmutex(kb));
        if(kb->hw_ileds != ileds){
            kb->hw_ileds = ileds;
            kb->vtable->updateindicators(kb, 0);
        }
        pthread_mutex_unlock(dmutex(kb));
    }
    return 0;
}
```

Here is the caller graph for this function:

13.22.1.2 static void isync (usbdevice * *kb*) [static]

Definition at line 101 of file input_linux.c.

References ckb_warn, usbdevice::uinput_kb, and usbdevice::uinput_mouse.

Referenced by os_keypress(), and os_mousemove().

```
                                {
    struct input_event event;
    memset(&event, 0, sizeof(event));
    event.type = EV_SYN;
    event.code = SYN_REPORT;
    if(write(kb->uinput_kb - 1, &event, sizeof(event)) <= 0)
        ckb_warn("uinput write failed: %s\n", strerror(errno));
    if(write(kb->uinput_mouse - 1, &event, sizeof(event)) <= 0)
        ckb_warn("uinput write failed: %s\n", strerror(errno));
}
```

Here is the caller graph for this function:

13.22.1.3 void os_inputclose (usbdevice * *kb*)

Definition at line 70 of file input_linux.c.

References ckb_warn, usbdevice::uinput_kb, and usbdevice::uinput_mouse.

Referenced by closeusb().

```
70                                  {
71     if(kb->uinput_kb <= 0 || kb->uinput_mouse <= 0)
72         return;
73     // Set all keys released
74     struct input_event event;
75     memset(&event, 0, sizeof(event));
76     event.type = EV_KEY;
77     for(int key = 0; key < KEY_CNT; key++){
78         event.code = key;
79         if(write(kb->uinput_kb - 1, &event, sizeof(event)) <= 0)
80             ckb_warn("uinput write failed: %s\n", strerror(errno));
81         if(write(kb->uinput_mouse - 1, &event, sizeof(event)) <= 0)
82             ckb_warn("uinput write failed: %s\n", strerror(errno));
83     }
84     event.type = EV_SYN;
85     event.code = SYN_REPORT;
86     if(write(kb->uinput_kb - 1, &event, sizeof(event)) <= 0)
87         ckb_warn("uinput write failed: %s\n", strerror(errno));
88     if(write(kb->uinput_mouse - 1, &event, sizeof(event)) <= 0)
89         ckb_warn("uinput write failed: %s\n", strerror(errno));
90     // Close the keyboard
91     ioctl(kb->uinput_kb - 1, UI_DEV_DESTROY);
92     close(kb->uinput_kb - 1);
93     kb->uinput_kb = 0;
94     // Close the mouse
95     ioctl(kb->uinput_mouse - 1, UI_DEV_DESTROY);
96     close(kb->uinput_mouse - 1);
97     kb->uinput_mouse = 0;
98 }
```

Here is the caller graph for this function:

13.22.1.4 int os_inputopen (usbdevice * *kb*)

Definition at line 49 of file input_linux.c.

References usbdevice::fwversion, INDEX_OF, keyboard, usbdevice::name, usbdevice::product, usbdevice::uinput_kb, usbdevice::uinput_mouse, uinputopen(), and usbdevice::vendor.

Referenced by _setupusb().

```
49                                  {
50     // Create the new input device
51     int index = INDEX_OF(kb, keyboard);
52     struct uinput_user_dev indev;
53     memset(&indev, 0, sizeof(indev));
54     snprintf(indev.name, UINPUT_MAX_NAME_SIZE, "ckb%d: %s", index, kb->name);
55     indev.id.bustype = BUS_USB;
56     indev.id.vendor = kb->vendor;
57     indev.id.product = kb->product;
58     indev.id.version = kb->fwversion;
59     // Open keyboard
60     int fd = uinputopen(&indev, 0);
61     kb->uinput_kb = fd;
62     if(fd <= 0)
63         return 0;
64     // Open mouse
65     fd = uinputopen(&indev, 1);
66     kb->uinput_mouse = fd;
67     return fd <= 0;
68 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.22.1.5 void os_keypress (usbdevice * *kb*, int *scancode*, int *down*)

Definition at line 112 of file input_linux.c.

References BTN_WHEELDOWN, BTN_WHEELUP, ckb_warn, isync(), SCAN_MOUSE, usbdevice::uinput_kb, and usbdevice::uinput_mouse.

Referenced by inputupdate_keys().

```
112                                                         {
113     struct input_event event;
114     memset(&event, 0, sizeof(event));
115     int is_mouse = 0;
116     if(scancode == BTN_WHEELUP || scancode == BTN_WHEELDOWN){
117         // The mouse wheel is a relative axis
118         if(!down)
119             return;
120         event.type = EV_REL;
121         event.code = REL_WHEEL;
122         event.value = (scancode == BTN_WHEELUP ? 1 : -1);
123         is_mouse = 1;
124     } else {
125         // Mouse buttons and key events are both EV_KEY. The scancodes are already correct, just remove the
        ckb bit
126         event.type = EV_KEY;
127         event.code = scancode & ~SCAN_MOUSE;
128         event.value = down;
129         is_mouse = !!(scancode & SCAN_MOUSE);
130     }
131     if(write((is_mouse ? kb->uinput_mouse : kb->uinput_kb) - 1, &event, sizeof(event))
        <= 0)
132         ckb_warn("uinput write failed: %s\n", strerror(errno));
133     else
134         isync(kb);
135 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.22.1.6 void os_mousemove (usbdevice * *kb*, int *x*, int *y*)

Definition at line 137 of file input_linux.c.

References ckb_warn, isync(), usbdevice::uinput_mouse, x, and y.

Referenced by inputupdate(), and inputupdate_keys().

```
137                                                 {
138     struct input_event event;
139     memset(&event, 0, sizeof(event));
140     event.type = EV_REL;
141     if(x != 0){
142         event.code = REL_X;
143         event.value = x;
144         if(write(kb->uinput_mouse - 1, &event, sizeof(event)) <= 0)
145             ckb_warn("uinput write failed: %s\n", strerror(errno));
146         else
147             isync(kb);
148     }
149     if(y != 0){
150         event.code = REL_Y;
151         event.value = y;
152         if(write(kb->uinput_mouse - 1, &event, sizeof(event)) <= 0)
153             ckb_warn("uinput write failed: %s\n", strerror(errno));
154         else
155             isync(kb);
156     }
157 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.22.1.7 int os_setupindicators (usbdevice * *kb*)

Definition at line 183 of file input_linux.c.

References _ledthread(), usbdevice::hw_ileds, usbdevice::hw_ileds_old, and usbdevice::ileds.

Referenced by _setupusb().

```
183                                     {
184     // Initialize LEDs to all off
185     kb->hw_ileds = kb->hw_ileds_old = kb->ileds = 0;
186     // Create and detach thread to read LED events
187     pthread_t thread;
188     int err = pthread_create(&thread, 0, _ledthread, kb);
189     if(err != 0)
190         return err;
191     pthread_detach(thread);
192     return 0;
193 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.22.1.8 int uinputopen (struct uinput_user_dev * *indev,* int *mouse*)

Definition at line 9 of file input_linux.c.

References ckb_err, and ckb_warn.

Referenced by os_inputopen().

```
9                                                   {
10      int fd = open("/dev/uinput", O_RDWR);
11      if(fd < 0){
```

```
        // If that didn't work, try /dev/input/uinput instead
        fd = open("/dev/input/uinput", O_RDWR);
        if(fd < 0){
            ckb_err("Failed to open uinput: %s\n", strerror(errno));
            return 0;
        }
    }
    // Enable all keys and mouse buttons
    ioctl(fd, UI_SET_EVBIT, EV_KEY);
    for(int i = 0; i < KEY_CNT; i++)
        ioctl(fd, UI_SET_KEYBIT, i);
    if(mouse){
        // Enable mouse axes
        ioctl(fd, UI_SET_EVBIT, EV_REL);
        for(int i = 0; i < REL_CNT; i++)
            ioctl(fd, UI_SET_RELBIT, i);
    } else {
        // Enable LEDs
        ioctl(fd, UI_SET_EVBIT, EV_LED);
        for(int i = 0; i < LED_CNT; i++)
            ioctl(fd, UI_SET_LEDBIT, i);
        // Eanble autorepeat
        ioctl(fd, UI_SET_EVBIT, EV_REP);
    }
    // Enable sychronization
    ioctl(fd, UI_SET_EVBIT, EV_SYN);
    // Create the device
    if(write(fd, indev, sizeof(*indev)) <= 0)
        ckb_warn("uinput write failed: %s\n", strerror(errno));
    if(ioctl(fd, UI_DEV_CREATE)){
        ckb_err("Failed to create uinput device: %s\n", strerror(errno));
        close(fd);
        return 0;
    }
    return fd + 1;
}
```

Here is the caller graph for this function:

13.23 src/ckb-daemon/input_mac.c File Reference

```
#include "command.h"
#include "device.h"
#include "input.h"
```

Include dependency graph for input_mac.c:

13.24 src/ckb-daemon/input_mac_mouse.c File Reference

```
#include "includes.h"
```

Include dependency graph for input_mac_mouse.c:

13.25 src/ckb-daemon/keymap.c File Reference

```
#include "device.h"
#include "includes.h"
#include "keymap.h"
```

Include dependency graph for keymap.c:

Macros

- #define BUTTON_HID_COUNT 5

Functions

- void hid_kb_translate (unsigned char ∗kbinput, int endpoint, int length, const unsigned char ∗urbinput)
- void hid_mouse_translate (unsigned char ∗kbinput, short ∗xaxis, short ∗yaxis, int endpoint, int length, const unsigned char ∗urbinput)
- void corsair_kbcopy (unsigned char ∗kbinput, int endpoint, const unsigned char ∗urbinput)
- void corsair_mousecopy (unsigned char ∗kbinput, int endpoint, const unsigned char ∗urbinput)

Variables

- const key keymap [(((152+3+12)+25)+11)]

13.25.1 Macro Definition Documentation

13.25.1.1 #define BUTTON_HID_COUNT 5

Definition at line 364 of file keymap.c.

Referenced by corsair_mousecopy(), and hid_mouse_translate().

13.25.2 Function Documentation

13.25.2.1 void corsair_kbcopy (unsigned char * *kbinput,* int *endpoint,* const unsigned char * *urbinput*)

Definition at line 394 of file keymap.c.

References N_KEYBYTES_HW.

Referenced by os_inputmain().

```
394                                                                                                 {
395     if(endpoint == 2 || endpoint == -2){
396         if(urbinput[0] != 3)
397             return;
398         urbinput++;
399     }
400     memcpy(kbinput, urbinput, N_KEYBYTES_HW);
401 }
```

Here is the caller graph for this function:

13.25.2.2 void corsair_mousecopy (unsigned char * *kbinput,* int *endpoint,* const unsigned char * *urbinput*)

Definition at line 403 of file keymap.c.

References BUTTON_HID_COUNT, CLEAR_KEYBIT, MOUSE_BUTTON_FIRST, N_BUTTONS_HW, and SET_KEYBIT.

Referenced by os_inputmain().

```
403                                                                                                 {
404     if(endpoint == 2 || endpoint == -2){
405         if(urbinput[0] != 3)
406             return;
407         urbinput++;
408     }
409     for(int bit = BUTTON_HID_COUNT; bit < N_BUTTONS_HW; bit++){
410         int byte = bit / 8;
411         uchar test = 1 << (bit % 8);
412         if(urbinput[byte] & test)
413             SET_KEYBIT(kbinput, MOUSE_BUTTON_FIRST + bit);
414         else
415             CLEAR_KEYBIT(kbinput, MOUSE_BUTTON_FIRST + bit);
416     }
417 }
```

Here is the caller graph for this function:

13.25.2.3 void hid_kb_translate (unsigned char * *kbinput*, int *endpoint*, int *length*, const unsigned char * *urbinput*)

Definition at line 223 of file keymap.c.

References ckb_warn, CLEAR_KEYBIT, and SET_KEYBIT.

Referenced by os_inputmain().

```
{
    if(length < 1)
        return;
    // LUT for HID -> Corsair scancodes (-1 for no scan code, -2 for currently unsupported)
    // Modified from Linux drivers/hid/usbhid/usbkbd.c, key codes replaced with array indices and K95 keys added
    static const short hid_codes[256] = {
        -1,  -1,  -1,  -1,  37,  54,  52,  39,  27,  40,  41,  42,  32,  43,  44,  45,
        56,  55,  33,  34,  25,  28,  38,  29,  31,  53,  26,  51,  30,  50,  13,  14,
        15,  16,  17,  18,  19,  20,  21,  22,  82,   0,  86,  24,  64,  23,  84,  35,
        79,  80,  81,  46,  47,  12,  57,  58,  59,  36,   1,   2,   3,   4,   5,   6,
         7,   8,   9,  10,  11,  72,  73,  74,  75,  76,  77,  78,  87,  88,  89,  95,
        93,  94,  92, 102, 103, 104, 105, 106, 107, 115, 116, 117, 112, 113, 114, 108,
       109, 110, 118, 119,  49,  69,  -2,  -2,  -2,  -2,  -2,  -2,  -2,  -2,  -2,  -2,
        -2,  -2,  -2,  -2,  -2,  -2,  -2,  -2,  98,  -2,  -2,  -2,  -2,  -2,  -2,  97,
       130, 131,  -1,  -1,  -1,  -2,  -1,  -2,  -2,  -2,  -2,  -2,  -2,  -1,  -1,  -1,
        -2,  -2,  -2,  -2,  -2,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,
        -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,
        -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,
        -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -3,  -1,  -1,  -1,  // <- -3 = non-RGB program key
       120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 136, 137, 138, 139, 140, 141,
        60,  48,  62,  61,  91,  90,  67,  68, 142, 143,  99, 101,  -2, 130, 131,  97,
        -2, 133, 134, 135,  -2,  96,  -2, 132,  -2,  -2,  71,  71,  71,  71,  -1,  -1,
    };
    switch(endpoint){
    case 1:
    case -1:
        // EP 1: 6KRO input (RGB and non-RGB)
        // Clear previous input
        for(int i = 0; i < 256; i++){
            if(hid_codes[i] >= 0)
                CLEAR_KEYBIT(kbinput, hid_codes[i]);
        }
        // Set new input
        for(int i = 0; i < 8; i++){
            if((urbinput[0] >> i) & 1)
                SET_KEYBIT(kbinput, hid_codes[i + 224]);
        }
        for(int i = 2; i < length; i++){
            if(urbinput[i] > 3){
                int scan = hid_codes[urbinput[i]];
                if(scan >= 0)
                    SET_KEYBIT(kbinput, scan);
                else
                    ckb_warn("Got unknown key press %d on EP 1\n", urbinput[i]);
            }
        }
        break;
    case -2:
        // EP 2 RGB: NKRO input
        if(urbinput[0] == 1){
            // Type 1: standard key
            if(length != 21)
                return;
            for(int bit = 0; bit < 8; bit++){
                if((urbinput[1] >> bit) & 1)
                    SET_KEYBIT(kbinput, hid_codes[bit + 224]);
                else
                    CLEAR_KEYBIT(kbinput, hid_codes[bit + 224]);
            }
            for(int byte = 0; byte < 19; byte++){
                char input = urbinput[byte + 2];
                for(int bit = 0; bit < 8; bit++){
                    int keybit = byte * 8 + bit;
                    int scan = hid_codes[keybit];
                    if((input >> bit) & 1){
                        if(scan >= 0)
                            SET_KEYBIT(kbinput, hid_codes[keybit]);
                        else
                            ckb_warn("Got unknown key press %d on EP 2\n", keybit);
                    } else if(scan >= 0)
                        CLEAR_KEYBIT(kbinput, hid_codes[keybit]);
                }
            }
            break;
        } else if(urbinput[0] == 2)
```

```
            ;       // Type 2: media key (fall through)
        else
            break;  // No other known types
    case 2:
        // EP 2 Non-RGB: media keys
        CLEAR_KEYBIT(kbinput, 97);          // mute
        CLEAR_KEYBIT(kbinput, 98);          // stop
        CLEAR_KEYBIT(kbinput, 99);          // prev
        CLEAR_KEYBIT(kbinput, 100);         // play
        CLEAR_KEYBIT(kbinput, 101);         // next
        CLEAR_KEYBIT(kbinput, 130);         // volup
        CLEAR_KEYBIT(kbinput, 131);         // voldn
        for(int i = 0; i < length; i++){
            switch(urbinput[i]){
            case 181:
                SET_KEYBIT(kbinput, 101);   // next
                break;
            case 182:
                SET_KEYBIT(kbinput, 99);    // prev
                break;
            case 183:
                SET_KEYBIT(kbinput, 98);    // stop
                break;
            case 205:
                SET_KEYBIT(kbinput, 100);   // play
                break;
            case 226:
                SET_KEYBIT(kbinput, 97);    // mute
                break;
            case 233:
                SET_KEYBIT(kbinput, 130);   // volup
                break;
            case 234:
                SET_KEYBIT(kbinput, 131);   // voldn
                break;
            }
        }
        break;
    case 3:
        // EP 3 non-RGB: NKRO input
        if(length != 15)
            return;
        for(int bit = 0; bit < 8; bit++){
            if((urbinput[0] >> bit) & 1)
                SET_KEYBIT(kbinput, hid_codes[bit + 224]);
            else
                CLEAR_KEYBIT(kbinput, hid_codes[bit + 224]);
        }
        for(int byte = 0; byte < 14; byte++){
            char input = urbinput[byte + 1];
            for(int bit = 0; bit < 8; bit++){
                int keybit = byte * 8 + bit;
                int scan = hid_codes[keybit];
                if((input >> bit) & 1){
                    if(scan >= 0)
                        SET_KEYBIT(kbinput, hid_codes[keybit]);
                    else
                        ckb_warn("Got unknown key press %d on EP 3\n", keybit);
                } else if(scan >= 0)
                    CLEAR_KEYBIT(kbinput, hid_codes[keybit]);
            }
        }
        break;
    }
}
```

Here is the caller graph for this function:

13.25.2.4 void hid_mouse_translate (unsigned char * *kbinput*, short * *xaxis*, short * *yaxis*, int *endpoint*, int *length*, const unsigned char * *urbinput*)

Definition at line 366 of file keymap.c.

References BUTTON_HID_COUNT, CLEAR_KEYBIT, MOUSE_BUTTON_FIRST, MOUSE_EXTRA_FIRST, and SET_KEYBIT.

Referenced by os_inputmain().

```
{
    if((endpoint != 2 && endpoint != -2) || length < 10)
        return;
    // EP 2: mouse input
    if(urbinput[0] != 1)
        return;
    // Byte 1 = mouse buttons (bitfield)
    for(int bit = 0; bit < BUTTON_HID_COUNT; bit++){
        if(urbinput[1] & (1 << bit))
            SET_KEYBIT(kbinput, MOUSE_BUTTON_FIRST + bit);
        else
            CLEAR_KEYBIT(kbinput, MOUSE_BUTTON_FIRST + bit);
    }
    // Bytes 5 - 8: movement
    *xaxis += *(short*)(urbinput + 5);
    *yaxis += *(short*)(urbinput + 7);
    // Byte 9: wheel
    char wheel = urbinput[9];
    if(wheel > 0)
        SET_KEYBIT(kbinput, MOUSE_EXTRA_FIRST);         // wheelup
    else
        CLEAR_KEYBIT(kbinput, MOUSE_EXTRA_FIRST);
    if(wheel < 0)
        SET_KEYBIT(kbinput, MOUSE_EXTRA_FIRST + 1);     // wheeldn
    else
        CLEAR_KEYBIT(kbinput, MOUSE_EXTRA_FIRST + 1);
}
```

Here is the caller graph for this function:

13.25.3 Variable Documentation

13.25.3.1 const key keymap[(((152+3+12)+25)+11)]

Definition at line 5 of file keymap.c.

Referenced by _cmd_get(), _cmd_macro(), cmd_bind(), cmd_rebind(), cmd_rgb(), initbind(), inputupdate_keys(), nprintkey(), printrgb(), readcmd(), and setactive_kb().

13.26 src/ckb-daemon/keymap_mac.h File Reference

```
#include "os.h"
```

Include dependency graph for keymap_mac.h:

This graph shows which files directly or indirectly include this file:

13.27 src/ckb-daemon/led.c File Reference

```
#include "command.h"
#include "led.h"
#include "profile.h"
#include "usb.h"
```

Include dependency graph for led.c:

Functions

- void cmd_rgb (usbdevice ∗kb, usbmode ∗mode, int dummy, int keyindex, const char ∗code)
- static uchar iselect (const char ∗led)
- void cmd_ioff (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗led)

- void cmd_ion (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗led)
- void cmd_iauto (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗led)
- void cmd_inotify (usbdevice ∗kb, usbmode ∗mode, int nnumber, int dummy, const char ∗led)
- static int has_key (const char ∗name, const usbdevice ∗kb)
- char ∗ printrgb (const lighting ∗light, const usbdevice ∗kb)

13.27.1 Function Documentation

13.27.1.1 void cmd_iauto (usbdevice ∗ *kb*, usbmode ∗ *mode*, int *dummy1*, int *dummy2*, const char ∗ *led*)

Definition at line 54 of file led.c.

References usbmode::ioff, usbmode::ion, iselect(), and usbdevice::vtable.

```
54                                                                                  {
55     uchar bits = iselect(led);
56     // Remove the bits from both ioff and ion
57     mode->ioff &= ~bits;
58     mode->ion &= ~bits;
59     kb->vtable->updateindicators(kb, 0);
60 }
```

Here is the call graph for this function:

13.27.1.2 void cmd_inotify (usbdevice ∗ *kb*, usbmode ∗ *mode*, int *nnumber*, int *dummy*, const char ∗ *led*)

Definition at line 62 of file led.c.

References usbmode::inotify, and iselect().

```
62                                                                                  {
63     uchar bits = iselect(led);
64     if(strstr(led, ":off"))
65         // Turn notifications for these bits off
66         mode->inotify[nnumber] &= ~bits;
67     else
68         // Turn notifications for these bits on
69         mode->inotify[nnumber] |= bits;
70 }
```

Here is the call graph for this function:

13.27.1.3 void cmd_ioff (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *led*)

Definition at line 38 of file led.c.

References usbmode::ioff, usbmode::ion, iselect(), and usbdevice::vtable.

```
38                                                                                  {
39     uchar bits = iselect(led);
40     // Add the bits to ioff, remove them from ion
41     mode->ioff |= bits;
42     mode->ion &= ~bits;
43     kb->vtable->updateindicators(kb, 0);
44 }
```

Here is the call graph for this function:

13.27.1.4 void cmd_ion (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *led*)

Definition at line 46 of file led.c.

References usbmode::ioff, usbmode::ion, iselect(), and usbdevice::vtable.

```
46                                                                                  {
47     uchar bits = iselect(led);
48     // Remove the bits from ioff, add them to ion
49     mode->ioff &= ~bits;
50     mode->ion |= bits;
51     kb->vtable->updateindicators(kb, 0);
52 }
```

Here is the call graph for this function:

13.27.1.5 void cmd_rgb (usbdevice * *kb*, usbmode * *mode*, int *dummy*, int *keyindex*, const char * *code*)

Definition at line 6 of file led.c.

References lighting::b, lighting::g, keymap, key::led, usbmode::light, lighting::r, and lighting::sidelight.

```
6                                                                                   {
7     int index = keymap[keyindex].led;
```

```
    if(index < 0) {
        if (index == -2){     // Process strafe sidelights
            uchar sideshine;
            if (sscanf(code, "%2hhx",&sideshine)) // monochromatic
                mode->light.sidelight = sideshine;
        }
        return;
    }
    uchar r, g, b;
    if(sscanf(code, "%2hhx%2hhx%2hhx", &r, &g, &b) == 3){
        mode->light.r[index] = r;
        mode->light.g[index] = g;
        mode->light.b[index] = b;
    }
}
```

13.27.1.6 static int has_key (const char * *name*, const usbdevice * *kb*) [static]

Definition at line 73 of file led.c.

References IS_K65, IS_K95, IS_MOUSE, IS_SABRE, IS_SCIMITAR, usbdevice::product, and usbdevice::vendor.

Referenced by printrgb().

```
{
    if(!name)
        return 0;
    if(IS_MOUSE(kb->vendor, kb->product)){
        // Mice only have the RGB zones
        if((IS_SABRE(kb) || IS_SCIMITAR(kb)) && !strcmp(name, "wheel"))
            return 1;
        if(IS_SCIMITAR(kb) && !strcmp(name, "thumb"))
            return 1;
        if(strstr(name, "dpi") == name || !strcmp(name, "front") || !strcmp(name, "back"))
            return 1;
        return 0;
    } else {
        // But keyboards don't have them at all
        if(strstr(name, "dpi") == name || !strcmp(name, "front") || !strcmp(name, "back") || !strcmp(name, "wheel") || !strcmp(name, "thumb"))
            return 0;
        // Only K95 has G keys and M keys (G1 - G18, MR, M1 - M3)
        if(!IS_K95(kb) && ((name[0] == 'g' && name[1] >= '1' && name[1] <= '9') || (name[0] == 'm' && (name[1] == 'r' || name[1] == '1' || name[1] == '2' || name[1] == '3'))))
            return 0;
        // Only K65 has lights on VolUp/VolDn
        if(!IS_K65(kb) && (!strcmp(name, "volup") || !strcmp(name, "voldn")))
            return 0;
        // K65 lacks numpad and media buttons
        if(IS_K65(kb) && (strstr(name, "num") == name || !strcmp(name, "stop") || !strcmp(name, "prev") || !strcmp(name, "play") || !strcmp(name, "next")))
            return 0;
    }
    return 1;
}
```

Here is the caller graph for this function:

13.27.1.7 static uchar iselect (const char * *led*) [static]

Definition at line 25 of file led.c.

References I_CAPS, I_NUM, and I_SCROLL.

Referenced by cmd_iauto(), cmd_inotify(), cmd_ioff(), and cmd_ion().

```
{
    int result = 0;
    if(!strncmp(led, "num", 3) || strstr(led, ",num"))
        result |= I_NUM;
    if(!strncmp(led, "caps", 4) || strstr(led, ",caps"))
        result |= I_CAPS;
    if(!strncmp(led, "scroll", 6) || strstr(led, ",scroll"))
        result |= I_SCROLL;
    if(!strncmp(led, "all", 3) || strstr(led, ",all"))
        result |= I_NUM | I_CAPS | I_SCROLL;
    return result;
}
```

Here is the caller graph for this function:

13.27.1.8 char* printrgb (const lighting * *light*, const usbdevice * *kb*)

Definition at line 102 of file led.c.

References lighting::b, lighting::g, has_key(), keymap, key::led, N_KEYS_EXTENDED, key::name, and lighting::r.

Referenced by _cmd_get().

```
{
    uchar r[N_KEYS_EXTENDED], g[N_KEYS_EXTENDED], b[N_KEYS_EXTENDED];
    const uchar* mr = light->r;
    const uchar* mg = light->g;
    const uchar* mb = light->b;
    for(int i = 0; i < N_KEYS_EXTENDED; i++){
        // Translate the key index to an RGB index using the key map
        int k = keymap[i].led;
        if(k < 0)
            continue;
        r[i] = mr[k];
        g[i] = mg[k];
        b[i] = mb[k];
    }
    // Make a buffer to track key names and to filter out duplicates
    char names[N_KEYS_EXTENDED][11];
    for(int i = 0; i < N_KEYS_EXTENDED; i++){
        const char* name = keymap[i].name;
        if(keymap[i].led < 0 || !has_key(name, kb))
            names[i][0] = 0;
        else
```

```
            strncpy(names[i], name, 11);
    }
    // Check to make sure these aren't all the same color
    int same = 1;
    for(int i = 1; i < N_KEYS_EXTENDED; i++){
        if(!names[i][0])
            continue;
        if(r[i] != r[0] || g[i] != g[0] || b[i] != b[0]){
            same = 0;
            break;
        }
    }
    // If they are, just output that color
    if(same){
        char* buffer = malloc(7);
        snprintf(buffer, 7, "%02x%02x%02x", r[0], g[0], b[0]);
        return buffer;
    }
    const int BUFFER_LEN = 4096;    // Should be more than enough to fit all keys
    char* buffer = malloc(BUFFER_LEN);
    int length = 0;
    for(int i = 0; i < N_KEYS_EXTENDED; i++){
        if(!names[i][0])
            continue;
        // Print the key name
        int newlen = 0;
        snprintf(buffer + length, BUFFER_LEN - length, length == 0 ? "%s%n" : " %s%n", names[i], &newlen);
        length += newlen;
        // Look ahead to see if any other keys have this color. If so, print them here as well.
        uchar kr = r[i], kg = g[i], kb = b[i];
        for(int j = i + 1; j < N_KEYS_EXTENDED; j++){
            if(!names[j][0])
                continue;
            if(r[j] != kr || g[j] != kg || b[j] != kb)
                continue;
            snprintf(buffer + length, BUFFER_LEN - length, ",%s%n", names[j], &newlen);
            length += newlen;
            // Erase the key's name so it won't get printed later
            names[j][0] = 0;
        }
        // Print the color
        snprintf(buffer + length, BUFFER_LEN - length, ":%02x%02x%02x%n", kr, kg, kb, &newlen);
        length += newlen;
    }
    return buffer;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.28 src/ckb-daemon/led.h File Reference

```
#include "includes.h"
#include "device.h"
```

Include dependency graph for led.h:

This graph shows which files directly or indirectly include this file:

Functions

- int updatergb_kb (usbdevice ∗kb, int force)
- int updatergb_mouse (usbdevice ∗kb, int force)
- int savergb_kb (usbdevice ∗kb, lighting ∗light, int mode)
- int savergb_mouse (usbdevice ∗kb, lighting ∗light, int mode)
- int loadrgb_kb (usbdevice ∗kb, lighting ∗light, int mode)
- int loadrgb_mouse (usbdevice ∗kb, lighting ∗light, int mode)
- char ∗ printrgb (const lighting ∗light, const usbdevice ∗kb)
- void cmd_rgb (usbdevice ∗kb, usbmode ∗mode, int dummy, int keyindex, const char ∗code)
- void cmd_ioff (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗led)
- void cmd_ion (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗led)
- void cmd_iauto (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗led)
- void cmd_inotify (usbdevice ∗kb, usbmode ∗mode, int nnumber, int dummy, const char ∗led)

13.28.1 Function Documentation

13.28.1.1 void cmd_iauto (usbdevice ∗ *kb*, usbmode ∗ *mode*, int *dummy1*, int *dummy2*, const char ∗ *led*)

Definition at line 54 of file led.c.

References usbmode::ioff, usbmode::ion, iselect(), and usbdevice::vtable.

```
54                                                                                                  {
55     uchar bits = iselect(led);
56     // Remove the bits from both ioff and ion
57     mode->ioff &= ~bits;
58     mode->ion &= ~bits;
59     kb->vtable->updateindicators(kb, 0);
60 }
```

Here is the call graph for this function:

13.28.1.2 void cmd_inotify (usbdevice * *kb*, usbmode * *mode*, int *nnumber*, int *dummy*, const char * *led*)

Definition at line 62 of file led.c.

References usbmode::inotify, and iselect().

```
62                                                                                  {
63     uchar bits = iselect(led);
64     if(strstr(led, ":off"))
65         // Turn notifications for these bits off
66         mode->inotify[nnumber] &= ~bits;
67     else
68         // Turn notifications for these bits on
69         mode->inotify[nnumber] |= bits;
70 }
```

Here is the call graph for this function:

13.28.1.3 void cmd_ioff (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *led*)

Definition at line 38 of file led.c.

References usbmode::ioff, usbmode::ion, iselect(), and usbdevice::vtable.

```
38                                                                                  {
39     uchar bits = iselect(led);
40     // Add the bits to ioff, remove them from ion
41     mode->ioff |= bits;
42     mode->ion &= ~bits;
43     kb->vtable->updateindicators(kb, 0);
44 }
```

Here is the call graph for this function:

13.28.1.4 void cmd_ion (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *led*)

Definition at line 46 of file led.c.

References usbmode::ioff, usbmode::ion, iselect(), and usbdevice::vtable.

```
46                                                                                  {
47     uchar bits = iselect(led);
48     // Remove the bits from ioff, add them to ion
49     mode->ioff &= ~bits;
50     mode->ion |= bits;
51     kb->vtable->updateindicators(kb, 0);
52 }
```

Here is the call graph for this function:

13.28.1.5 void cmd_rgb (usbdevice * *kb*, usbmode * *mode*, int *dummy*, int *keyindex*, const char * *code*)

Definition at line 6 of file led.c.

References lighting::b, lighting::g, keymap, key::led, usbmode::light, lighting::r, and lighting::sidelight.

```
6                                                                                   {
7     int index = keymap[keyindex].led;
8     if(index < 0) {
9         if (index == -2){     // Process strafe sidelights
10            uchar sideshine;
11            if (sscanf(code, "%2hhx",&sideshine)) // monochromatic
12                mode->light.sidelight = sideshine;
13         }
14         return;
15     }
16     uchar r, g, b;
17     if(sscanf(code, "%2hhx%2hhx%2hhx", &r, &g, &b) == 3){
18         mode->light.r[index] = r;
19         mode->light.g[index] = g;
20         mode->light.b[index] = b;
21     }
22 }
```

13.28.1.6 int loadrgb_kb (usbdevice * *kb*, lighting * *light*, int *mode*)

Since Firmware Version 2.05 the answers for getting the stored color-maps from the hardware has changed a bit. So comparing for the correct answer cannot validate against the cmd, and has to be done against a third map.

Definition at line 181 of file led_keyboard.c.

References lighting::b, ckb_err, usbdevice::fwversion, lighting::g, MSG_SIZE, N_KEYS_HW, lighting::r, usbrecv, and usbsend.

Referenced by hwloadmode().

```
181                                                     {
182     if(kb->fwversion >= 0x0120){
183         uchar data_pkt[12][MSG_SIZE] = {
184             { 0x0e, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x01 },
185             { 0xff, 0x01, 60, 0 },
186             { 0xff, 0x02, 60, 0 },
187             { 0xff, 0x03, 24, 0 },
188             { 0x0e, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x02 },
189             { 0xff, 0x01, 60, 0 },
190             { 0xff, 0x02, 60, 0 },
191             { 0xff, 0x03, 24, 0 },
192             { 0x0e, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x03 },
193             { 0xff, 0x01, 60, 0 },
194             { 0xff, 0x02, 60, 0 },
195             { 0xff, 0x03, 24, 0 },
196         };
197         uchar in_pkt[4][MSG_SIZE] = {
198             { 0x0e, 0x14, 0x03, 0x01 },
199             { 0xff, 0x01, 60, 0 },
200             { 0xff, 0x02, 60, 0 },
201             { 0xff, 0x03, 24, 0 },
202         };
203
207
208         uchar cmp_pkt[4][4] = {
209             { 0x0e, 0x14, 0x03, 0x01 },
210             { 0x0e, 0xff, 0x01, 60 },
211             { 0x0e, 0xff, 0x02, 60 },
212             { 0x0e, 0xff, 0x03, 24 },
213         };
214         // Read colors
215         uchar* colors[3] = { light->r, light->g, light->b };
216         for(int clr = 0; clr < 3; clr++){
217             for(int i = 0; i < 4; i++){
218                 if(!usbrecv(kb, data_pkt[i + clr * 4], in_pkt[i]))
219                     return -1;
220                 // Make sure the first four bytes match
221                 // see comment above
222                 // if(memcmp(p, data_pkt[i + clr * 4], 4)){
223                 if (memcmp(in_pkt[i], (kb->fwversion >= 0x0205)? cmp_pkt[i] : data_pkt[i + clr * 4
    ], 4)) {
224                     ckb_err("Bad input header\n");
225                     ckb_err("color = %d, i = %d, mode = %d\nInput(Antwort): %2.2x %2.2x %2.2x %2.2x
     %2.2x %2.2x %2.2x %2.2x\nOutput (Frage): %2.2x %2.2x %2.2x %2.2x\n", clr, i, mode,
226                         in_pkt[i][0], in_pkt[i][1], in_pkt[i][2], in_pkt[i][3], in_pkt[i][4], in_pkt[i][5],
     in_pkt[i][6], in_pkt[i][7],
227                             // data_pkt[i + clr * 4][0],    data_pkt[i + clr * 4 ][1],  data_pkt[i + clr *
     4 ][2],  data_pkt[i + clr * 4 ][3]);
228                         cmp_pkt[i][0], cmp_pkt[i][1], cmp_pkt[i][2], cmp_pkt[i][3]);
229                     in_pkt[2][0] = 0x99;
230                     in_pkt[2][1] = 0x99;
231                     in_pkt[2][2] = 0x99;
232                     in_pkt[2][3] = 0x99;
233                     usbrecv(kb, in_pkt[2], in_pkt[2]); // just to find it in the wireshark log
234                     return -1;
235                 }
236             }
237             // Copy colors to lighting. in_pkt[0] is irrelevant.
238             memcpy(colors[clr], in_pkt[1] + 4, 60);
239             memcpy(colors[clr] + 60, in_pkt[2] + 4, 60);
240             memcpy(colors[clr] + 120, in_pkt[3] + 4, 24);
241         }
242     } else {
243         uchar data_pkt[5][MSG_SIZE] = {
244             { 0x0e, 0x14, 0x02, 0x01, 0x01, mode + 1, 0 },
245             { 0xff, 0x01, 60, 0 },
246             { 0xff, 0x02, 60, 0 },
247             { 0xff, 0x03, 60, 0 },
248             { 0xff, 0x04, 36, 0 },
249         };
250         uchar in_pkt[4][MSG_SIZE] = {
251             { 0xff, 0x01, 60, 0 },
```

```
            { 0xff, 0x02, 60, 0 },
            { 0xff, 0x03, 60, 0 },
            { 0xff, 0x04, 36, 0 },
        };
        // Write initial packet
        if(!usbsend(kb, data_pkt[0], 1))
            return -1;
        // Read colors
        for(int i = 1; i < 5; i++){
            if(!usbrecv(kb, data_pkt[i],in_pkt[i - 1]))
                return -1;
            if(memcmp(in_pkt[i - 1], data_pkt[i], 4)){
                ckb_err("Bad input header\n");
                return -1;
            }
        }
        // Copy the data back to the mode
        uint8_t mr[N_KEYS_HW / 2], mg[N_KEYS_HW / 2], mb[N_KEYS_HW / 2];
        memcpy(mr,      in_pkt[0] +  4, 60);
        memcpy(mr + 60, in_pkt[1] +  4, 12);
        memcpy(mg,      in_pkt[1] + 16, 48);
        memcpy(mg + 48, in_pkt[2] +  4, 24);
        memcpy(mb,      in_pkt[2] + 28, 36);
        memcpy(mb + 36, in_pkt[3] +  4, 36);
        // Unpack LED data to 8bpc format
        for(int i = 0; i < N_KEYS_HW; i++){
            int     i_2 = i / 2;
            uint8_t r, g, b;

            // 3-bit intensities stored in alternate nybbles.
            if (i & 1) {
                r = 7 - (mr[i_2] >> 4);
                g = 7 - (mg[i_2] >> 4);
                b = 7 - (mb[i_2] >> 4);
            } else {
                r = 7 - (mr[i_2] & 0x0F);
                g = 7 - (mg[i_2] & 0x0F);
                b = 7 - (mb[i_2] & 0x0F);
            }
            // Scale 3-bit values up to 8 bits.
            light->r[i] = r << 5 | r << 2 | r >> 1;
            light->g[i] = g << 5 | g << 2 | g >> 1;
            light->b[i] = b << 5 | b << 2 | b >> 1;
        }
    }
    return 0;
}
```

Here is the caller graph for this function:

13.28.1.7 int loadrgb_mouse (usbdevice * *kb*, lighting * *light*, int *mode*)

Definition at line 81 of file led_mouse.c.

References lighting::b, ckb_err, lighting::g, IS_SABRE, IS_SCIMITAR, LED_DPI, LED_MOUSE, MSG_SIZE, lighting::r, and usbrecv.

Referenced by cmd_hwload_mouse().

```
81                                                          {
82     uchar data_pkt[MSG_SIZE] = { 0x0e, 0x13, 0x10, 1, 0 };
83     uchar in_pkt[MSG_SIZE] = { 0 };
84     // Load each RGB zone
85     int zonecount = IS_SCIMITAR(kb) ? 4 : IS_SABRE(kb) ? 3 : 2;
```

```
    for(int i = 0; i < zonecount; i++){
        if(!usbrecv(kb, data_pkt, in_pkt))
            return -1;
        if(memcmp(in_pkt, data_pkt, 4)){
            ckb_err("Bad input header\n");
            return -2;
        }
        // Copy data
        int led = LED_MOUSE + i;
        if(led >= LED_DPI)
            led++;          // Skip DPI light
        light->r[led] = in_pkt[4];
        light->g[led] = in_pkt[5];
        light->b[led] = in_pkt[6];
         // Set packet for next zone
         data_pkt[2]++;
    }
    return 0;
}
```

Here is the caller graph for this function:

13.28.1.8 char* printrgb (const lighting * *light*, const usbdevice * *kb*)

Definition at line 102 of file led.c.

References lighting::b, lighting::g, has_key(), keymap, key::led, N_KEYS_EXTENDED, key::name, and lighting::r.

Referenced by _cmd_get().

```
                                                        {
    uchar r[N_KEYS_EXTENDED], g[N_KEYS_EXTENDED], b[
N_KEYS_EXTENDED];
    const uchar* mr = light->r;
    const uchar* mg = light->g;
    const uchar* mb = light->b;
    for(int i = 0; i < N_KEYS_EXTENDED; i++){
        // Translate the key index to an RGB index using the key map
        int k = keymap[i].led;
        if(k < 0)
            continue;
        r[i] = mr[k];
        g[i] = mg[k];
        b[i] = mb[k];
    }
    // Make a buffer to track key names and to filter out duplicates
    char names[N_KEYS_EXTENDED][11];
    for(int i = 0; i < N_KEYS_EXTENDED; i++){
        const char* name = keymap[i].name;
        if(keymap[i].led < 0 || !has_key(name, kb))
            names[i][0] = 0;
        else
            strncpy(names[i], name, 11);
    }
    // Check to make sure these aren't all the same color
    int same = 1;
    for(int i = 1; i < N_KEYS_EXTENDED; i++){
        if(!names[i][0])
            continue;
        if(r[i] != r[0] || g[i] != g[0] || b[i] != b[0]){
            same = 0;
            break;
        }
    }
```

```
    // If they are, just output that color
    if(same){
        char* buffer = malloc(7);
        snprintf(buffer, 7, "%02x%02x%02x", r[0], g[0], b[0]);
        return buffer;
    }
    const int BUFFER_LEN = 4096;    // Should be more than enough to fit all keys
    char* buffer = malloc(BUFFER_LEN);
    int length = 0;
    for(int i = 0; i < N_KEYS_EXTENDED; i++){
        if(!names[i][0])
            continue;
        // Print the key name
        int newlen = 0;
        snprintf(buffer + length, BUFFER_LEN - length, length == 0 ? "%s%n" : " %s%n", names[i], &newlen);
        length += newlen;
        // Look ahead to see if any other keys have this color. If so, print them here as well.
        uchar kr = r[i], kg = g[i], kb = b[i];
        for(int j = i + 1; j < N_KEYS_EXTENDED; j++){
            if(!names[j][0])
                continue;
            if(r[j] != kr || g[j] != kg || b[j] != kb)
                continue;
            snprintf(buffer + length, BUFFER_LEN - length, ",%s%n", names[j], &newlen);
            length += newlen;
            // Erase the key's name so it won't get printed later
            names[j][0] = 0;
        }
        // Print the color
        snprintf(buffer + length, BUFFER_LEN - length, ":%02x%02x%02x%n", kr, kg, kb, &newlen);
        length += newlen;
    }
    return buffer;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.28.1.9 int savergb_kb (usbdevice * *kb*, lighting * *light*, int *mode*)

Definition at line 139 of file led_keyboard.c.

References usbdevice::dither, usbdevice::fwversion, IS_STRAFE, makergb_512(), makergb_full(), MSG_SIZE, ordered8to3(), quantize8to3(), and usbsend.

Referenced by cmd_hwsave_kb().

```
                                                    {
    if(kb->fwversion >= 0x0120){
        uchar data_pkt[12][MSG_SIZE] = {
            // Red
            { 0x7f, 0x01, 60, 0 },
            { 0x7f, 0x02, 60, 0 },
            { 0x7f, 0x03, 24, 0 },
            { 0x07, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x01 },
            // Green
            { 0x7f, 0x01, 60, 0 },
            { 0x7f, 0x02, 60, 0 },
            { 0x7f, 0x03, 24, 0 },
            { 0x07, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x02 },
            // Blue
            { 0x7f, 0x01, 60, 0 },
            { 0x7f, 0x02, 60, 0 },
            { 0x7f, 0x03, 24, 0 },
            { 0x07, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x03 }
        };
        makergb_full(light, data_pkt);
        if(!usbsend(kb, data_pkt[0], 12))
            return -1;
        if (IS_STRAFE(kb)){ // end save
            uchar save_end_pkt[MSG_SIZE] = { 0x07, 0x14, 0x04, 0x01, 0x01 };
            if(!usbsend(kb, save_end_pkt, 1))
                return -1;
        }
    } else {
        uchar data_pkt[5][MSG_SIZE] = {
            { 0x7f, 0x01, 60, 0 },
            { 0x7f, 0x02, 60, 0 },
            { 0x7f, 0x03, 60, 0 },
            { 0x7f, 0x04, 36, 0 },
            { 0x07, 0x14, 0x02, 0x00, 0x01, mode + 1 }
        };
        makergb_512(light, data_pkt, kb->dither ? ordered8to3 :
    quantize8to3);
        if(!usbsend(kb, data_pkt[0], 5))
            return -1;
    }
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.28.1.10 int savergb_mouse (usbdevice * *kb*, lighting * *light*, int *mode*)

Definition at line 62 of file led_mouse.c.

References lighting::b, lighting::g, IS_SABRE, IS_SCIMITAR, LED_DPI, LED_MOUSE, MSG_SIZE, lighting::r, and usbsend.

Referenced by cmd_hwsave_mouse().

```
62                                                          {
63     uchar data_pkt[MSG_SIZE] = { 0x07, 0x13, 0x10, 1, 0 };
64     // Save each RGB zone, minus the DPI light which is sent in the DPI packets
65     int zonecount = IS_SCIMITAR(kb) ? 4 : IS_SABRE(kb) ? 3 : 2;
66     for(int i = 0; i < zonecount; i++){
67         int led = LED_MOUSE + i;
68         if(led >= LED_DPI)
69             led++;           // Skip DPI light
70         data_pkt[4] = light->r[led];
71         data_pkt[5] = light->g[led];
72         data_pkt[6] = light->b[led];
73         if(!usbsend(kb, data_pkt, 1))
74             return -1;
75         // Set packet for next zone
76         data_pkt[2]++;
77     }
78     return 0;
79 }
```

Here is the caller graph for this function:

13.28.1.11 int updatergb_kb (usbdevice * *kb*, int *force*)

Definition at line 77 of file led_keyboard.c.

References usbdevice::active, usbprofile::currentmode, usbdevice::dither, lighting::forceupdate, IS_FULLRANGE, usbprofile::lastlight, usbmode::light, makergb_512(), makergb_full(), MSG_SIZE, ordered8to3(), usbdevice::profile, quantize8to3(), rgbcmp(), lighting::sidelight, and usbsend.

```
77                                                          {
```

```
    if(!kb->active)
        return 0;
    lighting* lastlight = &kb->profile->lastlight;
    lighting* newlight = &kb->profile->currentmode->light;
    // Don't do anything if the lighting hasn't changed
    if(!force && !lastlight->forceupdate && !newlight->forceupdate
            && !rgbcmp(lastlight, newlight) && lastlight->sidelight == newlight->sidelight)   // strafe sidelights
        return 0;
    lastlight->forceupdate = newlight->forceupdate = 0;

    if(IS_FULLRANGE(kb)){
        // Update strafe sidelights if necessary
        if(lastlight->sidelight != newlight->sidelight) {
            uchar data_pkt[2][MSG_SIZE] = {
                 { 0x07, 0x05, 0x08, 0x00, 0x00 },
                 { 0x07, 0x05, 0x02, 0, 0x03 }
             };
             if (newlight->sidelight)
                 data_pkt[0][4]=1;    // turn on
             if(!usbsend(kb, data_pkt[0], 2))
                 return -1;
        }
         // 16.8M color lighting works fine on strafe and is the only way it actually works
         uchar data_pkt[12][MSG_SIZE] = {
             // Red
             { 0x7f, 0x01, 0x3c, 0 },
             { 0x7f, 0x02, 0x3c, 0 },
             { 0x7f, 0x03, 0x18, 0 },
             { 0x07, 0x28, 0x01, 0x03, 0x01, 0},
             // Green
             { 0x7f, 0x01, 0x3c, 0 },
             { 0x7f, 0x02, 0x3c, 0 },
             { 0x7f, 0x03, 0x18, 0 },
             { 0x07, 0x28, 0x02, 0x03, 0x01, 0},
             // Blue
             { 0x7f, 0x01, 0x3c, 0 },
             { 0x7f, 0x02, 0x3c, 0 },
             { 0x7f, 0x03, 0x18, 0 },
             { 0x07, 0x28, 0x03, 0x03, 0x02, 0}
         };
         makergb_full(newlight, data_pkt);
         if(!usbsend(kb, data_pkt[0], 12))
             return -1;
    } else {
         // On older keyboards it looks flickery and causes lighting glitches, so we don't use it.
         uchar data_pkt[5][MSG_SIZE] = {
             { 0x7f, 0x01, 60, 0 },
             { 0x7f, 0x02, 60, 0 },
             { 0x7f, 0x03, 60, 0 },
             { 0x7f, 0x04, 36, 0 },
             { 0x07, 0x27, 0x00, 0x00, 0xD8 }
         };
         makergb_512(newlight, data_pkt, kb->dither ? ordered8to3 : quantize8to3);
         if(!usbsend(kb, data_pkt[0], 5))
             return -1;
    }

    memcpy(lastlight, newlight, sizeof(lighting));
    return 0;
}
```

Here is the call graph for this function:

13.28.1.12 int updatergb_mouse (usbdevice * *kb*, int *force*)

Definition at line 20 of file led_mouse.c.

References usbdevice::active, lighting::b, usbprofile::currentmode, lighting::forceupdate, lighting::g, isblack(), usbprofile::lastlight, LED_MOUSE, usbmode::light, MSG_SIZE, N_MOUSE_ZONES, usbdevice::profile, lighting::r, rgbcmp(), and usbsend.

```
20                                                  {
21     if(!kb->active)
22         return 0;
23     lighting* lastlight = &kb->profile->lastlight;
24     lighting* newlight = &kb->profile->currentmode->
      light;
25     // Don't do anything if the lighting hasn't changed
26     if(!force && !lastlight->forceupdate && !newlight->forceupdate
27             && !rgbcmp(lastlight, newlight))
28         return 0;
29     lastlight->forceupdate = newlight->forceupdate = 0;
30
31     // Send the RGB values for each zone to the mouse
32     uchar data_pkt[2][MSG_SIZE] = {
33         { 0x07, 0x22, N_MOUSE_ZONES, 0x01, 0 }, // RGB colors
34         { 0x07, 0x05, 0x02, 0 }                 // Lighting on/off
35     };
36     uchar* rgb_data = &data_pkt[0][4];
37     for(int i = 0; i < N_MOUSE_ZONES; i++){
38         *rgb_data++ = i + 1;
39         *rgb_data++ = newlight->r[LED_MOUSE + i];
40         *rgb_data++ = newlight->g[LED_MOUSE + i];
41         *rgb_data++ = newlight->b[LED_MOUSE + i];
42     }
43     // Send RGB data
44     if(!usbsend(kb, data_pkt[0], 1))
45         return -1;
46     int was_black = isblack(kb, lastlight), is_black = isblack(kb, newlight);
47     if(is_black){
48         // If the lighting is black, send the deactivation packet (M65 only)
49         if(!usbsend(kb, data_pkt[1], 1))
50             return -1;
51     } else if(was_black || force){
52         // If the lighting WAS black, or if we're on forced update, send the activation packet
53         data_pkt[1][4] = 1;
54         if(!usbsend(kb, data_pkt[1], 1))
```

```
            return -1;
    }

    memcpy(lastlight, newlight, sizeof(lighting));
    return 0;
}
```

Here is the call graph for this function:

13.29 src/ckb-daemon/led_keyboard.c File Reference

```
#include <stdint.h>
#include "led.h"
#include "notify.h"
#include "profile.h"
#include "usb.h"
```

Include dependency graph for led_keyboard.c:

Macros

- #define BR1(x) ((((x) & 0xaa) >> 1) | (((x) & 0x55) << 1))
- #define BR2(x) (((BR1(x) & 0xcc) >> 2) | ((BR1(x) & 0x33) << 2))
- #define BR4(x) (((BR2(x) & 0xf0) >> 4) | ((BR2(x) & 0x0f) << 4))
- #define O0(i) BR4(i),
- #define O1(i) O0(i) O0((i) + 1)
- #define O2(i) O1(i) O1((i) + 2)
- #define O3(i) O2(i) O2((i) + 4)
- #define O4(i) O3(i) O3((i) + 8)
- #define O5(i) O4(i) O4((i) + 16)

- #define O6(i) O5(i) O5((i) + 32)
- #define O7(i) O6(i) O6((i) + 64)
- #define O8(i) O7(i) O7((i) + 127)

Functions

- static uchar ordered8to3 (int index, uchar value)
- static uchar quantize8to3 (int index, uchar value)
- static void makergb_512 (const lighting *light, uchar data_pkt[5][64], uchar(*ditherfn)(int, uchar))
- static void makergb_full (const lighting *light, uchar data_pkt[12][64])
- static int rgbcmp (const lighting *lhs, const lighting *rhs)
- int updatergb_kb (usbdevice *kb, int force)
- int savergb_kb (usbdevice *kb, lighting *light, int mode)
- int loadrgb_kb (usbdevice *kb, lighting *light, int mode)

Variables

- static uchar bit_reverse_table [256] = { ((((((((((0) & 0xaa) >> 1) | (((0) & 0x55) << 1)) & 0xcc) >> 2) | ((((((0) & 0xaa) >> 1) | (((0) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) & 0xaa) >> 1) | (((0) & 0x55) << 1)) & 0xcc) >> 2) | ((((((0) & 0xaa) >> 1) | (((0) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 1) & 0xaa) >> 1) | (((0) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((0) + 1) & 0xaa) >> 1) | (((0) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 1) & 0xaa) >> 1) | (((0) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((0) + 1) & 0xaa) >> 1) | (((0) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 2) & 0xaa) >> 1) | (((0) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((0) + 2) & 0xaa) >> 1) | (((0) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 2) & 0xaa) >> 1) | (((0) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((0) + 2) & 0xaa) >> 1) | (((0) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 2) + 1) & 0xaa) >> 1) | (((((0) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 2) + 1) & 0xaa) >> 1) | (((((0) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 2) + 1) & 0xaa) >> 1) | (((((0) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 2) + 1) & 0xaa) >> 1) | (((((0) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 4) & 0xaa) >> 1) | (((0) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((0) + 4) & 0xaa) >> 1) | (((0) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 4) & 0xaa) >> 1) | (((0) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((0) + 4) & 0xaa) >> 1) | (((0) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 4) + 1) & 0xaa) >> 1) | (((((0) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 4) + 1) & 0xaa) >> 1) | (((((0) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 4) + 1) & 0xaa) >> 1) | (((((0) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 4) + 1) & 0xaa) >> 1) | (((((0) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 4) + 2) & 0xaa) >> 1) | (((((0) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 4) + 2) & 0xaa) >> 1) | (((((0) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 4) + 2) & 0xaa) >> 1) | (((((0) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 4) + 2) & 0xaa) >> 1) | (((((0) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 8) & 0xaa) >> 1) | (((((0) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 8) & 0xaa) >> 1) | (((((0) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 8) & 0xaa) >> 1) | (((((0) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 8) & 0xaa) >> 1) | (((((0) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 8) + 1) & 0xaa) >> 1) | (((((0) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 8) + 1) & 0xaa) >> 1) | (((((0) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 8) + 1) & 0xaa) >> 1) | (((((0) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 8) + 1) & 0xaa) >> 1) | (((((0) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 8) + 2) & 0xaa) >> 1) | (((((0) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 8) + 2) & 0xaa) >> 1) | (((((0) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 8) + 2) & 0xaa) >> 1) | (((((0) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 8) + 2) & 0xaa) >> 1) | (((((0) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 8) + 2) + 1) & 0xaa) >>

1) | ((((((0) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((0) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 8) + 4) & 0xaa) >> 1) | (((((0) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 8) + 4) & 0xaa) >> 1) | (((((0) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 8) + 4) & 0xaa) >> 1) | (((((0) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 8) + 4) & 0xaa) >> 1) | (((((0) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((0) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((0) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 16) & 0xaa) >> 1) | (((0) + 16) & 0x55) << 1)) & 0xcc) >> 2) | ((((((0) + 16) & 0xaa) >> 1) | (((0) + 16) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 16) & 0xaa) >> 1) | (((0) + 16) & 0x55) << 1)) & 0xcc) >> 2) | ((((((0) + 16) & 0xaa) >> 1) | (((0) + 16) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 16) + 1) & 0xaa) >> 1) | (((0) + 16) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 16) + 1) & 0xaa) >> 1) | (((0) + 16) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 16) + 1) & 0xaa) >> 1) | (((0) + 16) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 16) + 1) & 0xaa) >> 1) | (((0) + 16) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 16) + 2) & 0xaa) >> 1) | (((0) + 16) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 16) + 2) & 0xaa) >> 1) | (((0) + 16) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 16) + 2) & 0xaa) >> 1) | (((0) + 16) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 16) + 2) & 0xaa) >> 1) | (((0) + 16) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 16) + 2) + 1) & 0xaa) >> 1) | (((((0) + 16) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 16) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 16) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((0) + 16) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 16) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 16) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 16) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 16) + 4) & 0xaa) >> 1) | (((0) + 16) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 16) + 4) & 0xaa) >> 1) | (((0) + 16) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 16) + 4) & 0xaa) >> 1) | (((0) + 16) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 16) + 4) & 0xaa) >> 1) | (((0) + 16) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 16) + 4) + 1) & 0xaa) >> 1) | (((((0) + 16) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 16) + 4) + 1) & 0xaa) >> 1) | ((((((0) + 16) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((0) + 16) + 4) + 1) & 0xaa) >> 1) | ((((((0) + 16) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 16) + 4) + 1) & 0xaa) >> 1) | ((((((0) + 16) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 16) + 4) + 2) & 0xaa) >> 1) | ((((((0) + 16) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 16) + 4) + 2) & 0xaa) >> 1) | ((((((0) + 16) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((0) + 16) + 4) + 2) & 0xaa) >> 1) | ((((((0) + 16) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 16) + 4) + 2) & 0xaa) >> 1) | ((((((0) + 16) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 16) + 8) & 0xaa) >> 1) | ((((0) + 16) + 8) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 16) + 8) & 0xaa) >> 1) | ((((0) + 16) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 16) + 8) & 0xaa) >> 1) | ((((0) + 16) + 8) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 16) + 8) & 0xaa) >> 1) | ((((0) + 16) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 16) + 8) + 1) & 0xaa) >> 1) | (((((0) + 16) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) +

16) + 8) + 1) & 0xaa) >> 1) | ((((((0) + 16) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((0) + 16) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((0) + 16) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 16) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 16) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) >> 4) | (((((((((((((0) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 16) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 16) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((0) + 16) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((0) + 16) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((0) + 16) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((0) + 16) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0xf0) >> 4) | ((((((((((((((0) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 32) & 0xaa) >> 1) | (((0) + 32) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) & 0xaa) >> 1) | (((0) + 32) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 32) & 0xaa) >> 1) | (((0) + 32) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) & 0xaa) >> 1) | (((0) + 32) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 32) + 1) & 0xaa) >> 1) | ((((0) + 32) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 1) & 0xaa) >> 1) | ((((0) + 32) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 32) + 1) & 0xaa) >> 1) | ((((0) + 32) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 1) & 0xaa) >> 1) | ((((0) + 32) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 32) + 2) & 0xaa) >> 1) | ((((0) + 32) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 2) & 0xaa) >> 1) | ((((0) + 32) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 32) + 2) & 0xaa) >> 1) | ((((0) + 32) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 2) & 0xaa) >> 1) | ((((0) + 32) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 32) + 2) + 1) & 0xaa) >> 1) | (((((0) + 32) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 2) + 1) & 0xaa) >> 1) | (((((0) + 32) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 32) + 2) + 1) & 0xaa) >> 1) | (((((0) + 32) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 2) + 1) & 0xaa) >> 1) | (((((0) + 32) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 32) + 4) & 0xaa) >> 1) | (((((0) + 32) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 4) & 0xaa) >> 1) | ((((0) + 32) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 32) + 4) & 0xaa) >> 1) | ((((0) + 32) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 4) & 0xaa) >> 1) | ((((0) + 32) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 32) + 4) + 1) & 0xaa) >> 1) | (((((0) + 32) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 4) + 1) & 0xaa) >> 1) | (((((0) + 32) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 32) + 4) + 1) & 0xaa) >> 1) | (((((0) + 32) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 4) + 1) & 0xaa) >> 1) | (((((0) + 32) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 32) + 4) + 2) & 0xaa) >> 1) | (((((0) + 32) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 4) + 2) & 0xaa) >> 1) | (((((0) + 32) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 32) + 4) + 2) & 0xaa) >> 1) | (((((0) + 32) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) + 4) + 2) &

0xaa) >> 1) | ((((((0) + 32) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 32) + 8) & 0xaa) >> 1) | (((((0) + 32) + 8) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 32) + 8) & 0xaa) >> 1) | (((((0) + 32) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 32) + 8) & 0xaa) >> 1) | (((((0) + 32) + 8) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 32) + 8) & 0xaa) >> 1) | (((((0) + 32) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 32) + 8) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 8) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 32) + 8) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 8) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 32) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 32) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 32) + 8) + 4) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 8) + 4) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 32) + 8) + 4) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 8) + 4) & 0xaa) >> 1) | ((((((0) + 32) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 32) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 32) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 32) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 32) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 32) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 32) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 32) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 32) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 32) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 32) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 32) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 32) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 32) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((((0) + 32) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 32) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 32) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 32) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 32) + 16) & 0xaa) >> 1) | (((((0) + 32) + 16) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 32) + 16) & 0xaa) >> 1) | (((((0) + 32) + 16) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 32) + 16) & 0xaa) >> 1) | (((((0) + 32) + 16) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 32) + 16) & 0xaa) >> 1) | (((((0) + 32) + 16) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 32) + 16) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 16) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 16) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 16) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 32) + 16) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 16) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 16) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 16) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 32) + 16) + 2) & 0xaa) >> 1) | ((((((0) + 32) + 16) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 16) + 2) & 0xaa) >> 1) | ((((((0) + 32) + 16) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 32) + 16) + 2) & 0xaa) >> 1) | ((((((0) + 32) + 16) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 16) + 2) & 0xaa) >> 1) | ((((((0) + 32) + 16) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 32) + 16) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 16) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 32) + 16) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 16) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 32) + 16) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 32) + 16) + 2) + 1) & 0x55) << 1)) & 0xcc)

```
>> 2) | (((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 32 )
+ 16 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 32 )
+ 16 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) & 0xaa) >> 1)
| ((( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) & 0xaa) >> 1)
| ((( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 32 ) + 16 )
+ 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 )
+ 32 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2))
& 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 1 )
& 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) +
16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 32 ) + 16 )
+ 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >>
4) | (((((((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0x55) <<
1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 )
& 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >>
1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) +
4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) &
0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 )
+ 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( (
( ( ( ( 0 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 32 )
+ 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 32
) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) |
(((((((((( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) & 0x55) << 1)) & 0xcc) >>
2) | (((((( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) & 0x55) << 1)) & 0x33) <<
2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) +
1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 )
+ 16 ) + 8 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 32 ) + 16 )
+ 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) <<
4)), ((((((((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0x55) <<
1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2
) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) |
((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( (
( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0x55) <<
1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) +
8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1
) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0
) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) &
0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) +
16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( (
( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 32 ) + 16 ) +
8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) +
32 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) &
0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) +
8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) |
((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0
) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) &
0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) +
4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) &
0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 32
) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 32 )
+ 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa)
>> 1) | ((( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((
( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1
) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( (
```

```
( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( (
( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) &
0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( (
0 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( 0 ) + 64 ) &
0xaa) >> 1) | ((( ( 0 ) + 64 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( 0 ) + 64 ) & 0xaa) >> 1) | ((( ( 0 ) + 64 )
& 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((( 0 ) + 64 ) & 0xaa) >> 1) | ((( ( 0 ) + 64 ) & 0x55)
<< 1)) & 0xcc) >> 2) | ((((((( 0 ) + 64 ) & 0xaa) >> 1) | ((( ( 0 ) + 64 ) & 0x55) << 1)) & 0x33) << 2)) &
0x0f) << 4)), ((((((((((( ( ( 0 ) + 64 ) + 1 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2)
| ((((((( ( ( 0 ) + 64 ) + 1 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4)
| ((((((((((( ( ( 0 ) + 64 ) + 1 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( 0 )
+ 64 ) + 1 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( (
0 ) + 64 ) + 2 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( 0 ) + 64 ) + 2 )
& 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((( ( ( 0 ) + 64 ) +
2 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( 0 ) + 64 ) + 2 ) & 0xaa) >>
1) | ((( ( ( 0 ) + 64 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 2 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 2 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((( ( ( ( 0 ) +
64 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) +
64 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)),
((((((((((( ( ( 0 ) + 64 ) + 4 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( 0 ) +
64 ) + 4 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( 0 )
+ 64 ) + 4 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( 0 ) + 64 ) + 4 ) &
0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) +
4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 4 )
+ 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( (
( 0 ) + 64 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0
) + 64 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) <<
4)), ((((((((((( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >>
2) | ((((((( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) <<
2)) & 0xf0) >> 4) | ((((((((( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) & 0x55) <<
1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) & 0x55) <<
1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64
) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( (
( ( 0 ) + 64 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 64 ) + 4 ) +
2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 )
+ 64 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) &
0x0f) << 4)), ((((((((((( ( ( 0 ) + 64 ) + 8 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 8 ) & 0x55) << 1)) & 0xcc) >> 2)
| ((((((( ( ( 0 ) + 64 ) + 8 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 8 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4)
| ((((((((( ( ( 0 ) + 64 ) + 8 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 8 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( 0 )
+ 64 ) + 8 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 8 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( (
( 0 ) + 64 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 8 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0
) + 64 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 8 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >>
4) | ((((((((( ( ( ( 0 ) + 64 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 8 ) + 1 ) & 0x55) << 1)) & 0xcc) >>
2) | ((((((( ( ( ( 0 ) + 64 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 8 ) + 1 ) & 0x55) << 1)) & 0x33) <<
2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) & 0x55) <<
1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) & 0x55) <<
1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 8 ) +
2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 8 ) + 2 )
& 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( (
( ( ( 0 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0xaa)
>> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) +
64 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((
( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) & 0x55)
<< 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) +
8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 8 )
+ 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1)
```

```
| ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( (
( 0 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2)
| ((((((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) &
0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8
) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 )
+ 64 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 2 )
& 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 8 )
+ 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) <<
4)), ((((((((((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1 ) &
0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64
) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 2
) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( (
0 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) &
0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( 0 ) + 64 ) + 16 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 16 ) & 0x55) <<
1)) & 0xcc) >> 2) | ((((((( ( ( 0 ) + 64 ) + 16 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 16 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0xf0) >> 4) | ((((((((( ( ( 0 ) + 64 ) + 16 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 16 ) & 0x55) << 1)) &
0xcc) >> 2) | ((((((( ( ( 0 ) + 64 ) + 16 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 16 ) & 0x55) << 1)) & 0x33) <<
2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 16 ) + 1 ) & 0x55)
<< 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 16 ) + 1 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( 0 ) + 64 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) +
16 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) +
16 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 16 ) + 2 ) & 0xaa) >> 1) |
((( ( ( ( ( 0 ) + 64 ) + 16 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 16 ) + 2 ) & 0xaa) >> 1) |
((( ( ( ( ( 0 ) + 64 ) + 16 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( 0 ) + 64 ) + 16 ) + 2
) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 16 ) + 2
) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( (
0 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >>
2) | ((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1))
& 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) +
16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( (
( 0 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 16 ) + 4
) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 16 ) + 4
) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( 0
) + 64 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( (
0 ) + 64 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f)
<< 4)), ((((((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0x55)
<< 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 )
+ 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1)
| ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((
( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc)
>> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 )
+ 64 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1)
| ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 64
) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc)
>> 2) | ((((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1
) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >>
1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) +
4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) &
0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) & 0x55) << 1))
& 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) & 0x55) << 1))
& 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 16 ) + 8
) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 16 ) + 8
) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 1 ) & 0xaa) >> 1) |
((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( (
```

```
( ( 0 ) + 64 ) + 16 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 1 ) & 0x55) << 1)) & 0xcc) >>
2) | (((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 1 ) & 0x55) << 1))
& 0x33) << 2)) & 0x0f) << 4)), ((((((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 )
+ 16 ) + 8 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( (
( ( 0 ) + 64 ) + 16 ) + 8 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 64 ) + 16 ) +
8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) +
64 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) &
0x0f) << 4)), ((((((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 )
+ 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( (
( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( 0 ) + 64 )
+ 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >>
2) | (((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 2 ) + 1 ) &
0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( (
( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) & 0xaa)
>> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 )
+ 64 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) |
(((((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) &
0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0
) + 64 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 1 )
& 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) |
(((((((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 1 ) &
0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64
) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 )
+ 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( (
( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) <<
1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( (
0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 )
& 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)),
((((((((((( ( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 )
+ 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1)
| ((( ( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( (
( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) &
0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( ( 0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( (
0 ) + 64 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( 0 ) + 64 ) +
32 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 32 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( 0 ) + 64 ) + 32 ) & 0xaa)
>> 1) | ((( ( ( 0 ) + 64 ) + 32 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( 0 ) + 64 ) + 32 ) &
0xaa) >> 1) | ((( ( ( 0 ) + 64 ) + 32 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( 0 ) + 64 ) + 32 ) & 0xaa) >> 1)
| ((( ( ( 0 ) + 64 ) + 32 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( 0 ) + 64 ) + 32 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 32 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 64 ) + 32 ) + 1 )
& 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 32 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( 0
) + 64 ) + 32 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 32 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( (
0 ) + 64 ) + 32 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 32 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f)
<< 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) & 0x55) << 1)) &
0xcc) >> 2) | (((((( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) & 0x55) << 1)) &
0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 32 ) + 2 )
& 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 ) + 32 ) + 2
) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) + 1 ) & 0xaa) >> 1) |
((( ( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( (
( ( 0 ) + 64 ) + 32 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc)
>> 2) | (((((( ( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 32 ) + 2 ) + 1 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 32 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 )
+ 32 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 64 ) + 32 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 64 )
+ 32 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( 0 ) + 64 ) + 32 ) + 4 ) & 0xaa) >> 1)
| ((( ( ( ( 0 ) + 64 ) + 32 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 64 ) + 32 ) + 4 ) & 0xaa) >> 1)
| ((( ( ( ( 0 ) + 64 ) + 32 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 64 ) + 32 )
+ 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 32 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 )
+ 64 ) + 32 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 64 ) + 32 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2))
```

& 0xf0) >> 4) | ((((((((((((((0) + 64) + 32) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 64) + 32) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 64) + 32) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 64) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 64) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 64) + 32) + 8) & 0xaa) >> 1) | ((((((0) + 64) + 32) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 64) + 32) + 8) & 0xaa) >> 1) | ((((((0) + 64) + 32) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 64) + 32) + 8) & 0xaa) >> 1) | ((((((0) + 64) + 32) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 64) + 32) + 8) & 0xaa) >> 1) | ((((((0) + 64) + 32) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 64) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 64) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 64) + 32) + 8) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 8) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 64) + 32) + 8) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 8) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 64) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 64) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 64) + 32) + 8) + 4) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 8) + 4) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 64) + 32) + 8) + 4) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 8) + 4) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 64) + 32) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 64) + 32) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 64) + 32) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 64) + 32) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 64) + 32) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 64) + 32) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 64) + 32) + 16) & 0xaa) >> 1) | ((((((0) + 64) + 32) + 16) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 64) + 32) + 16) & 0xaa) >> 1) | ((((((0) + 64) + 32) + 16) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 64) + 32) + 16) & 0xaa) >> 1) | ((((((0) + 64) + 32) + 16) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 64) + 32) + 16) & 0xaa) >> 1) | ((((((0) + 64) + 32) + 16) & 0x55) << 1)) & 0x33) << 2)) &

0x0f) << 4)), (((((((((((((((0) + 64) + 32) + 16) + 1) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 16) + 1) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 64) + 32) + 16) + 1) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 16) + 1) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 64) + 32) + 16) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 16) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 64) + 32) + 16) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 16) + 2) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 64) + 32) + 16) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 64) + 32) + 16) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 64) + 32) + 16) + 4) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 16) + 4) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 64) + 32) + 16) + 4) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 16) + 4) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 64) + 32) + 16) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 64) + 32) + 16) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 64) + 32) + 16) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 64) + 32) + 16) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((((0) + 64) + 32) + 16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 64) + 32) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((((0) + 64) + 32) + 16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 64) + 32) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 64) + 32) + 16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 64) + 32) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((((0) + 64) + 32) + 16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 64) + 32) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 64) + 32) + 16) + 8) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 8) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 16) + 8) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 64) + 32) + 16) + 8) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 8) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 64) + 32) + 16) + 8) & 0xaa) >> 1) | (((((((0) + 64) + 32) + 16) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 64) + 32) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 64) + 32) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 64) + 32) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 64) + 32) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 64) + 32) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 64) + 32) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 64) + 32) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 64) + 32) + 16) + 8) + 2)

```
+ 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) &
0x0f) << 4)), ((((((((( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 32 ) +
16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1)
| ((( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0
) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) &
0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 )
+ 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 )
+ 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((
( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) +
1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( (
( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1
) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) &
0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( (
( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2
) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) &
0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( (
( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) &
0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 )
& 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) |
(((((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16
) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16
) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) <<
1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( ( 0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( (
0 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((( ( 0 ) +
127 ) & 0xaa) >> 1) | ((( 0 ) + 127 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( 0 ) + 127 ) & 0xaa) >> 1) | (((
( 0 ) + 127 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( 0 ) + 127 ) & 0xaa) >> 1) | ((( 0 ) +
127 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( 0 ) + 127 ) & 0xaa) >> 1) | ((( 0 ) + 127 ) & 0x55) << 1)) &
0x33) << 2)) & 0x0f) << 4)), ((((((((( ( ( 0 ) + 127 ) + 1 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 1 ) & 0x55) <<
1)) & 0xcc) >> 2) | (((((( ( ( 0 ) + 127 ) + 1 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 1 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0xf0) >> 4) | (((((((((( ( ( 0 ) + 127 ) + 1 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 1 ) & 0x55) << 1)) &
0xcc) >> 2) | (((((( ( ( 0 ) + 127 ) + 1 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 1 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0x0f) << 4)), ((((((((( ( ( 0 ) + 127 ) + 2 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 2 ) & 0x55) << 1)) & 0xcc)
>> 2) | (((((( ( ( 0 ) + 127 ) + 2 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) &
0xf0) >> 4) | (((((((((( ( ( 0 ) + 127 ) + 2 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 2 ) & 0x55) << 1)) & 0xcc) >>
2) | (((((( ( ( 0 ) + 127 ) + 2 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f)
<< 4)), ((((((((( ( ( ( 0 ) + 127 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 2 ) + 1 ) & 0x55) << 1)) &
0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 2 ) + 1 ) & 0x55) <<
1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( 0 ) + 127 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 2 ) + 1
) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 2 ) +
1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((( ( ( 0 ) + 127 ) + 4 ) & 0xaa) >> 1) | ((( ( ( 0 ) +
127 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( 0 ) + 127 ) + 4 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 4 ) &
0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( 0 ) + 127 ) + 4 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) +
4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( 0 ) + 127 ) + 4 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 4 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((( ( ( ( 0 ) + 127 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 )
+ 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 )
+ 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( 0 ) + 127 ) + 4 ) + 1 ) & 0xaa) >> 1) |
((( ( ( ( 0 ) + 127 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 4 ) + 1 ) & 0xaa) >> 1) |
((( ( ( ( 0 ) + 127 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((( ( ( ( 0 ) + 127 ) + 4 ) +
2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 4 ) +
2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( (
0 ) + 127 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( (
0 ) + 127 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f)
<< 4)), ((((((((( ( ( ( ( 0 ) + 127 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 4 ) + 2 ) + 1 ) & 0x55)
<< 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 4 ) + 2 )
+ 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 127 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1)
| ((( ( ( ( ( 0 ) + 127 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 4 ) + 2 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((( (
```

```
( 0 ) + 127 ) + 8 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 8 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( 0 ) + 127 )
+ 8 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 8 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( 0 )
+ 127 ) + 8 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 8 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( 0 ) + 127 ) + 8
) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 8 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) +
127 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 8 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) +
127 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 8 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4)
| ((((((((( ( ( ( 0 ) + 127 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 8 ) + 1 ) & 0x55) << 1)) & 0xcc) >>
2) | (((((( ( ( ( 0 ) + 127 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 8 ) + 1 ) & 0x55) << 1)) & 0x33) <<
2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) & 0x55)
<< 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 )
+ 8 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 )
+ 8 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) + 1 ) & 0xaa)
>> 1) | ((( ( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 8 ) + 2
) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) |
((((((((( ( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1))
& 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 8 ) + 2 ) + 1 ) &
0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 )
+ 127 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 )
+ 127 ) + 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) & 0xaa)
>> 1) | ((( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) & 0xaa)
>> 1) | ((( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127
) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( (
( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4
) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) +
127 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2
) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 )
+ 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0)
>> 4) | ((((((((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2 ) & 0x55)
<< 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 )
+ 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa)
>> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 127 ) +
8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) <<
2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 8 )
+ 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1)
| ((( ( ( ( ( ( 0 ) + 127 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( 0 )
+ 127 ) + 16 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 16 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( 0 ) + 127 ) +
16 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 16 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( 0 ) +
127 ) + 16 ) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 16 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( 0 ) + 127 ) + 16
) & 0xaa) >> 1) | ((( ( ( 0 ) + 127 ) + 16 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) +
127 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 )
+ 127 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0)
>> 4) | ((((((((( ( ( ( 0 ) + 127 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 1 ) & 0x55) << 1)) &
0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 1 ) & 0x55) << 1))
& 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 127 ) + 16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 16 )
+ 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) +
16 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( 0 ) + 127 ) + 16 ) + 2 ) & 0xaa) >> 1)
| ((( ( ( ( 0 ) + 127 ) + 16 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 16 ) + 2 ) & 0xaa) >>
1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) +
16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( (
( ( 0 ) + 127 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) +
2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 )
+ 127 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 127 ) + 16 ) + 4 )
& 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 16 ) +
4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( (
( 0 ) + 127 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((
```

```
( ( ( 0 ) + 127 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) &
0x0f) << 4)), (((((((((( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 1 )
& 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 )
+ 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 1 )
& 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127
) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) &
0x0f) << 4)), (((((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 2 )
& 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 )
+ 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 2 )
& 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) +
16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f)
<< 4)), (((((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) +
2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( (
( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) +
127 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) &
0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 4 )
+ 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) & 0xaa) >>
1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) & 0xaa)
>> 1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( 0 ) + 127
) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) +
127 ) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << <
4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 1 ) & 0x55)
<< 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8
) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 1 ) & 0xaa) >>
1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 )
+ 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)),
((((((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) & 0x55) <<
1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 )
+ 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) & 0xaa) >>
1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 )
+ 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)),
((((((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) + 1 )
& 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 )
+ 127 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 127 ) + 16
) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) |
((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 2 ) + 1 ) &
0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | (((
( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( (
( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc)
>> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | (((
( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) +
4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0)
>> 4) | (((((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4
) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( (
( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127
) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc)
>> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) +
2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa)
>> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 )
+ 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( (
0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 )
+ 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( (
0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 )
+ 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33)
```

<< 2)) & 0x0f) << 4)), ((((((((((((0) + 127) + 32) & 0xaa) >> 1) | (((((0) + 127) + 32) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 127) + 32) & 0xaa) >> 1) | (((((0) + 127) + 32) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 127) + 32) & 0xaa) >> 1) | (((((0) + 127) + 32) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 127) + 32) & 0xaa) >> 1) | (((((0) + 127) + 32) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 32) + 1) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 1) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 127) + 32) + 1) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 1) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 32) + 2) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 2) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 127) + 32) + 2) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 2) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 32) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 32) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 2) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 32) + 4) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 4) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 127) + 32) + 4) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 4) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 32) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 32) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 4) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 32) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 32) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 4) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 127) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 32) + 8) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 8) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 127) + 32) + 8) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 8) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 32) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 127) + 32) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 8) + 2) & 0xaa) >> 1) | ((((((0) + 127) + 32) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 127) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 32) + 8) + 4) & 0xaa)

```
>> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 32 ) +
8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >>
4) | ((((((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) & 0x55)
<< 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) +
8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) +
127 ) + 32 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) &
0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 )
+ 127 ) + 32 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 1 )
& 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)),
((((((((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 )
& 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 )
+ 127 ) + 32 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( 0 ) + 127 ) + 32
) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >>
2) | (((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2
) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( (
( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1
) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) &
0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( (
( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) &
0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) & 0xaa) >> 1) | ((( ( ( (
0 ) + 127 ) + 32 ) + 16 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) & 0xaa) >> 1) |
((( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( 0 ) + 127 ) + 32 )
+ 16 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( 0 ) + 127
) + 32 ) + 16 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) <<
4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 1 ) & 0x55)
<< 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) +
16 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 1 ) & 0xaa)
>> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 32 ) +
16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) <<
4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 ) & 0x55)
<< 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) +
16 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 ) & 0xaa)
>> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 32 ) +
16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) <<
4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 )
+ 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( (
( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) +
127 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) &
0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) +
16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 )
+ 32 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) &
0xf0) >> 4) | ((((((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4
) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127
) + 32 ) + 16 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) +
4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( (
( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | (((
( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16
) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) &
0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) +
16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0xaa) >>
1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( (
( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0x55)
<< 1)) & 0xcc) >> 2) | (((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) +
32 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 32 ) +
```

16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 127) + 32) + 16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 16) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 127) + 32) + 16) + 8) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 16) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 16) + 8) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 16) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 127) + 32) + 16) + 8) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 16) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 16) + 8) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 16) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 32) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 32) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 127) + 32) + 16) + 8) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 16) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 127) + 32) + 16) + 8) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 32) + 16) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 32) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 32) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 32) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 32) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 32) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 32) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 32) + 16) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 32) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 127) + 64) & 0xaa) >> 1) | (((((0) + 127) + 64) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 127) + 64) & 0xaa) >> 1) | (((((0) + 127) + 64) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 127) + 64) & 0xaa) >> 1) | (((((0) + 127) + 64) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 127) + 64) & 0xaa) >> 1) | (((((0) + 127) + 64) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 127) + 64) + 1) & 0xaa) >> 1) | ((((((0) + 127) + 64) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 127) + 64) + 1) & 0xaa) >> 1) | ((((((0) + 127) + 64) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0)

```
>> 4) | (((((((((( ( ( ( 0 ) + 127 ) + 64 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 1 ) & 0x55) << 1)) &
0xcc) >> 2) | ((((((( ( ( ( 0 ) + 127 ) + 64 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 1 ) & 0x55) << 1))
& 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 127 ) + 64 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 )
+ 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 127 ) + 64 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) +
64 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( 0 ) + 127 ) + 64 ) + 2 ) & 0xaa) >> 1)
| ((( ( ( ( 0 ) + 127 ) + 64 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 127 ) + 64 ) + 2 ) & 0xaa) >>
1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) +
64 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( (
( ( 0 ) + 127 ) + 64 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) +
2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 )
+ 127 ) + 64 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 127 ) + 64 ) + 4 )
& 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 127 ) + 64 ) +
4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( (
( 0 ) + 127 ) + 64 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((
( ( ( 0 ) + 127 ) + 64 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) &
0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 1 )
& 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 )
+ 64 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 1 )
& 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127
) + 64 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) &
0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 2 )
& 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 )
+ 64 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 2 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) +
64 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f)
<< 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) +
2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( (
( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) +
127 ) + 64 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) &
0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 4 )
+ 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) & 0xaa) >>
1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) & 0xaa)
>> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( 0 ) + 127
) + 64 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) +
127 ) + 64 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) <<
4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 1 ) & 0x55)
<< 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8
) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 1 ) & 0xaa) >>
1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 )
+ 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)),
((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) & 0x55) <<
1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 )
+ 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) & 0xaa) >>
1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 )
+ 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)),
((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) + 1 )
& 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 )
+ 127 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 127 ) + 64
) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) |
((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 2 ) + 1 ) &
0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) & 0xaa) >> 1) | (((
( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) &
0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( (
( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc)
>> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | (((
( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) +
```

```
4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0)
>> 4) | (((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4
) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( (
( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127
) + 64 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc)
>> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) +
2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 2 ) & 0xaa)
>> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) +
64 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) <<
2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) +
127 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) +
2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) &
0xf0) >> 4) | ((((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) +
64 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1
) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f)
<< 4)), ((((((((((( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) & 0x55) << 1))
& 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127
) + 64 ) + 16 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) +
127 ) + 64 ) + 16 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 1
) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127
) + 64 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) &
0xf0) >> 4) | ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 1
) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127
) + 64 ) + 16 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) +
2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) +
127 ) + 64 ) + 16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 2 ) & 0x55) << 1)) & 0x33) <<
2)) & 0xf0) >> 4) | ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16
) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 )
+ 127 ) + 64 ) + 16 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) +
16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) |
((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 2 ) + 1 ) &
0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0xaa) >>
1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64
) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) <<
2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) +
16 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( (
0 ) + 127 ) + 64 ) + 16 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((( ( ( ( ( 0 ) + 127 ) + 64
) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( (
( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) & 0x55) << 1)) &
0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0
) + 127 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) +
1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >>
4) | ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 )
+ 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( (
( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) +
127 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) &
0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) +
16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) +
2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( (
0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 2 ) & 0x55) <<
1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) |
((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 )
+ 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) <<
1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) |
((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 )
+ 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) <<
1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) +
```

127) + 64) + 16) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 16) + 8) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 16) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 127) + 64) + 16) + 8) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 16) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 16) + 8) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 16) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 64) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 64) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 64) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 64) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 64) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 16) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 64) + 32) & 0xaa) >> 1) | ((((((0) + 127) + 64) + 32) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 127) + 64) + 32) & 0xaa) >> 1) | ((((((0) + 127) + 64) + 32) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((0) + 127) + 64) + 32) & 0xaa) >> 1) | ((((((0) + 127) + 64) + 32) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 127) + 64) + 32) & 0xaa) >> 1) | ((((((0) + 127) + 64) + 32) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 64) + 32) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 32) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 127) + 64) + 32) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 32) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((0) + 127) + 64) + 32) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 127) + 64) + 32) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((0) + 127) + 64

) + 32) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 127) + 64) + 32) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 64) + 32) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 32) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 32) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 32) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 64) + 32) + 4) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 32) + 4) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 32) + 4) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 32) + 4) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 64) + 32) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 32) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 32) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 32) + 4) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 64) + 32) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 32) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 32) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 4) + 2) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 32) + 4) + 2) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 64) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 64) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((((0) + 127) + 64) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 64) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 127) + 64) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 64) + 32) + 4) + 2) + 1) & 0xcc) >> 2) | ((((((((((((0) + 127) + 64) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | (((((((((0) + 127) + 64) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 64) + 32) + 8) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 32) + 8) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 32) + 8) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 32) + 8) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 64) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 32) + 8) + 1) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((((0) + 127) + 64) + 32) + 8) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 32) + 8) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((((0) + 127) + 64) + 32) + 8) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 127) + 64) + 32) + 8) + 2) & 0xaa) >> 1) | (((((((0) + 127) + 64) + 32) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 64) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 127) + 64) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 32) + 8) + 2) + 1) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 64) + 32) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 32) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((((((0) + 127) + 64) + 32) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((((0) + 127) + 64) + 32) + 8) + 4) & 0xaa) >> 1) | ((((((((0) + 127) + 64) + 32) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((((((0) + 127) + 64) + 32) + 8)

```
+ 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2)
| ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) +
8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) +
4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) |
((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8
) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) +
4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) |
((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8
) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4
) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) |
((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8
) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 )
+ 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) &
0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) +
127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( ( 0 )
+ 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 2
) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa)
>> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f)
<< 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 )
& 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127
) + 64 ) + 32 ) + 16 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) +
16 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( 0 )
+ 127 ) + 64 ) + 32 ) + 16 ) & 0xaa) >> 1) | ((( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) +
127 ) + 64 ) + 32 ) + 16 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 1
) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >>
4) | (((((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16
) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 1 ) & 0xaa) >> 1) | ((( (
( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 )
+ 127 ) + 64 ) + 32 ) + 16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 2 ) & 0x55) <<
1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) +
64 ) + 32 ) + 16 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32
) + 16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) |
((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 2
) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 2 ) + 1 )
& 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( (
( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) +
2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 2
) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2)
| ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32
) + 16 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 )
+ 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) |
((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4
) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) & 0xaa)
>> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127
) + 64 ) + 32 ) + 16 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) & 0x55) << 1)) &
0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( (
( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) +
64 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0x55) <<
1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) |
((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 )
+ 64 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 1 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0xaa)
>> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0
) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 )
& 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 ) &
0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( (
( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 )
```

```
+ 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) +
2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc)
>> 2) | ((((((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( ( 0 ) + 127 )
+ 64 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( ( ( 0 ) +
127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2
) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0xaa)
>> 1) | ((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f)
<< 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32
) + 16 ) + 8 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) & 0xaa) >> 1)
| ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( (
( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) & 0x55)
<< 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) & 0xaa) >> 1) | ((( ( ( ( ( ( 0 ) + 127
) + 64 ) + 32 ) + 16 ) + 8 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 )
+ 32 ) + 16 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 1 ) & 0x55) << 1))
& 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127
) + 64 ) + 32 ) + 16 ) + 8 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( ( 0 ) + 127 ) +
64 ) + 32 ) + 16 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 1 ) & 0x55) <<
1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) +
127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) << 4)), ((((((((((( ( ( ( ( ( ( 0 ) + 127
) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) &
0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( (
( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( (
0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 )
& 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0xaa) >> 1) | ((( (
( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) << 4)), ((((((((((( ( ( (
( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) +
16 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2
) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( (
( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( ( 0 ) +
127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 2
) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 )
+ 4 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >> 2) |
((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) +
16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16
) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0xcc) >>
2) | ((((((( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32
) + 16 ) + 8 ) + 4 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 )
+ 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55)
<< 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( (
( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( (
( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) +
16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4
) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 1 ) & 0x55) << 1)) & 0x33)
<< 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( (
( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) +
127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4
) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8
) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) &
0xcc) >> 2) | ((((((( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0 )
+ 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((( ( ( ( ( ( (
( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) +
16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc) >> 2) | ((((((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8
) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55)
<< 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1
) & 0xaa) >> 1) | ((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0xcc)
>> 2) | ((((((( ( ( ( ( ( ( ( 0 ) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0xaa) >> 1) | ((( ( ( ( ( ( ( 0
) + 127 ) + 64 ) + 32 ) + 16 ) + 8 ) + 4 ) + 2 ) + 1 ) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), }
```

13.29.1 Macro Definition Documentation

13.29.1.1 #define BR1(x) ((((x) & 0xaa) >> 1) | (((x) & 0x55) << 1))

Definition at line 9 of file led_keyboard.c.

13.29.1.2 #define BR2(x) (((BR1(x) & 0xcc) >> 2) | ((BR1(x) & 0x33) << 2))

Definition at line 10 of file led_keyboard.c.

13.29.1.3 #define BR4(x) (((BR2(x) & 0xf0) >> 4) | ((BR2(x) & 0x0f) << 4))

Definition at line 11 of file led_keyboard.c.

13.29.1.4 #define O0(i) BR4(i),

Definition at line 12 of file led_keyboard.c.

13.29.1.5 #define O1(i) O0(i) O0((i) + 1)

Definition at line 13 of file led_keyboard.c.

13.29.1.6 #define O2(i) O1(i) O1((i) + 2)

Definition at line 14 of file led_keyboard.c.

13.29.1.7 #define O3(i) O2(i) O2((i) + 4)

Definition at line 15 of file led_keyboard.c.

13.29.1.8 #define O4(i) O3(i) O3((i) + 8)

Definition at line 16 of file led_keyboard.c.

13.29.1.9 #define O5(i) O4(i) O4((i) + 16)

Definition at line 17 of file led_keyboard.c.

13.29.1.10 #define O6(i) O5(i) O5((i) + 32)

Definition at line 18 of file led_keyboard.c.

13.29.1.11 #define O7(i) O6(i) O6((i) + 64)

Definition at line 19 of file led_keyboard.c.

13.29.1.12 #define O8(i) O7(i) O7((i) + 127)

Definition at line 20 of file led_keyboard.c.

13.29.2 Function Documentation

13.29.2.1 int loadrgb_kb (usbdevice * *kb*, lighting * *light*, int *mode*)

Since Firmware Version 2.05 the answers for getting the stored color-maps from the hardware has changed a bit. So comparing for the correct answer cannot validate against the cmd, and has to be done against a third map.

Definition at line 181 of file led_keyboard.c.

References lighting::b, ckb_err, usbdevice::fwversion, lighting::g, MSG_SIZE, N_KEYS_HW, lighting::r, usbrecv, and usbsend.

Referenced by hwloadmode().

```
181                                                     {
182     if(kb->fwversion >= 0x0120){
183         uchar data_pkt[12][MSG_SIZE] = {
184             { 0x0e, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x01 },
185             { 0xff, 0x01, 60, 0 },
186             { 0xff, 0x02, 60, 0 },
187             { 0xff, 0x03, 24, 0 },
188             { 0x0e, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x02 },
189             { 0xff, 0x01, 60, 0 },
190             { 0xff, 0x02, 60, 0 },
191             { 0xff, 0x03, 24, 0 },
192             { 0x0e, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x03 },
193             { 0xff, 0x01, 60, 0 },
194             { 0xff, 0x02, 60, 0 },
195             { 0xff, 0x03, 24, 0 },
196         };
197         uchar in_pkt[4][MSG_SIZE] = {
198             { 0x0e, 0x14, 0x03, 0x01 },
199             { 0xff, 0x01, 60, 0 },
200             { 0xff, 0x02, 60, 0 },
201             { 0xff, 0x03, 24, 0 },
202         };
203
204
205         uchar cmp_pkt[4][4] = {
206             { 0x0e, 0x14, 0x03, 0x01 },
207             { 0x0e, 0xff, 0x01, 60 },
208             { 0x0e, 0xff, 0x02, 60 },
209             { 0x0e, 0xff, 0x03, 24 },
210         };
211         // Read colors
212         uchar* colors[3] = { light->r, light->g, light->b };
213         for(int clr = 0; clr < 3; clr++){
214             for(int i = 0; i < 4; i++){
215                 if(!usbrecv(kb, data_pkt[i + clr * 4], in_pkt[i]))
216                     return -1;
217                 // Make sure the first four bytes match
218                 // see comment above
219                 // if(memcmp(p, data_pkt[i + clr * 4], 4)){
220                 if (memcmp(in_pkt[i], (kb->fwversion >= 0x0205)? cmp_pkt[i] : data_pkt[i + clr * 4
    ], 4)) {
221                     ckb_err("Bad input header\n");
222                     ckb_err("color = %d, i = %d, mode = %d\nInput(Antwort): %2.2x %2.2x %2.2x %2.2x
    %2.2x %2.2x %2.2x %2.2x\nOutput (Frage): %2.2x %2.2x %2.2x %2.2x\n", clr, i, mode,
                         in_pkt[i][0], in_pkt[i][1], in_pkt[i][2], in_pkt[i][3], in_pkt[i][4], in_pkt[i][5],
    in_pkt[i][6], in_pkt[i][7],
                             // data_pkt[i + clr * 4][0],    data_pkt[i + clr * 4 ][1],  data_pkt[i + clr *
    4 ][2],  data_pkt[i + clr * 4 ][3]);
                         cmp_pkt[i][0], cmp_pkt[i][1], cmp_pkt[i][2], cmp_pkt[i][3]);
                     in_pkt[2][0] = 0x99;
                     in_pkt[2][1] = 0x99;
                     in_pkt[2][2] = 0x99;
                     in_pkt[2][3] = 0x99;
                     usbrecv(kb, in_pkt[2], in_pkt[2]); // just to find it in the wireshark log
                     return -1;
                 }
             }
             // Copy colors to lighting. in_pkt[0] is irrelevant.
             memcpy(colors[clr], in_pkt[1] + 4, 60);
             memcpy(colors[clr] + 60, in_pkt[2] + 4, 60);
             memcpy(colors[clr] + 120, in_pkt[3] + 4, 24);
         }
     } else {
         uchar data_pkt[5][MSG_SIZE] = {
             { 0x0e, 0x14, 0x02, 0x01, 0x01, mode + 1, 0 },
             { 0xff, 0x01, 60, 0 },
             { 0xff, 0x02, 60, 0 },
             { 0xff, 0x03, 60, 0 },
             { 0xff, 0x04, 36, 0 },
```

```
        };
        uchar in_pkt[4][MSG_SIZE] = {
            { 0xff, 0x01, 60, 0 },
            { 0xff, 0x02, 60, 0 },
            { 0xff, 0x03, 60, 0 },
            { 0xff, 0x04, 36, 0 },
        };
        // Write initial packet
        if(!usbsend(kb, data_pkt[0], 1))
            return -1;
        // Read colors
        for(int i = 1; i < 5; i++){
            if(!usbrecv(kb, data_pkt[i],in_pkt[i - 1]))
                return -1;
            if(memcmp(in_pkt[i - 1], data_pkt[i], 4)){
                ckb_err("Bad input header\n");
                return -1;
            }
        }
        // Copy the data back to the mode
        uint8_t mr[N_KEYS_HW / 2], mg[N_KEYS_HW / 2], mb[N_KEYS_HW / 2];
        memcpy(mr,      in_pkt[0] +  4, 60);
        memcpy(mr + 60, in_pkt[1] +  4, 12);
        memcpy(mg,      in_pkt[1] + 16, 48);
        memcpy(mg + 48, in_pkt[2] +  4, 24);
        memcpy(mb,      in_pkt[2] + 28, 36);
        memcpy(mb + 36, in_pkt[3] +  4, 36);
        // Unpack LED data to 8bpc format
        for(int i = 0; i < N_KEYS_HW; i++){
            int     i_2 = i / 2;
            uint8_t r, g, b;

            // 3-bit intensities stored in alternate nybbles.
            if (i & 1) {
                r = 7 - (mr[i_2] >> 4);
                g = 7 - (mg[i_2] >> 4);
                b = 7 - (mb[i_2] >> 4);
            } else {
                r = 7 - (mr[i_2] & 0x0F);
                g = 7 - (mg[i_2] & 0x0F);
                b = 7 - (mb[i_2] & 0x0F);
            }
            // Scale 3-bit values up to 8 bits.
            light->r[i] = r << 5 | r << 2 | r >> 1;
            light->g[i] = g << 5 | g << 2 | g >> 1;
            light->b[i] = b << 5 | b << 2 | b >> 1;
        }
    }
    return 0;
}
```

Here is the caller graph for this function:

13.29.2.2 static void makergb_512 (const lighting * *light*, uchar *data_pkt[5][64]*, uchar(*)(int, uchar) *ditherfn*) [static]

Definition at line 36 of file led_keyboard.c.

References lighting::b, lighting::g, N_KEYS_HW, and lighting::r.

Referenced by savergb_kb(), and updatergb_kb().

```
{
    uchar r[N_KEYS_HW / 2], g[N_KEYS_HW / 2], b[N_KEYS_HW / 2];
```

```
    // Compress RGB values to a 512-color palette
    for(int i = 0; i < N_KEYS_HW; i += 2){
        char r1 = ditherfn(i, light->r[i]), r2 = ditherfn(i + 1, light->r[i + 1]);
        char g1 = ditherfn(i, light->g[i]), g2 = ditherfn(i + 1, light->g[i + 1]);
        char b1 = ditherfn(i, light->b[i]), b2 = ditherfn(i + 1, light->b[i + 1]);
        r[i / 2] = (7 - r2) << 4 | (7 - r1);
        g[i / 2] = (7 - g2) << 4 | (7 - g1);
        b[i / 2] = (7 - b2) << 4 | (7 - b1);
    }
    memcpy(data_pkt[0] + 4, r, 60);
    memcpy(data_pkt[1] + 4, r + 60, 12);
    memcpy(data_pkt[1] + 16, g, 48);
    memcpy(data_pkt[2] + 4, g + 48, 24);
    memcpy(data_pkt[2] + 28, b, 36);
    memcpy(data_pkt[3] + 4, b + 36, 36);
}
```

Here is the caller graph for this function:

13.29.2.3 static void makergb_full (const lighting * *light*, uchar *data_pkt[12][64]*) [static]

Definition at line 56 of file led_keyboard.c.

References lighting::b, lighting::g, and lighting::r.

Referenced by savergb_kb(), and updatergb_kb().

```
56                                                                                  {
57     const uchar* r = light->r, *g = light->g, *b = light->b;
58     // Red
59     memcpy(data_pkt[0] + 4, r, 60);
60     memcpy(data_pkt[1] + 4, r + 60, 60);
61     memcpy(data_pkt[2] + 4, r + 120, 24);
62     // Green (final R packet is blank)
63     memcpy(data_pkt[4] + 4, g, 60);
64     memcpy(data_pkt[5] + 4, g + 60, 60);
65     memcpy(data_pkt[6] + 4, g + 120, 24);
66     // Blue (final G packet is blank)
67     memcpy(data_pkt[8] + 4, b, 60);
68     memcpy(data_pkt[9] + 4, b + 60, 60);
69     memcpy(data_pkt[10] + 4, b + 120, 24);
70 }
```

Here is the caller graph for this function:

13.29.2.4 static uchar ordered8to3 (int *index*, uchar *value*) [static]

Definition at line 24 of file led_keyboard.c.

References bit_reverse_table.

Referenced by savergb_kb(), and updatergb_kb().

```
24                                                  {
25     int m = value * 7;
26     int b = m / 255;
27     if((m % 255) > bit_reverse_table[index & 0xff])
28         b++;
29     return b;
30 }
```

Here is the caller graph for this function:

13.29.2.5 static uchar quantize8to3 (int *index*, uchar *value*) [static]

Definition at line 32 of file led_keyboard.c.

Referenced by savergb_kb(), and updatergb_kb().

```
32                                                  {
33     return value >> 5;
34 }
```

Here is the caller graph for this function:

13.29.2.6 static int rgbcmp (const lighting * *lhs*, const lighting * *rhs*) [static]

Definition at line 72 of file led_keyboard.c.

References lighting::b, lighting::g, N_KEYS_HW, and lighting::r.

Referenced by updatergb_kb().

```
{
    // Compare two light structures, ignore mouse zones
    return memcmp(lhs->r, rhs->r, N_KEYS_HW) || memcmp(lhs->g, rhs->g, N_KEYS_HW) || memcmp(lhs->b, rhs->b, N_KEYS_HW);
}
```

Here is the caller graph for this function:

13.29.2.7 int savergb_kb (usbdevice * *kb*, lighting * *light*, int *mode*)

Definition at line 139 of file led_keyboard.c.

References usbdevice::dither, usbdevice::fwversion, IS_STRAFE, makergb_512(), makergb_full(), MSG_SIZE, ordered8to3(), quantize8to3(), and usbsend.

Referenced by cmd_hwsave_kb().

```
{
    if(kb->fwversion >= 0x0120){
        uchar data_pkt[12][MSG_SIZE] = {
            // Red
            { 0x7f, 0x01, 60, 0 },
            { 0x7f, 0x02, 60, 0 },
            { 0x7f, 0x03, 24, 0 },
            { 0x07, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x01 },
            // Green
            { 0x7f, 0x01, 60, 0 },
            { 0x7f, 0x02, 60, 0 },
            { 0x7f, 0x03, 24, 0 },
            { 0x07, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x02 },
            // Blue
            { 0x7f, 0x01, 60, 0 },
            { 0x7f, 0x02, 60, 0 },
            { 0x7f, 0x03, 24, 0 },
            { 0x07, 0x14, 0x03, 0x01, 0x01, mode + 1, 0x03 }
        };
        makergb_full(light, data_pkt);
        if(!usbsend(kb, data_pkt[0], 12))
            return -1;
        if (IS_STRAFE(kb)){ // end save
            uchar save_end_pkt[MSG_SIZE] = { 0x07, 0x14, 0x04, 0x01, 0x01 };
            if(!usbsend(kb, save_end_pkt, 1))
                return -1;
        }
    } else {
        uchar data_pkt[5][MSG_SIZE] = {
            { 0x7f, 0x01, 60, 0 },
            { 0x7f, 0x02, 60, 0 },
            { 0x7f, 0x03, 60, 0 },
            { 0x7f, 0x04, 36, 0 },
            { 0x07, 0x14, 0x02, 0x00, 0x01, mode + 1 }
        };
        makergb_512(light, data_pkt, kb->dither ? ordered8to3 : quantize8to3);
        if(!usbsend(kb, data_pkt[0], 5))
            return -1;
    }
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.29.2.8 int updatergb_kb (usbdevice * *kb*, int *force*)

Definition at line 77 of file led_keyboard.c.

References usbdevice::active, usbprofile::currentmode, usbdevice::dither, lighting::forceupdate, IS_FULLRANGE, usbprofile::lastlight, usbmode::light, makergb_512(), makergb_full(), MSG_SIZE, ordered8to3(), usbdevice::profile, quantize8to3(), rgbcmp(), lighting::sidelight, and usbsend.

```
77                                          {
78     if(!kb->active)
79         return 0;
80     lighting* lastlight = &kb->profile->lastlight;
81     lighting* newlight = &kb->profile->currentmode->
    light;
82     // Don't do anything if the lighting hasn't changed
83     if(!force && !lastlight->forceupdate && !newlight->forceupdate
84             && !rgbcmp(lastlight, newlight) && lastlight->sidelight == newlight->
    sidelight)   // strafe sidelights
85         return 0;
86     lastlight->forceupdate = newlight->forceupdate = 0;
87
88     if(IS_FULLRANGE(kb)){
89         // Update strafe sidelights if necessary
90         if(lastlight->sidelight != newlight->sidelight) {
91             uchar data_pkt[2][MSG_SIZE] = {
92                 { 0x07, 0x05, 0x08, 0x00, 0x00 },
93                 { 0x07, 0x05, 0x02, 0, 0x03 }
94             };
95             if (newlight->sidelight)
```

```
                data_pkt[0][4]=1;    // turn on
            if(!usbsend(kb, data_pkt[0], 2))
                return -1;
        }
        // 16.8M color lighting works fine on strafe and is the only way it actually works
        uchar data_pkt[12][MSG_SIZE] = {
            // Red
            { 0x7f, 0x01, 0x3c, 0 },
            { 0x7f, 0x02, 0x3c, 0 },
            { 0x7f, 0x03, 0x18, 0 },
            { 0x07, 0x28, 0x01, 0x03, 0x01, 0},
            // Green
            { 0x7f, 0x01, 0x3c, 0 },
            { 0x7f, 0x02, 0x3c, 0 },
            { 0x7f, 0x03, 0x18, 0 },
            { 0x07, 0x28, 0x02, 0x03, 0x01, 0},
            // Blue
            { 0x7f, 0x01, 0x3c, 0 },
            { 0x7f, 0x02, 0x3c, 0 },
            { 0x7f, 0x03, 0x18, 0 },
            { 0x07, 0x28, 0x03, 0x03, 0x02, 0}
        };
        makergb_full(newlight, data_pkt);
        if(!usbsend(kb, data_pkt[0], 12))
            return -1;
    } else {
        // On older keyboards it looks flickery and causes lighting glitches, so we don't use it.
        uchar data_pkt[5][MSG_SIZE] = {
            { 0x7f, 0x01, 60, 0 },
            { 0x7f, 0x02, 60, 0 },
            { 0x7f, 0x03, 60, 0 },
            { 0x7f, 0x04, 36, 0 },
            { 0x07, 0x27, 0x00, 0x00, 0xD8 }
        };
        makergb_512(newlight, data_pkt, kb->dither ? ordered8to3 : quantize8to3);
        if(!usbsend(kb, data_pkt[0], 5))
            return -1;
    }

    memcpy(lastlight, newlight, sizeof(lighting));
    return 0;
}
```

Here is the call graph for this function:

13.29.3 Variable Documentation

13.29.3.1 **uchar bit_reverse_table[256] = { ((((((((((0) & 0xaa) >> 1) | ((((0) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) & 0xaa) >> 1) | (((0) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) & 0xaa) >> 1) | ((((0) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) & 0xaa) >> 1) | (((0) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 1) & 0xaa) >> 1) | ((((0) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 1) & 0xaa) >> 1) | ((((0) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 1) & 0xaa) >> 1) | ((((0) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 1) & 0xaa) >> 1) | ((((0) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 2) & 0xaa) >> 1) | ((((0) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 2) & 0xaa) >> 1) | ((((0) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 2) & 0xaa) >> 1) | ((((0) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 2) & 0xaa) >> 1) | ((((0) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 2) + 1) & 0xaa) >> 1) | (((((0) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 2) + 1) & 0xaa) >> 1) | (((((0) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 2) + 1) & 0xaa) >> 1) | (((((0) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 2) + 1) & 0xaa) >> 1) | (((((0) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 4) & 0xaa) >> 1) | ((((0) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 4) & 0xaa) >> 1) | ((((0) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 4) & 0xaa) >> 1) | ((((0) + 4) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 4) & 0xaa) >> 1) | ((((0) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 4) + 1) & 0xaa) >> 1) | (((((0) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 4) + 1) & 0xaa) >> 1) | (((((0) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 4) + 1) & 0xaa) >> 1) | (((((0) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 4) + 1) & 0xaa) >> 1) | (((((0) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 4) + 2) & 0xaa) >> 1) | (((((0) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 4) + 2) & 0xaa) >> 1) | (((((0) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 4) + 2) & 0xaa) >> 1) | (((((0) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 4) + 2) & 0xaa) >> 1) | (((((0) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 8) & 0xaa) >> 1) | (((0) + 8) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 8) & 0xaa) >> 1) | (((0) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 8) & 0xaa) >> 1) | (((0) + 8) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 8) & 0xaa) >> 1) | (((0) + 8) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 8) + 1) & 0xaa) >> 1) | ((((0) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 8) + 1) & 0xaa) >> 1) | ((((0) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 8) + 1) & 0xaa) >> 1) | ((((0) + 8) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 8) + 1) & 0xaa) >> 1) | ((((0) + 8) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 8) + 2) & 0xaa) >> 1) | ((((0) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 8) + 2) & 0xaa) >> 1) | ((((0) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 8) + 2) & 0xaa) >> 1) | ((((0) + 8) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 8) + 2) & 0xaa) >> 1) | ((((0) + 8) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 8) + 2) + 1) & 0xaa) >> 1) | (((((0) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 2) + 1) & 0xaa) >> 1) | (((((0) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 8) + 2) + 1) & 0xaa) >> 1) | (((((0) + 8) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 2) + 1) & 0xaa) >> 1) | (((((0) + 8) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 8) + 4) & 0xaa) >> 1) | ((((0) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 8) + 4) & 0xaa) >> 1) | ((((0) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 8) + 4) & 0xaa) >> 1) | ((((0) + 8) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 8) + 4) & 0xaa) >> 1) | ((((0) + 8) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 8) + 4) + 1) & 0xaa) >> 1) | (((((0) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 4) + 1) & 0xaa) >> 1) | (((((0) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 8) + 4) + 1) & 0xaa) >> 1) | (((((0) + 8) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 4) + 1) & 0xaa) >> 1) | (((((0) + 8) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 8) + 4) + 2) & 0xaa) >> 1) | (((((0) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 4) + 2) & 0xaa) >> 1) | (((((0) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 8) + 4) + 2) & 0xaa) >> 1) | (((((0) + 8) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 8) + 4) + 2) & 0xaa) >> 1) | (((((0) + 8) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((0) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 8) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 8) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 16) & 0xaa) >> 1) | (((0) + 16) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 16) & 0xaa) >> 1) | (((0) + 16) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 16) & 0xaa) >> 1) | (((0) + 16) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 16) & 0xaa) >> 1) | (((0) + 16) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 16) + 1) & 0xaa) >> 1) | ((((0) + 16) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 16) + 1) & 0xaa) >> 1) | ((((0) + 16) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 16) + 1) & 0xaa) >> 1) | ((((0) + 16) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 16) + 1) & 0xaa) >> 1) | ((((0) + 16) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 16) + 2) & 0xaa) >> 1) | ((((0) + 16) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 16) + 2) & 0xaa) >> 1) | ((((0) + 16) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 16) + 2) & 0xaa) >> 1) | ((((0) + 16) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 16) + 2) & 0xaa) >> 1) | ((((0) + 16) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 16) + 2) + 1) & 0xaa) >> 1) | (((((0) + 16) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 16) + 2) + 1) & 0xaa) >> 1) | (((((0) + 16) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 16) + 2) + 1) & 0xaa) >> 1) | (((((0) + 16) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 16) + 2) + 1) & 0xaa) >> 1) | (((((0) + 16) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 32) & 0xaa) >> 1) | ((((0) + 32) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) & 0xaa) >> 1) | ((((0) + 32) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 32) & 0xaa) >> 1) | ((((0) + 32) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 32) & 0xaa) >> 1) | ((((0) + 32) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 32) + 1) & 0xaa) >> 1) | (((((0) + 32) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 32) + 1) & 0xaa) >> 1) | (((((0) + 32) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 32) + 1) & 0xaa) >> 1) | (((((0) + 32) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 32) + 1) & 0xaa) >> 1) | (((((0) + 32) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 32) + 2) & 0xaa) >> 1) | (((((0) + 32) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 32) + 2) & 0xaa) >> 1) | (((((0) + 32) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 32) + 2) & 0xaa) >> 1) | (((((0) + 32) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 32) + 2) & 0xaa) >> 1) | (((((0) + 32) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 32) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 32) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 32) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 32) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 32) + 4) & 0xaa) >> 1) | ((((0) + 32) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 32) + 4) & 0xaa) >> 1) | ((((0) + 32) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 32) + 4) & 0xaa) >> 1) | ((((0) + 32) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 32) + 4) & 0xaa) >> 1) | ((((0) + 32) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 32) + 4) + 1) & 0xaa) >> 1) | (((((0) + 32) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 32) + 4) + 1) & 0xaa) >> 1) | (((((0) + 32) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 32) + 4) + 1) & 0xaa) >> 1) | (((((0) + 32) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 32) + 4) + 1) & 0xaa) >> 1) | (((((0) + 32) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 32) + 4) + 2) & 0xaa) >> 1) | (((((0) + 32) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 32) + 4) + 2) & 0xaa) >> 1) | (((((0) + 32) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 32) + 4) + 2) & 0xaa) >> 1) | (((((0) + 32) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 32) + 4) + 2) & 0xaa) >> 1) | (((((0) + 32) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((0) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 32) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 32) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 64) & 0xaa) >> 1) | (((0) + 64) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 64) & 0xaa) >> 1) | (((0) + 64) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 64) & 0xaa) >> 1) | (((0) + 64) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 64) & 0xaa) >> 1) | (((0) + 64) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 64) + 1) & 0xaa) >> 1) | ((((0) + 64) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 64) + 1) & 0xaa) >> 1) | ((((0) + 64) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 64) + 1) & 0xaa) >> 1) | ((((0) + 64) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 64) + 1) & 0xaa) >> 1) | ((((0) + 64) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 64) + 2) & 0xaa) >> 1) | ((((0) + 64) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 64) + 2) & 0xaa) >> 1) | ((((0) + 64) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 64) + 2) & 0xaa) >> 1) | ((((0) + 64) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 64) + 2) & 0xaa) >> 1) | ((((0) + 64) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 64) + 2) + 1) & 0xaa) >> 1) | (((((0) + 64) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 64) + 2) + 1) & 0xaa) >> 1) | (((((0) + 64) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 64) + 2) + 1) & 0xaa) >> 1) | (((((0) + 64) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 64) + 2) + 1) & 0xaa) >> 1) | (((((0) + 64) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 64) + 4) & 0xaa) >> 1) | ((((0) + 64) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 64) + 4) & 0xaa) >> 1) | ((((0) + 64) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 64) + 4) & 0xaa) >> 1) | ((((0) + 64) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 64) + 4) & 0xaa) >> 1) | ((((0) + 64) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 64) + 4) + 1) & 0xaa) >> 1) | (((((0) + 64) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 64) + 4) + 1) & 0xaa) >> 1) | (((((0) + 64) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 64) + 4) + 1) & 0xaa) >> 1) | (((((0) + 64) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 64) + 4) + 1) & 0xaa) >> 1) | (((((0) + 64) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 64) + 4) + 2) & 0xaa) >> 1) | (((((0) + 64) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 64) + 4) + 2) & 0xaa) >> 1) | (((((0) + 64) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 64) + 4) + 2) & 0xaa) >> 1) | (((((0) + 64) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 64) + 4) + 2) & 0xaa) >> 1) | (((((0) + 64) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((((0) + 64) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 64) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 64) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 64) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((((0) + 64) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 64) + 4) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((((0) + 64) + 4) + 2) + 1) & 0xaa) >> 1) | ((((((0) + 64) + 4) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((0) + 128) & 0xaa) >> 1) | (((0) + 128) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 128) & 0xaa) >> 1) | (((0) + 128) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((0) + 128) & 0xaa) >> 1) | (((0) + 128) & 0x55) << 1)) & 0xcc) >> 2) | (((((((0) + 128) & 0xaa) >> 1) | (((0) + 128) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 128) + 1) & 0xaa) >> 1) | ((((0) + 128) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 128) + 1) & 0xaa) >> 1) | ((((0) + 128) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 128) + 1) & 0xaa) >> 1) | ((((0) + 128) + 1) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 128) + 1) & 0xaa) >> 1) | ((((0) + 128) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 128) + 2) & 0xaa) >> 1) | ((((0) + 128) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 128) + 2) & 0xaa) >> 1) | ((((0) + 128) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 128) + 2) & 0xaa) >> 1) | ((((0) + 128) + 2) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 128) + 2) & 0xaa) >> 1) | ((((0) + 128) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 128) + 2) + 1) & 0xaa) >> 1) | (((((0) + 128) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 128) + 2) + 1) & 0xaa) >> 1) | (((((0) + 128) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 128) + 2) + 1) & 0xaa) >> 1) | (((((0) + 128) + 2) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 128) + 2) + 1) & 0xaa) >> 1) | (((((0) + 128) + 2) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), (((((((((((0) + 128) + 4) & 0xaa) >> 1) | ((((0) + 128) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 128) + 4) & 0xaa) >> 1) | ((((0) + 128) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | ((((((((((0) + 128) + 4) & 0xaa) >> 1) | ((((0) + 128) + 4) & 0x55) << 1)) & 0xcc) >> 2) | ((((((((0) + 128) + 4) & 0xaa) >> 1) | ((((0) + 128) + 4) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 128) + 4) + 1) & 0xaa) >> 1) | (((((0) + 128) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 128) + 4) + 1) & 0xaa) >> 1) | (((((0) + 128) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 128) + 4) + 1) & 0xaa) >> 1) | (((((0) + 128) + 4) + 1) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 128) + 4) + 1) & 0xaa) >> 1) | (((((0) + 128) + 4) + 1) & 0x55) << 1)) & 0x33) << 2)) & 0x0f) << 4)), ((((((((((((0) + 128) + 4) + 2) & 0xaa) >> 1) | (((((0) + 128) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0) + 128) + 4) + 2) & 0xaa) >> 1) | (((((0) + 128) + 4) + 2) & 0x55) << 1)) & 0x33) << 2)) & 0xf0) >> 4) | (((((((((((0) + 128) + 4) + 2) & 0xaa) >> 1) | (((((0) + 128) + 4) + 2) & 0x55) << 1)) & 0xcc) >> 2) | (((((((((0)

Referenced by ordered8to3().

13.30 src/ckb-daemon/led_mouse.c File Reference

```
#include "led.h"
#include "notify.h"
#include "profile.h"
#include "usb.h"
```

Include dependency graph for led_mouse.c:

Functions

- static int rgbcmp (const lighting ∗lhs, const lighting ∗rhs)
- static int isblack (const usbdevice ∗kb, const lighting ∗light)
- int updatergb_mouse (usbdevice ∗kb, int force)
- int savergb_mouse (usbdevice ∗kb, lighting ∗light, int mode)
- int loadrgb_mouse (usbdevice ∗kb, lighting ∗light, int mode)

13.30.1 Function Documentation

13.30.1.1 static int isblack (const usbdevice ∗ *kb*, const lighting ∗ *light*) [static]

Definition at line 13 of file led_mouse.c.

References lighting::b, lighting::g, IS_M65, LED_MOUSE, N_MOUSE_ZONES, and lighting::r.

Referenced by updatergb_mouse().

```
13                                                                  {
14     if(!IS_M65(kb))
15         return 0;
16     uchar black[N_MOUSE_ZONES] = { 0 };
17     return !memcmp(light->r + LED_MOUSE, black, sizeof(black)) && !memcmp(light->
      g + LED_MOUSE, black, sizeof(black)) && !memcmp(light->b + LED_MOUSE, black, sizeof(
      black));
18 }
```

Here is the caller graph for this function:

13.30.1.2 int loadrgb_mouse (usbdevice * *kb*, lighting * *light*, int *mode*)

Definition at line 81 of file led_mouse.c.

References lighting::b, ckb_err, lighting::g, IS_SABRE, IS_SCIMITAR, LED_DPI, LED_MOUSE, MSG_SIZE, lighting::r, and usbrecv.

Referenced by cmd_hwload_mouse().

```
81                                                          {
82     uchar data_pkt[MSG_SIZE] = { 0x0e, 0x13, 0x10, 1, 0 };
83     uchar in_pkt[MSG_SIZE] = { 0 };
84     // Load each RGB zone
85     int zonecount = IS_SCIMITAR(kb) ? 4 : IS_SABRE(kb) ? 3 : 2;
86     for(int i = 0; i < zonecount; i++){
87         if(!usbrecv(kb, data_pkt, in_pkt))
88             return -1;
89         if(memcmp(in_pkt, data_pkt, 4)){
90             ckb_err("Bad input header\n");
91             return -2;
92         }
93         // Copy data
94         int led = LED_MOUSE + i;
95         if(led >= LED_DPI)
96             led++;          // Skip DPI light
97         light->r[led] = in_pkt[4];
98         light->g[led] = in_pkt[5];
99         light->b[led] = in_pkt[6];
100         // Set packet for next zone
101         data_pkt[2]++;
102     }
103     return 0;
104 }
```

Here is the caller graph for this function:

13.30.1.3 static int rgbcmp (const lighting * *lhs*, const lighting * *rhs*) [static]

Definition at line 7 of file led_mouse.c.

References lighting::b, lighting::g, LED_MOUSE, N_MOUSE_ZONES, and lighting::r.

Referenced by updatergb_mouse().

```
{
    return memcmp(lhs->r + LED_MOUSE, rhs->r + LED_MOUSE,
    N_MOUSE_ZONES) || memcmp(lhs->g + LED_MOUSE, rhs->g +
    LED_MOUSE, N_MOUSE_ZONES) || memcmp(lhs->b + LED_MOUSE, rhs->
    b + LED_MOUSE, N_MOUSE_ZONES);
}
```

Here is the caller graph for this function:

13.30.1.4 int savergb_mouse (usbdevice * *kb*, lighting * *light*, int *mode*)

Definition at line 62 of file led_mouse.c.

References lighting::b, lighting::g, IS_SABRE, IS_SCIMITAR, LED_DPI, LED_MOUSE, MSG_SIZE, lighting::r, and usbsend.

Referenced by cmd_hwsave_mouse().

```
62                                                          {
63     uchar data_pkt[MSG_SIZE] = { 0x07, 0x13, 0x10, 1, 0 };
64     // Save each RGB zone, minus the DPI light which is sent in the DPI packets
65     int zonecount = IS_SCIMITAR(kb) ? 4 : IS_SABRE(kb) ? 3 : 2;
66     for(int i = 0; i < zonecount; i++){
67         int led = LED_MOUSE + i;
68         if(led >= LED_DPI)
69             led++;          // Skip DPI light
70         data_pkt[4] = light->r[led];
71         data_pkt[5] = light->g[led];
72         data_pkt[6] = light->b[led];
73         if(!usbsend(kb, data_pkt, 1))
74             return -1;
75         // Set packet for next zone
76         data_pkt[2]++;
77     }
78     return 0;
79 }
```

Here is the caller graph for this function:

13.30.1.5 int updatergb_mouse (usbdevice * *kb*, int *force*)

Definition at line 20 of file led_mouse.c.

References usbdevice::active, lighting::b, usbprofile::currentmode, lighting::forceupdate, lighting::g, isblack(), usbprofile::lastlight, LED_MOUSE, usbmode::light, MSG_SIZE, N_MOUSE_ZONES, usbdevice::profile, lighting::r, rgbcmp(), and usbsend.

```
{
    if(!kb->active)
        return 0;
    lighting* lastlight = &kb->profile->lastlight;
    lighting* newlight = &kb->profile->currentmode->light;
    // Don't do anything if the lighting hasn't changed
    if(!force && !lastlight->forceupdate && !newlight->forceupdate
            && !rgbcmp(lastlight, newlight))
        return 0;
    lastlight->forceupdate = newlight->forceupdate = 0;

    // Send the RGB values for each zone to the mouse
    uchar data_pkt[2][MSG_SIZE] = {
        { 0x07, 0x22, N_MOUSE_ZONES, 0x01, 0 }, // RGB colors
        { 0x07, 0x05, 0x02, 0 }                 // Lighting on/off
    };
    uchar* rgb_data = &data_pkt[0][4];
    for(int i = 0; i < N_MOUSE_ZONES; i++){
        *rgb_data++ = i + 1;
        *rgb_data++ = newlight->r[LED_MOUSE + i];
        *rgb_data++ = newlight->g[LED_MOUSE + i];
        *rgb_data++ = newlight->b[LED_MOUSE + i];
    }
    // Send RGB data
    if(!usbsend(kb, data_pkt[0], 1))
        return -1;
    int was_black = isblack(kb, lastlight), is_black = isblack(kb, newlight);
    if(is_black){
        // If the lighting is black, send the deactivation packet (M65 only)
        if(!usbsend(kb, data_pkt[1], 1))
            return -1;
    } else if(was_black || force){
        // If the lighting WAS black, or if we're on forced update, send the activation packet
        data_pkt[1][4] = 1;
        if(!usbsend(kb, data_pkt[1], 1))
            return -1;
    }

    memcpy(lastlight, newlight, sizeof(lighting));
    return 0;
}
```

Here is the call graph for this function:

13.31 src/ckb-daemon/main.c File Reference

```
#include "device.h"
#include "devnode.h"
#include "input.h"
#include "led.h"
#include "notify.h"
```

Include dependency graph for main.c:

Functions

- static void quitWithLock (char mut)

  quitWithLock
- int restart ()
- void timespec_add (struct timespec ∗timespec, long nanoseconds)
- static void quit ()

  quit Stop working the daemon. function is called if the daemon received a sigterm In this case, locking the device-mutex is ok.
- void sighandler2 (int type)
- void sighandler (int type)
- void localecase (char ∗dst, size_t length, const char ∗src)
- int main (int argc, char ∗∗argv)

Variables

- static int main_ac
- static char ∗∗ main_av
- volatile int reset_stop
- int features_mask
- int hwload_mode

13.31.1 Function Documentation

13.31.1.1 void localecase (char ∗ *dst*, size_t *length*, const char ∗ *src*)

Definition at line 71 of file main.c.

```
71                                                          {
72     char* ldst = dst + length;
73     char s;
74     while((s = *src++)){
75         if(s == '_')
76             s = '-';
77         else
78             s = tolower(s);
79         *dst++ = s;
80         if(dst == ldst){
81             dst--;
82             break;
83         }
84     }
85     *dst = 0;
86 }
```

13.31.1.2 int main (int *argc*, char ** *argv*)

Definition at line 88 of file main.c.

References ckb_fatal_nofile, ckb_info(), ckb_info_nofile, ckb_warn_nofile, devpath, FEAT_BIND, FEAT_MOUSEACCEL, FEAT_NOTIFY, features_mask, gid, hwload_mode, keyboard, main_ac, main_av, mkdevpath(), quit(), restart(), sighandler(), and usbmain().

Referenced by restart().

```
88                                  {
89      // Set output pipes to buffer on newlines, if they weren't set that way already
90      setlinebuf(stdout);
91      setlinebuf(stderr);
92      main_ac = argc;
93      main_av = argv;
94
95      printf("    ckb: Corsair RGB driver %s\n", CKB_VERSION_STR);
96      // If --help occurs anywhere in the command-line, don't launch the program but instead print usage
97      for(int i = 1; i < argc; i++){
98          if(!strcmp(argv[i], "--help")){
99              printf(
100 #ifdef OS_MAC
101                         "Usage: ckb-daemon [--gid=<gid>] [--hwload=<always|try|never>] [--nonotify]
        [--nobind] [--nomouseaccel] [--nonroot]\n"
102 #else
103                         "Usage: ckb-daemon [--gid=<gid>] [--hwload=<always|try|never>] [--nonotify]
        [--nobind] [--nonroot]\n"
104 #endif
105                         "\n"
106                         "See https://github.com/ccMSC/ckb/blob/master/DAEMON.md for full instructions.\n"
107                         "\n"
108                         "Command-line parameters:\n"
109                         "    --gid=<gid>\n"
110                         "        Restrict access to %s* nodes to users in group <gid>.\n"
111                         "        (Ordinarily they are accessible to anyone)\n"
112                         "    --hwload=<always|try|never>\n"
113                         "        --hwload=always will force loading of stored hardware profiles on
        compatible devices. May result in long start up times.\n"
114                         "        --hwload=try will try to load the profiles, but give up if not immediately
        successful (default).\n"
115                         "        --hwload=never will ignore hardware profiles completely.\n"
116                         "    --nonotify\n"
117                         "        Disables key monitoring/notifications.\n"
118                         "        Note that this makes reactive lighting impossible.\n"
119                         "    --nobind\n"
120                         "        Disables all key rebinding, macros, and notifications. Implies --nonotify.
       \n"
121 #ifdef OS_MAC
122                         "    --nomouseaccel\n"
123                         "        Disables mouse acceleration, even if the system preferences enable it.\n"
124 #endif
125                         "    --nonroot\n"
126                         "        Allows running ckb-daemon as a non root user.\n"
127                         "        This will almost certainly not work. Use only if you know what you're
        doing.\n"
128                         "\n", devpath);
129             exit(0);
130         }
131     }
132
133     // Check PID, quit if already running
134     char pidpath[strlen(devpath) + 6];
135     snprintf(pidpath, sizeof(pidpath), "%s0/pid", devpath);
136     FILE* pidfile = fopen(pidpath, "r");
137     if(pidfile){
138         pid_t pid;
139         fscanf(pidfile, "%d", &pid);
140         fclose(pidfile);
141         if(pid > 0){
142             // kill -s 0 checks if the PID is active but doesn't send a signal
143             if(!kill(pid, 0)){
144                 ckb_fatal_nofile("ckb-daemon is already running (PID %d). Try `killall
        ckb-daemon`.\n", pid);
145                 ckb_fatal_nofile("(If you're certain the process is dead, delete %s and try
        again)\n", pidpath);
146                 return 0;
147             }
148         }
149     }
150
151     // Read parameters
152     int forceroot = 1;
153     for(int i = 1; i < argc; i++){
```

```
        char* argument = argv[i];
        unsigned newgid;
        char hwload[7];
        if(sscanf(argument, "--gid=%u", &newgid) == 1){
            // Set dev node GID
            gid = newgid;
            ckb_info_nofile("Setting /dev node gid: %u\n", newgid);
        } else if(!strcmp(argument, "--nobind")){
            // Disable key notifications and rebinding
            features_mask &= ~FEAT_BIND & ~FEAT_NOTIFY;
            ckb_info_nofile("Key binding and key notifications are disabled\n");
        } else if(!strcmp(argument, "--nonotify")){
            // Disable key notifications
            features_mask &= ~FEAT_NOTIFY;
            ckb_info_nofile("Key notifications are disabled\n");
        } else if(sscanf(argument, "--hwload=%6s", hwload) == 1){
            if(!strcmp(hwload, "always") || !strcmp(hwload, "yes") || !strcmp(hwload, "y") || !strcmp(hwload, "a")){
                hwload_mode = 2;
                ckb_info_nofile("Setting hardware load: always\n");
            } else if(!strcmp(hwload, "tryonce") || !strcmp(hwload, "try") || !strcmp(hwload, "once") || !strcmp(hwload, "t") || !strcmp(hwload, "o")){
                hwload_mode = 1;
                ckb_info_nofile("Setting hardware load: tryonce\n");
            } else if(!strcmp(hwload, "never") || !strcmp(hwload, "none") || !strcmp(hwload, "no") || !strcmp(hwload, "n")){
                hwload_mode = 0;
                ckb_info_nofile("Setting hardware load: never\n");
            }
        } else if(!strcmp(argument, "--nonroot")){
            // Allow running as a non-root user
            forceroot = 0;
        }
#ifdef OS_MAC
        else if(!strcmp(argument, "--nomouseaccel")){
            // On OSX, provide an option to disable mouse acceleration
            features_mask &= ~FEAT_MOUSEACCEL;
            ckb_info_nofile("Mouse acceleration disabled\n");
        }
#endif
    }

    // Check UID
    if(getuid() != 0){
        if(forceroot){
            ckb_fatal_nofile("ckb-daemon must be run as root. Try 'sudo %s'\n", argv[0]);
            exit(0);
        } else
            ckb_warn_nofile("Warning: not running as root, allowing anyway per command-line parameter...\n");
    }

    // Make root keyboard
    umask(0);
    memset(keyboard, 0, sizeof(keyboard));
    if(!mkdevpath(keyboard))
        ckb_info("Root controller ready at %s0\n", devpath);

    // Set signals
    sigset_t signals;
    sigfillset(&signals);
    sigdelset(&signals, SIGTERM);
    sigdelset(&signals, SIGINT);
    sigdelset(&signals, SIGQUIT);
    sigdelset(&signals, SIGUSR1);
    // Set up signal handlers for quitting the service.
    sigprocmask(SIG_SETMASK, &signals, 0);
    signal(SIGTERM, sighandler);
    signal(SIGINT, sighandler);
    signal(SIGQUIT, sighandler);
    signal(SIGUSR1, (void (*)())restart);

    // Start the USB system
    int result = usbmain();
    quit();
    return result;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.31.1.3 static void quit ( ) [static]

Definition at line 30 of file main.c.

References quitWithLock().

Referenced by KbFirmware::_fileForBoard(), KbFirmware::_latestForBoard(), FwUpgradeDialog::fwUpdateFinished(), main(), and sighandler().

```
30                  {
31      quitWithLock(1);
32  }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.31.1.4 void quitWithLock (char *mut*) [static]

Parameters

mut	try to close files maybe without locking the mutex if mut == true then lock

Definition at line 40 of file main.c.

References ckb_info(), closeusb(), DEV_MAX, devmutex, IS_CONNECTED, keyboard, reset_stop, revertusb(), rmdevpath(), and usbkill().

Referenced by quit(), and restart().

```
40                              {
41     // Abort any USB resets in progress
42     reset_stop = 1;
43     for(int i = 1; i < DEV_MAX; i++){
44         // Before closing, set all keyboards back to HID input mode so that the stock driver can still talk
       to them
45         if (mut) pthread_mutex_lock(devmutex + i);
46         if(IS_CONNECTED(keyboard + i)){
47             revertusb(keyboard + i);
48             closeusb(keyboard + i);
49         }
50         pthread_mutex_unlock(devmutex + i);
51     }
52     ckb_info("Closing root controller\n");
53     rmdevpath(keyboard);
54     usbkill();
55 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.31.1.5 int restart ( )

Definition at line 228 of file main.c.

References ckb_err, main(), main_ac, main_av, and quitWithLock().

Referenced by cmd_restart(), and main().

```
228             {
229     ckb_err("restart called, running quit without mutex-lock.\n");
230     quitWithLock(0);
231     return main(main_ac, main_av);
232 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.31.1.6 void sighandler (int *type*)

Definition at line 62 of file main.c.

References quit(), and sighandler2().

Referenced by main().

```
62                          {
63     signal(SIGTERM, sighandler2);
64     signal(SIGINT, sighandler2);
65     signal(SIGQUIT, sighandler2);
66     printf("\n[I] Caught signal %d\n", type);
67     quit();
68     exit(0);
69 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.31.1.7 void sighandler2 (int *type*)

Definition at line 57 of file main.c.

Referenced by sighandler().

```
57                          {
58     // Don't use ckb_warn, we want an extra \n at the beginning
59     printf("\n[W] Ignoring signal %d (already shutting down)\n", type);
60 }
```

Here is the caller graph for this function:

13.31.1.8 void timespec_add (struct timespec * *timespec,* long *nanoseconds*)

Definition at line 19 of file main.c.

```
19                                                          {
20     nanoseconds += timespec->tv_nsec;
21     timespec->tv_sec += nanoseconds / 1000000000;
22     timespec->tv_nsec = nanoseconds % 1000000000;
23 }
```

13.31.2 Variable Documentation

13.31.2.1 int features_mask

Definition at line 17 of file usb.c.

Referenced by _setupusb(), and main().

13.31.2.2 int hwload_mode

Definition at line 7 of file device.c.

Referenced by main().

13.31.2.3 int main_ac [static]

Definition at line 7 of file main.c.

Referenced by main(), and restart().

13.31.2.4 char** main_av [static]

Definition at line 8 of file main.c.

Referenced by main(), and restart().

13.31.2.5 volatile int reset_stop

Definition at line 14 of file usb.c.

Referenced by _usbrecv(), _usbsend(), quitWithLock(), and usb_tryreset().

13.32 src/ckb-gradient/main.c File Reference

```
#include "../ckb/ckb-anim.h"
#include <math.h>
#include <time.h>
#include <stdio.h>
```

Include dependency graph for main.c:

Data Structures

- struct keyAnim

Macros

- #define NONE -1.f
- #define HOLD -2.f

Functions

- void ckb_info ()
- void ckb_init (ckb_runctx ∗context)
- void ckb_parameter (ckb_runctx ∗context, const char ∗name, const char ∗value)
- void ckb_keypress (ckb_runctx ∗context, ckb_key ∗key, int x, int y, int state)
- void ckb_start (ckb_runctx ∗context, int state)
- void ckb_time (ckb_runctx ∗context, double delta)
- int ckb_frame (ckb_runctx ∗context)

Variables

- ckb_gradient animcolor = { 0 }
- int kphold = 0
- int kprelease = 0
- int randomize = 0
- struct keyAnim ∗ anim

13.32.1 Data Structure Documentation

13.32.1.1 struct keyAnim

Definition at line 47 of file main.c.

Collaboration diagram for keyAnim:

Data Fields

ckb_gradient	gradient	
float	target	

13.32.2 Macro Definition Documentation

13.32.2.1 #define HOLD -2.f

Definition at line 45 of file main.c.

Referenced by ckb_frame(), and ckb_keypress().

13.32.2.2 #define NONE -1.f

Definition at line 44 of file main.c.

Referenced by ckb_init(), ckb_keypress(), and ckb_start().

13.32.3 Function Documentation

13.32.3.1 int ckb_frame (ckb_runctx * *context*)

Definition at line 137 of file main.c.

References ckb_key::a, animcolor, ckb_key::b, ckb_grad_color(), ckb_key::g, keyAnim::gradient, HOLD, ckb_runctx::keycount, ckb_runctx::keys, phase, ckb_key::r, randomize, and keyAnim::target.

```
137                                 {
138     // Draw key colors
139     unsigned count = context->keycount;
140     for(unsigned i = 0; i < count; i++){
141         float phase = anim[i].target;
142
143         if(phase == HOLD)
144             phase = 0.f;
145         else if(phase < 0.f)
146             phase = 1.f;
147         ckb_key* key = context->keys + i;
148         float a, r, g, b;
149         ckb_gradient thisGradient;
150         if (randomize) {
151             thisGradient = anim[i].gradient;
152         } else {
153             thisGradient = animcolor;
154         }
155         ckb_grad_color(&a, &r, &g, &b, &thisGradient, phase * 100.);
156         key->a = a;
157         key->r = r;
158         key->g = g;
159         key->b = b;
160     }
161     return 0;
162 }
```

Here is the call graph for this function:

13.32.3.2 void ckb_info ( )

Definition at line 5 of file main.c.

References CKB_COPYRIGHT, CKB_DESCRIPTION, CKB_GUID, CKB_KP_NAME, CKB_KPMODE, CKB_LICENSE, CKB_LIVEPARAMS, CKB_NAME, CKB_PARAM_AGRADIENT, CKB_PARAM_BOOL, CKB_PRESET_END, CKB_PRESET_PARAM, CKB_PRESET_START, CKB_TIME_DURATION, CKB_TIMEMODE, CKB_VERSION, and TRUE.

Referenced by main(), and quitWithLock().

```
5                 {
6     // Plugin info
7     CKB_NAME("Gradient");
8     CKB_VERSION("0.9");
9     CKB_COPYRIGHT("2014-2016", "MSC");
10     CKB_LICENSE("GPLv2");
11     CKB_GUID("{54DD2975-E192-457D-BCFC-D912A24E33B4}");
12     CKB_DESCRIPTION("A transition from one color to another.");
13
14     // Effect parameters
15     CKB_PARAM_AGRADIENT("color", "Color:", "", "ffffffff");
16     CKB_PARAM_BOOL("kphold", "Freeze until key is released", TRUE);
17     CKB_PARAM_BOOL("randomize", "Randomly select from gradient", 0);
```

```
18
19     // Timing/input parameters
20     CKB_KPMODE(CKB_KP_NAME);
21     CKB_TIMEMODE(CKB_TIME_DURATION);
22     CKB_LIVEPARAMS(TRUE);
23
24     // Presets
25     CKB_PRESET_START("Fade in");
26     CKB_PRESET_PARAM("color", "ff000000");
27     CKB_PRESET_PARAM("duration", "1.0");
28     CKB_PRESET_PARAM("stop", "0");
29     CKB_PRESET_PARAM("kpstop", "0");
30     CKB_PRESET_END;
31
32     CKB_PRESET_START("Rainbow");
33     CKB_PRESET_PARAM("color", "0:ffff0000 17:ffffff00 33:ff00ff00 50:ff00ffff 67:ff0000ff
       83:ffff00ff 100:ffff0000");
34     CKB_PRESET_PARAM("duration", "2.0");
35     CKB_PRESET_END;
36
37     CKB_PRESET_START("Type lighting");
38     CKB_PRESET_PARAM("duration", "1.0");
39     CKB_PRESET_PARAM("trigger", "0");
40     CKB_PRESET_PARAM("kptrigger", "1");
41     CKB_PRESET_END;
42 }
```

Here is the caller graph for this function:

13.32.3.3 void ckb_init (ckb_runctx * *context*)

Definition at line 57 of file main.c.

References ckb_runctx::keycount, and NONE.

```
57                                  {
58     // Initialize all keys to 100% (animation over)
59
60     srand((unsigned)time(NULL));
61     unsigned count = context->keycount;
62     anim =  malloc(count * sizeof *anim);
63     for(unsigned i = 0; i < count; i++) {
64         anim[i].target = NONE;
65     }
66 }
```

13.32.3.4 void ckb_keypress (ckb_runctx * *context*, ckb_key * *key*, int *x*, int *y*, int *state*)

Definition at line 75 of file main.c.

References ckb_gradient::a, ckb_gradient::b, ckb_grad_color(), ckb_gradient::g, keyAnim::gradient, HOLD, ckb_runctx::keys, kphold, kprelease, NONE, ckb_gradient::ptcount, ckb_gradient::pts, ckb_gradient::r, randomize, and keyAnim::target.

```
75                                                                  {
76     // Start or stop animation on key
77     int i = key - context->keys;
78     if(state){
79         if (randomize) {
```

```
            float a, r, g, b;
            float colorChoice = (float)rand()/(float)(RAND_MAX);
            ckb_grad_color(&a, &r, &g, &b, &animcolor, colorChoice * 100.);
            ckb_gradient newGradient = { 0 };
            newGradient.ptcount = 2;
            newGradient.pts[0] = 0;
            newGradient.pts[1] = 100;
            newGradient.a[0] = 255;
            newGradient.b[0] = b;
            newGradient.g[0] = g;
            newGradient.r[0] = r;
            newGradient.a[1] = 0;
            newGradient.b[1] = b;
            newGradient.g[1] = g;
            newGradient.r[1] = r;

            anim[i].gradient = newGradient;
        }

        if(kphold) {
            anim[i].target = HOLD;
        } else {
            anim[i].target = 0.f;
        }
    } else {
        if(kprelease) {
            anim[i].target = NONE;
        }
        else if(kphold) {
            anim[i].target = 0.f;
        }
    }
}
```

Here is the call graph for this function:

13.32.3.5 void ckb_parameter (ckb_runctx * *context*, const char * *name*, const char * *value*)

Definition at line 68 of file main.c.

References CKB_PARSE_AGRADIENT, CKB_PARSE_BOOL, kphold, kprelease, and randomize.

```
68                                                                          {
69     CKB_PARSE_AGRADIENT("color", &animcolor){}
70     CKB_PARSE_BOOL("kphold", &kphold){}
71     CKB_PARSE_BOOL("kprelease", &kprelease){}
72     CKB_PARSE_BOOL("randomize", &randomize){}
73 }
```

13.32.3.6 void ckb_start (ckb_runctx * *context*, int *state*)

Definition at line 114 of file main.c.

References ckb_runctx::keycount, NONE, and keyAnim::target.

```
114                                                 {
115     // Start/stop all keys
116     unsigned count = context->keycount;
117     if(state) {
```

```
        memset(anim, 0, count * sizeof *anim);
    } else {
        for(unsigned i = 0; i < count; i++) {
            anim[i].target = NONE;
        }
    }
}
```

13.32.3.7 void ckb_time (ckb_runctx * *context,* double *delta*)

Definition at line 126 of file main.c.

References ckb_runctx::keycount, phase, and keyAnim::target.

```
                                                {
    // Advance animation on each key
    unsigned count = context->keycount;
    for(unsigned i = 0; i < count; i++){
        float phase = anim[i].target;
        if(phase > 1.f || phase < 0.f)
            continue;
        anim[i].target = phase + delta;
    }
}
```

13.32.4 Variable Documentation

13.32.4.1 struct keyAnim* anim

Definition at line 55 of file main.c.

Referenced by KbLight::addAnim(), anim_add(), anim_remove(), KbLight::animKeypress(), RebindWidget::applyChanges(), ckb_frame(), ckb_time(), KbLight::close(), KbLight::duplicateAnim(), KbLight::findAnim(), KbLight::frameUpdate(), KeyAction::keyEvent(), KbLight::load(), KbLight::map(), KbLight::needsSave(), KbMode::newId(), KbAnimWidget::on_animList_itemChanged(), KbLight::open(), KbLight::previewAnim(), KbAnimWidget::refreshList(), KbAnimWidget::reorderAnims(), KbLight::restartAnimation(), KbLight::save(), and RebindWidget::setSelection().

13.32.4.2 ckb_gradient animcolor = { 0 }

Definition at line 52 of file main.c.

Referenced by ckb_frame().

13.32.4.3 int kphold = 0

Definition at line 53 of file main.c.

Referenced by ckb_keypress(), and ckb_parameter().

13.32.4.4 int kprelease = 0

Definition at line 53 of file main.c.

Referenced by ckb_keypress(), ckb_parameter(), ckb_start(), and AnimScript::load().

13.32.4.5 int randomize = 0

Definition at line 53 of file main.c.

Referenced by ckb_frame(), ckb_keypress(), and ckb_parameter().

13.33 src/ckb-heat/main.c File Reference

```
#include "../ckb/ckb-anim.h"
#include <math.h>
```

Include dependency graph for main.c:

Data Structures

- struct keyanim

Functions

- void ckb_info ()
- void ckb_init (ckb_runctx *context)
- void ckb_parameter (ckb_runctx *context, const char *name, const char *value)
- void anim_add (int index)
- void anim_remove (int index)
- void ckb_keypress (ckb_runctx *context, ckb_key *key, int x, int y, int state)
- void ckb_start (ckb_runctx *context, int state)
- void ckb_time (ckb_runctx *context, double delta)
- int ckb_frame (ckb_runctx *context)

Variables

- ckb_gradient animcolor = { 0 }
- int randomBright = 0
- long ffade = 30
- double pressestofull = 10.f
- keyanim * anims = NULL

13.33.1 Data Structure Documentation

13.33.1.1 struct keyanim

Definition at line 40 of file main.c.

Collaboration diagram for keyanim:

Data Fields

int	pressed	
double	timing	
unsigned int	usages	
int	x	
int	y	

13.33.2 Function Documentation

13.33.2.1 void anim_add (int *index*)

Definition at line 65 of file main.c.

References ffade, keyanim::pressed, keyanim::timing, and keyanim::usages.

Referenced by ckb_keypress(), and ckb_start().

```
65                          {
66     anims[index].usages += ffade;
67     anims[index].pressed = 1;
68     anims[index].timing = 0.f;
69 }
```

Here is the caller graph for this function:

13.33.2.2 void anim_remove (int *index*)

Definition at line 71 of file main.c.

References keyanim::pressed.

Referenced by ckb_keypress(), and ckb_start().

```
71                              {
72      anims[index].pressed = 0;
73  }
```

Here is the caller graph for this function:

13.33.2.3 int ckb_frame (ckb_runctx * *context*)

Definition at line 101 of file main.c.

References ckb_alpha_blend(), ckb_grad_color(), CKB_KEYCLEAR, ffade, ckb_runctx::keycount, ckb_runctx::keys, pressestofull, and randomBright.

```
101                                     {
102     CKB_KEYCLEAR(context);
103     // Draw spots
104     unsigned count = context->keycount;
105     ckb_key* keys = context->keys;
106     unsigned int full = pressestofull*ffade;
107     for(int i =0; i < count; i++){
108         if(!anims[i].usages)
109             continue;
110         float a, r, g, b;
```

```
        if(randomBright)
            ckb_grad_color(&a, &r, &g, &b, &animcolor, ((float)(rand() % 1024))/10.f
    );
        else
            ckb_grad_color(&a, &r, &g, &b, &animcolor, (float)fmin(
    anims[i].usages,full)*100.f/full);
        ckb_alpha_blend(keys+i, a, r, g, b);
    }
    return 0;
}
```

Here is the call graph for this function:

13.33.2.4 void ckb_info ( )

Definition at line 4 of file main.c.

References CKB_COPYRIGHT, CKB_DESCRIPTION, CKB_GUID, CKB_KP_POSITION, CKB_KPMODE, CKB_-LICENSE, CKB_LIVEPARAMS, CKB_NAME, CKB_PARAM_AGRADIENT, CKB_PARAM_BOOL, CKB_PARAM_-DOUBLE, CKB_PARAM_LONG, CKB_PRESET_END, CKB_PRESET_PARAM, CKB_PRESET_START, CKB_R-EPEAT, CKB_TIME_ABSOLUTE, CKB_TIMEMODE, CKB_VERSION, FALSE, and TRUE.

```
{
    // Plugin info
    CKB_NAME("Heat Map");
    CKB_VERSION("0.2");
    CKB_COPYRIGHT("2015", "RULER501");
    CKB_LICENSE("LGPLv3");
     CKB_GUID("{097D69F0-70B2-48B8-AFE2-25A1CDB0D92C}");
     CKB_DESCRIPTION("A spot effect on pressed keys that shows usage");

     // Effect parameters
     CKB_PARAM_AGRADIENT("color", "Fade color:", "", "ffffffff");
     CKB_PARAM_BOOL("random", "Random Brightness", 0);
     CKB_PARAM_LONG("ffade", "Frames to fade", "frames", 30, 10, 1000);
     CKB_PARAM_DOUBLE("pressestofull", "Presses to full", "keypresses", 10.f, 1.f, 100.f);

     // Timing/input parameters
     CKB_KPMODE(CKB_KP_POSITION);
     CKB_TIMEMODE(CKB_TIME_ABSOLUTE);
     CKB_REPEAT(FALSE);
     CKB_LIVEPARAMS(TRUE);

     // Presets
     CKB_PRESET_START("Single Spot");
     CKB_PRESET_PARAM("random", "0");
     CKB_PRESET_PARAM("ffade", "30");
     CKB_PRESET_PARAM("pressestofull", "10");
     CKB_PRESET_PARAM("trigger", "0");
     CKB_PRESET_PARAM("kptrigger", "1");
     CKB_PRESET_END;
}
```

13.33.2.5 void ckb_init (ckb_runctx * *context*)

Definition at line 50 of file main.c.

References ckb_runctx::keycount, ckb_runctx::keys, keyanim::x, ckb_key::x, keyanim::y, and ckb_key::y.

```
{
    anims = calloc(context->keycount, sizeof(keyanim));
    for(int i=0; i < context->keycount; i++){
        anims[i].x = context->keys[i].x;
        anims[i].y = context->keys[i].y;
    }
}
```

13.33.2.6 void ckb_keypress (ckb_runctx * *context*, ckb_key * *key*, int *x*, int *y*, int *state*)

Definition at line 75 of file main.c.

References anim_add(), anim_remove(), and ckb_runctx::keys.

```
{
    // Add or remove a spot on this key
    if(state)
        anim_add(key - context->keys);
    else
        anim_remove(key - context->keys);
}
```

Here is the call graph for this function:

13.33.2.7 void ckb_parameter (ckb_runctx * *context*, const char * *name*, const char * *value*)

Definition at line 58 of file main.c.

References CKB_PARSE_AGRADIENT, CKB_PARSE_BOOL, CKB_PARSE_DOUBLE, CKB_PARSE_LONG, ffade, pressestofull, and randomBright.

```
{
    CKB_PARSE_AGRADIENT("color", &animcolor){}
    CKB_PARSE_BOOL("random", &randomBright){}
    CKB_PARSE_LONG("ffade", &ffade){}
    CKB_PARSE_DOUBLE("pressestofull", &pressestofull){}
}
```

13.33.2.8 void ckb_start (ckb_runctx * *context*, int *state*)

Definition at line 83 of file main.c.

```
{
    return;
}
```

13.33.2.9 void ckb_time (ckb_runctx * *context,* double *delta*)

Definition at line 87 of file main.c.

References ckb_runctx::keycount, keyanim::timing, and keyanim::usages.

```
87                                                  {
88     unsigned int count = context->keycount;
89     for(unsigned int i=0; i < count; i++){
90         if(anims[i].usages && !anims[i].pressed){
91             anims[i].timing -= delta;
92             while(anims[i].timing < 0){
93                 anims[i].timing += 1.f/30.f;
94                 if(anims[i].usages > 0)
95                     anims[i].usages--;
96             }
97         }
98     }
99 }
```

13.33.3 Variable Documentation

13.33.3.1 ckb_gradient animcolor = { 0 }

Definition at line 35 of file main.c.

13.33.3.2 keyanim* anims = NULL

Definition at line 48 of file main.c.

13.33.3.3 long ffade = 30

Definition at line 37 of file main.c.

Referenced by anim_add(), ckb_frame(), and ckb_parameter().

13.33.3.4 double pressestofull = 10.f

Definition at line 38 of file main.c.

Referenced by ckb_frame(), and ckb_parameter().

13.33.3.5 int randomBright = 0

Definition at line 36 of file main.c.

Referenced by ckb_frame(), and ckb_parameter().

13.34 src/ckb-mviz/main.c File Reference

```
#include <math.h>
#include <stdint.h>
#include <stdlib.h>
#include <pulse/simple.h>
#include "../ckb/ckb-anim.h"
#include "kiss_fftr.h"
```

Include dependency graph for main.c:

Functions

- void ckb_info ()
- void ckb_init (ckb_runctx ∗context)
- void ckb_parameter (ckb_runctx ∗context, const char ∗name, const char ∗value)
- void anim_add (ckb_key ∗press, float x, float y)
- void anim_remove (float x, float y)
- void ckb_keypress (ckb_runctx ∗context, ckb_key ∗key, int x, int y, int state)
- void ckb_start (ckb_runctx ∗context, int state)
- void ckb_time (ckb_runctx ∗context, double delta)
- int max (int a, int b)
- int min (int a, int b)
- void getFreqDec ()
- int ckb_frame (ckb_runctx ∗context)

Variables

- double powers [2048] = { 0.f }
- kiss_fft_cpx ∗ inbuf
- kiss_fft_cpx ∗ outbuf
- ckb_gradient animcolor = { 0 }
- pa_simple ∗ pas = NULL
- int power = 0
- int gcounter = 0

13.34.1 Function Documentation

13.34.1.1 void anim_add (ckb_key ∗ *press*, float *x*, float *y*)

Definition at line 61 of file main.c.

```
61                                                  {
62     return;
63 }
```

13.34.1.2 void anim_remove (float *x*, float *y*)

Definition at line 65 of file main.c.

```
65                                  {
66     return;
67 }
```

13.34.1.3 int ckb_frame (ckb_runctx * *context*)

Definition at line 110 of file main.c.

References ckb_alpha_blend(), ckb_grad_color(), CKB_KEYCLEAR, getFreqDec(), ckb_runctx::height, ckb_runctx::keycount, ckb_runctx::keys, max(), min(), power, powers, and ckb_runctx::width.

```
110                                 {
111     CKB_KEYCLEAR(context);
112     ckb_key* keys = context->keys;
113     ckb_key* maxkey = keys+context->keycount-1;
114     getFreqDec();
115     unsigned int frames = context->width*context->height - 1;
116     int height = context->height;
117     for(ckb_key* key = keys; key < maxkey; key++){
118         int posl = height*key->x + key->y - 1;
119         posl = max(posl, 0);
120         int posr = height*key->x + key->y + 1;
121         posr = max(posr, 0);
122         int lowi = floorf(pow(2,posl*11.f/frames));
123         int highi = ceilf(pow(2,posr*11.f/frames));
124         highi= min(highi, (int)sizeof(powers)/sizeof(double)-1);
125         lowi = max(lowi, 0);
126         double total = 0;
127         unsigned int height = context->height;
128         for(unsigned int i = lowi; i <= highi; i++)
129             total += powers[i];
130         total /= highi - lowi + 1;
131         float a, r, g, b;
132         ckb_grad_color(&a, &r, &g, &b, &animcolor, total/(
      power ? 150994944.f : 12288.f));
133         ckb_alpha_blend(key, a, r, g, b);
134     }
135     return 0;
136 }
```

Here is the call graph for this function:

13.34.1.4 void ckb_info ( )

Definition at line 11 of file main.c.

References CKB_COPYRIGHT, CKB_DESCRIPTION, CKB_GUID, CKB_KP_NONE, CKB_KPMODE, CKB_LICENSE, CKB_LIVEPARAMS, CKB_NAME, CKB_PARAM_AGRADIENT, CKB_PARAM_BOOL, CKB_PRESET_END, CKB_PRESET_PARAM, CKB_PRESET_START, CKB_REPEAT, CKB_TIME_ABSOLUTE, CKB_TIMEMODE, CKB_VERSION, FALSE, and TRUE.

```
11                {
12     // Plugin info
13     CKB_NAME("Music Visualization");
14     CKB_VERSION("0.2");
15     CKB_COPYRIGHT("2015", "RULER501");
16     CKB_LICENSE("LGPLv3");
17     CKB_GUID("{097D69F0-70B2-48B8-AFE2-25CA1DB0D92C}");
18     CKB_DESCRIPTION("A collection of music visualization effects");
19
20     // Effect parameters
21     CKB_PARAM_AGRADIENT("color", "Fade color:", "", "ffffffff");
22     CKB_PARAM_BOOL("power", "Use Power instead of Magnitude?", 0);
23
24     // Timing/input parameters
25     CKB_KPMODE(CKB_KP_NONE);
26     CKB_TIMEMODE(CKB_TIME_ABSOLUTE);
27     CKB_REPEAT(FALSE);
28     CKB_LIVEPARAMS(TRUE);
29
30     // Presets
31     CKB_PRESET_START("Default");
32     CKB_PRESET_PARAM("power", "0");
33     CKB_PRESET_PARAM("trigger", "0");
34     CKB_PRESET_PARAM("kptrigger", "1");
35     CKB_PRESET_END;
36 }
```

13.34.1.5 void ckb_init (ckb_runctx * *context*)

Definition at line 45 of file main.c.

References pas.

```
45                                {
46     static const pa_sample_spec ss ={
47         .format = PA_SAMPLE_S16LE,
48         .rate = 44100,
49         .channels = 1
50     };
51     pas = pa_simple_new(NULL, "CKB Music Viz", PA_STREAM_RECORD, NULL, "CKB Music Viz", &ss, NULL, NULL,
       NULL);
52     inbuf = malloc(2048*sizeof(kiss_fft_cpx));
53     outbuf = malloc(2048*sizeof(kiss_fft_cpx));
54 }
```

13.34.1.6 void ckb_keypress (ckb_runctx * *context*, ckb_key * *key*, int *x*, int *y*, int *state*)

Definition at line 69 of file main.c.

```
69                                                                    {
70     return;
71 }
```

13.34.1.7 void ckb_parameter (ckb_runctx * *context*, const char * *name*, const char * *value*)

Definition at line 56 of file main.c.

References CKB_PARSE_AGRADIENT, CKB_PARSE_BOOL, and power.

```
56                                                                    {
57     CKB_PARSE_AGRADIENT("color", &animcolor){}
58     CKB_PARSE_BOOL("power", &power);
59 }
```

13.34.1.8 void ckb_start (ckb_runctx * *context*, int *state*)

Definition at line 73 of file main.c.

```
73                                                  {
74     return;
75 }
```

13.34.1.9 void ckb_time (ckb_runctx * *context,* double *delta*)

Definition at line 77 of file main.c.

```
77                                                  {
78     return;
79 }
```

13.34.1.10 void getFreqDec ( )

Definition at line 91 of file main.c.

References kiss_fft_cpx::i, kiss_fft(), kiss_fft_alloc(), kiss_fft_cleanup(), kiss_fft_free, pas, power, powers, and kiss_fft_cpx::r.

Referenced by ckb_frame().

```
91                 {
92     int16_t data[2048];
93     pa_simple_read(pas, data, sizeof(data), NULL);
94     for(int j=0; j<2048; j++){
95         inbuf[j].r = data[j];
96         inbuf[j].i = 0;
97     }
98     kiss_fft_cfg config = kiss_fft_alloc(2048, 0, NULL, NULL);
99     kiss_fft(config, inbuf, outbuf);
100
101     for(unsigned int j=0; j < 2048; j++)
102         if(power)
103             powers[j] = outbuf[j].r*outbuf[j].r + outbuf[j].
      i*outbuf[j].i;
104         else
105             powers[j] = sqrt(outbuf[j].r*outbuf[j].r + outbuf[j].i*
      outbuf[j].i);
106     kiss_fft_free(config);
107     kiss_fft_cleanup();
108 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.34.1.11 int max (int *a*, int *b*)

Definition at line 81 of file main.c.

Referenced by ckb_frame().

```
81                      {
82     return a > b ? a : b;
83 }
```

Here is the caller graph for this function:

13.34.1.12 int min (int *a*, int *b*)

Definition at line 85 of file main.c.

Referenced by ckb_frame(), and dpiExp().

```
85                      {
86     return a < b ? a : b;
87 }
```

Here is the caller graph for this function:

13.34.2 Variable Documentation

13.34.2.1 ckb_gradient animcolor = { 0 }

Definition at line 41 of file main.c.

13.34.2.2 int gcounter = 0

Definition at line 89 of file main.c.

13.34.2.3 kiss_fft_cpx* inbuf

Definition at line 39 of file main.c.

13.34.2.4 kiss_fft_cpx* outbuf

Definition at line 40 of file main.c.

13.34.2.5 pa_simple* pas = NULL

Definition at line 42 of file main.c.

Referenced by ckb_init(), and getFreqDec().

13.34.2.6 int power = 0

Definition at line 43 of file main.c.

Referenced by ckb_frame(), ckb_parameter(), and getFreqDec().

13.34.2.7 double powers[2048] = { 0.f }

Definition at line 38 of file main.c.

Referenced by ckb_frame(), and getFreqDec().

13.35 src/ckb-pinwheel/main.c File Reference

```
#include "../ckb/ckb-anim.h"
```

Include dependency graph for main.c:

Macros

- #define ANGLE(theta) fmod((theta) + M_PI ∗ 2., M_PI ∗ 2.)

Functions

- void ckb_info ()
- void ckb_parameter (ckb_runctx ∗context, const char ∗name, const char ∗value)
- void ckb_init (ckb_runctx ∗context)
- void ckb_keypress (ckb_runctx ∗context, ckb_key ∗key, int x, int y, int state)
- void ckb_start (ckb_runctx ∗context, int state)
- void ckb_time (ckb_runctx ∗context, double delta)
- int ckb_frame (ckb_runctx ∗context)

Variables

- ckb_gradient animcolor = { 0 }
- double animlength = 0.
- int symmetric = 0
- int counter_clock = 0
- double x_offset = 0
- double y_offset = 0
- double frame = -1.
- float x
- float y

13.35.1 Macro Definition Documentation

13.35.1.1 #define ANGLE(*theta*) fmod((theta) + M_PI ∗ 2., M_PI ∗ 2.)

Definition at line 68 of file main.c.

Referenced by ckb_frame().

13.35.2 Function Documentation

13.35.2.1 int ckb_frame (ckb_runctx * *context*)

Definition at line 86 of file main.c.

References ANGLE, animlength, ckb_alpha_blend(), ckb_grad_color(), CKB_KEYCLEAR, counter_clock, frame, ckb_runctx::keycount, ckb_runctx::keys, M_PI, symmetric, x, and y.

```
86                                  {
87      CKB_KEYCLEAR(context);
88      if(frame < 0.)
89          return 0;
90      // Color each key according to its angle from the center
91      float position;
92      if(counter_clock)
93          position = ANGLE(frame * M_PI * 2.);
94      else
95          position = ANGLE(-frame * M_PI * 2.);
96      unsigned count = context->keycount;
97      ckb_key* keys = context->keys;
98      for(ckb_key* key = keys; key < keys + count; key++){
99          float theta;
100         if(key->x == x && key->y == y)
101             // Dead center = 0°
102             theta = 0.f;
103         else
104             theta = ANGLE(ANGLE(atan2(x - key->x, y - key->y)) - position);
105         // If the animation is symmetric, mirror the second half
106         if(symmetric && theta > M_PI)
107             theta = M_PI * 2. - theta;
108         // Draw the gradient position that corresponds to this angle
109         if(theta < animlength){
110             float distance = theta / animlength;
111             float a, r, g, b;
112             ckb_grad_color(&a, &r, &g, &b, &animcolor, distance * 100.);
113             ckb_alpha_blend(key, a, r, g, b);
114         }
115     }
116     return 0;
117 }
```

Here is the call graph for this function:

13.35.2.2 void ckb_info ( )

Definition at line 3 of file main.c.

References CKB_COPYRIGHT, CKB_DESCRIPTION, CKB_GUID, CKB_KP_NONE, CKB_KPMODE, CKB_LICENSE, CKB_LIVEPARAMS, CKB_NAME, CKB_PARAM_AGRADIENT, CKB_PARAM_BOOL, CKB_PARAM_DOUBLE, CKB_PRESET_END, CKB_PRESET_PARAM, CKB_PRESET_START, CKB_REPEAT, CKB_TIME_DURATION, CKB_TIMEMODE, CKB_VERSION, FALSE, and TRUE.

```
3               {
4       // Plugin info
```

```
5     CKB_NAME("Pinwheel");
6     CKB_VERSION("0.9");
7     CKB_COPYRIGHT("2014-2016", "MSC");
8     CKB_LICENSE("GPLv2");
9     CKB_GUID("{07551A90-D97A-4DD0-A770-E9E280A90891}");
10     CKB_DESCRIPTION("A spinning pinwheel effect.");
11
12     // Effect parameters
13     CKB_PARAM_AGRADIENT("color", "Wheel color:", "", "ffffffff");
14     CKB_PARAM_DOUBLE("length", "Wheel size:", "%", 100, 1., 100.);
15     CKB_PARAM_DOUBLE("x_offset", "X offset:", "%", 0, -100, 100);
16     CKB_PARAM_DOUBLE("y_offset", "Y offset:", "%", 0, -100, 100);
17     CKB_PARAM_BOOL("counter_clock", "Counter Clockwise", 0);
18     CKB_PARAM_BOOL("symmetric", "Symmetric", 0);
19
20     // Timing/input parameters
21     CKB_KPMODE(CKB_KP_NONE);
22     CKB_TIMEMODE(CKB_TIME_DURATION);
23     CKB_LIVEPARAMS(TRUE);
24     CKB_REPEAT(FALSE);
25
26     // Presets
27     CKB_PRESET_START("Search light");
28     CKB_PRESET_PARAM("duration", "2.0");
29     CKB_PRESET_PARAM("length", "50.0");
30     CKB_PRESET_PARAM("symmetric", "1");
31     CKB_PRESET_END;
32
33     CKB_PRESET_START("Rainbow");
34     CKB_PRESET_PARAM("color", "0:ffff0000 17:ffffff00 33:ff00ff00 50:ff00ffff 67:ff0000ff
       83:ffff00ff 100:ffff0000");
35     CKB_PRESET_PARAM("duration", "2.0");
36     CKB_PRESET_END;
37 }
```

13.35.2.3 void ckb_init (ckb_runctx * *context*)

Definition at line 57 of file main.c.

```
57                                  {
58     // Unused
59 }
```

13.35.2.4 void ckb_keypress (ckb_runctx * *context*, ckb_key * *key*, int *x*, int *y*, int *state*)

Definition at line 61 of file main.c.

```
61                                                                  {
62     // Unused
63 }
```

13.35.2.5 void ckb_parameter (ckb_runctx * *context*, const char * *name*, const char * *value*)

Definition at line 45 of file main.c.

References animlength, CKB_PARSE_AGRADIENT, CKB_PARSE_BOOL, CKB_PARSE_DOUBLE, counter_clock, M_PI, symmetric, x_offset, and y_offset.

```
45                                                                  {
46     CKB_PARSE_AGRADIENT("color", &animcolor){}
47     double len;
48     CKB_PARSE_DOUBLE("length", &len){
49         animlength = len / 100. * M_PI * 2.;
50     }
51     CKB_PARSE_BOOL("symmetric", &symmetric){}
52     CKB_PARSE_BOOL("counter_clock", &counter_clock){}
53     CKB_PARSE_DOUBLE("x_offset", &x_offset) {}
54     CKB_PARSE_DOUBLE("y_offset", &y_offset) {}
55 }
```

13.35.2.6 void ckb_start (ckb_runctx * *context*, int *state*)

Definition at line 70 of file main.c.

References frame, ckb_runctx::height, ckb_runctx::width, x, x_offset, y, and y_offset.

```
70                                                  {
71      // Begin or end animation
72      frame = state ? 0. : -1.;
73      x = (context->width + (context->width * x_offset * 0.01)) / 2.f;
74      y = (context->height - (context->height * y_offset * 0.01)) / 2.f;
75  }
```

13.35.2.7 void ckb_time (ckb_runctx * *context*, double *delta*)

Definition at line 77 of file main.c.

References frame.

```
77                                                      {
78      if(frame < 0.)
79          return;
80      // Spin the wheel
81      frame += delta;
82      if(frame > 1.)
83          frame -= 1.;
84  }
```

13.35.3 Variable Documentation

13.35.3.1 ckb_gradient animcolor = { 0 }

Definition at line 39 of file main.c.

13.35.3.2 double animlength = 0.

Definition at line 40 of file main.c.

Referenced by anim_add(), ckb_frame(), ckb_parameter(), and ckb_time().

13.35.3.3 int counter_clock = 0

Definition at line 42 of file main.c.

Referenced by ckb_frame(), and ckb_parameter().

13.35.3.4 double frame = -1.

Definition at line 65 of file main.c.

Referenced by ckb_frame(), ckb_start(), ckb_time(), and AnimSettingDialog::hLine().

13.35.3.5 int symmetric = 0

Definition at line 41 of file main.c.

Referenced by anim_add(), ckb_frame(), and ckb_parameter().

13.35.3.6 float x

Definition at line 66 of file main.c.

Referenced by anim_add(), KeyMap::byPosition(), ckb_frame(), ckb_parameter(), ckb_start(), cmd_dpi(), drop_add(), GradientDialogWidget::fillRect(), main(), GradientDialog::makeIcon(), GradientDialogWidget::mousePressEvent(), os_mousemove(), GradientDialogWidget::paintEvent(), KeyWidget::paintEvent(), Kb::readNotify(), unz64local_getLong(), unz64local_getLong64(), unz64local_getShort(), GradientButton::updateImage(), zip64local_getLong(), zip64local_getLong64(), and zip64local_getShort().

13.35.3.7 double x_offset = 0

Definition at line 43 of file main.c.

Referenced by ckb_parameter(), and ckb_start().

13.35.3.8 float y

Definition at line 66 of file main.c.

Referenced by anim_add(), KeyMap::byPosition(), ckb_frame(), ckb_parameter(), ckb_start(), cmd_dpi(), drop_add(), GradientDialogWidget::fillRect(), main(), GradientDialog::makeIcon(), GradientDialogWidget::mousePressEvent(), os_mousemove(), GradientDialogWidget::paintEvent(), KeyWidget::paintEvent(), and Kb::readNotify().

13.35.3.9 double y_offset = 0

Definition at line 43 of file main.c.

Referenced by ckb_parameter(), and ckb_start().

13.36 src/ckb-rain/main.c File Reference

```
#include "../ckb/ckb-anim.h"
#include <math.h>
#include <stdlib.h>
#include <time.h>
```

Include dependency graph for main.c:

Macros

- #define DROP_MAX 1000

Functions

- void ckb_info ()
- void drop_add (float x, float y, int slow)
- void ckb_init (ckb_runctx *context)
- void ckb_parameter (ckb_runctx *context, const char *name, const char *value)
- void ckb_keypress (ckb_runctx *context, ckb_key *key, int x, int y, int state)
- void ckb_start (ckb_runctx *context, int state)
- void ckb_time (ckb_runctx *context, double delta)
- int ckb_frame (ckb_runctx *context)

Variables

- int spawn = 0
- double period = 0.1
- double maxsize = 100.
- double speed = 100.
- unsigned char ar = 255
- unsigned char ag = 255
- unsigned char ab = 255
- float aa = 1.
- struct {
  int **active**
  float **x**
  float **y**
  float **size**
  float **msize**
  } drop [1000]
- double tick = -1.

13.36.1 Macro Definition Documentation

13.36.1.1 #define DROP_MAX 1000

Definition at line 34 of file main.c.

Referenced by ckb_frame(), ckb_time(), and drop_add().

13.36.2 Function Documentation

13.36.2.1 int ckb_frame (ckb_runctx * *context*)

Definition at line 120 of file main.c.

References aa, ab, ag, ar, ckb_alpha_blend(), CKB_KEYCLEAR, drop, DROP_MAX, ckb_runctx::keycount, and ckb_runctx::keys.

```
                                {
    CKB_KEYCLEAR(context);
    // Draw drops
    for(unsigned i = 0; i < DROP_MAX; i++){
        if(drop[i].active){
            unsigned count = context->keycount;
            ckb_key* keys = context->keys;
            for(ckb_key* key = keys; key < keys + count; key++){
                // Calculate distance between key and drop, relative to the current drop size
                float distance = drop[i].size - sqrt(pow(key->x - drop[i].x, 2.f) + pow(key->y - drop[i].y, 2.f));
                // On the outside, cut the distance in half
                if(distance < 0.)
                    distance = -distance / 2.;
                // Scale according to drop size (fade-out radius expands as the drop becomes larger)
                float scale = drop[i].size / 4.f;
                if(scale < 10.)
                    scale = 10.;
                distance /= scale;
                if(distance <= 1.){
                    // Scale alpha according to size divided by maximum size (drops fade out as they expand)
                    float ascale = (1.f - drop[i].size / drop[i].msize);
                    if(ascale > 1.f)
                        ascale = 1.f;
                    // Apply color
                    ckb_alpha_blend(key, (1.f - distance) * ascale * aa * 255., ar, ag, ab);
                }
            }
        }
    }
    return 0;
}
```

Here is the call graph for this function:

13.36.2.2 void ckb_info ( )

Definition at line 6 of file main.c.

References CKB_COPYRIGHT, CKB_DESCRIPTION, CKB_GUID, CKB_KP_POSITION, CKB_KPMODE, CKB_LICENSE, CKB_LIVEPARAMS, CKB_NAME, CKB_PARAM_DOUBLE, CKB_PARAM_LONG, CKB_PARAM_RGB, CKB_PRESET_END, CKB_PRESET_PARAM, CKB_PRESET_START, CKB_REPEAT, CKB_TIME_ABSOLUTE, CKB_TIMEMODE, CKB_VERSION, FALSE, and TRUE.

```
6               {
7     // Plugin info
8     CKB_NAME("Raindrop");
9     CKB_VERSION("0.10");
10     CKB_COPYRIGHT("2014-2016", "MSC");
11     CKB_LICENSE("GPLv2");
12     CKB_GUID("{5D6695AF-0496-41E2-BEE7-F7D0ABAA49E9}");
13     CKB_DESCRIPTION("A rain-like effect.");
14
15     // Effect parameters
16     CKB_PARAM_RGB("color", "Drop color:", "", 255, 255, 255);
17     CKB_PARAM_DOUBLE("intensity", "Intensity:", "%", 100, 0, 100);
18     CKB_PARAM_DOUBLE("size", "Size:", "%", 25, 1, 100);
19     CKB_PARAM_LONG("frequency", "Frequency:", "per second", 10, 1, 100);
20
21     // Timing/input parameters
22     CKB_KPMODE(CKB_KP_POSITION);
```

```
    CKB_TIMEMODE(CKB_TIME_ABSOLUTE);
    CKB_REPEAT(FALSE);
    CKB_LIVEPARAMS(TRUE);

    // Presets
    CKB_PRESET_START("Default");
    CKB_PRESET_PARAM("trigger", "1");
    CKB_PRESET_PARAM("kptrigger", "1");
    CKB_PRESET_END;
}
```

13.36.2.3 void ckb_init (ckb_runctx * *context*)

Definition at line 63 of file main.c.

```
                                {
    srand(time(NULL));
}
```

13.36.2.4 void ckb_keypress (ckb_runctx * *context*, ckb_key * *key*, int *x*, int *y*, int *state*)

Definition at line 86 of file main.c.

References drop_add().

```
                                                                {
    // Add a drop on keypress
    if(state)
        drop_add(x, y, 0);
}
```

Here is the call graph for this function:

13.36.2.5 void ckb_parameter (ckb_runctx * *context*, const char * *name*, const char * *value*)

Definition at line 67 of file main.c.

References aa, ab, ag, ar, CKB_PARSE_BOOL, CKB_PARSE_DOUBLE, CKB_PARSE_LONG, CKB_PARSE_RGB, ckb_runctx::height, maxsize, period, spawn, speed, and ckb_runctx::width.

```
                                                                {
    CKB_PARSE_RGB("color", &ar, &ag, &ab){}
    double intensity, size;
    long frequency;
    CKB_PARSE_DOUBLE("intensity", &intensity){
        aa = intensity / 100.;
    }
    CKB_PARSE_DOUBLE("size", &size){
        double sizex = context->width / 2.;
        double sizey = context->height / 2.;
        maxsize = size / 100. * sqrt(sizex * sizex + sizey * sizey);
        speed = maxsize;
    }
```

```
80      CKB_PARSE_LONG("frequency", &frequency){
81          period = 1. / frequency;
82      }
83      CKB_PARSE_BOOL("trigger", &spawn){}
84  }
```

13.36.2.6 void ckb_start (ckb_runctx * *context*, int *state*)

Definition at line 94 of file main.c.

References tick.

```
94                                                  {
95      // Start or stop random spawning
96      tick = state ? 0. : -1.;
97  }
```

13.36.2.7 void ckb_time (ckb_runctx * *context*, double *delta*)

Definition at line 99 of file main.c.

References drop, drop_add(), DROP_MAX, ckb_runctx::height, period, spawn, speed, tick, and ckb_runctx::width.

```
99                                                  {
100     if(delta <= 0.)
101         return;
102     // Process existing drops
103     for(unsigned i = 0; i < DROP_MAX; i++){
104         if(drop[i].active){
105             drop[i].size += delta * speed;
106             if(drop[i].size > drop[i].msize)
107                 drop[i].active = 0;
108         }
109     }
110     if(tick >= 0.){
111         // Spawn a new randomly-placed drop, if the spawn time has passed
112         tick += delta;
113         if(tick > period && spawn){
114             drop_add(rand() / (double)RAND_MAX * context->width, rand() / (double)RAND_MAX *
        context->height, 1);
115             tick -= period;
116         }
117     }
118 }
```

Here is the call graph for this function:

13.36.2.8 void drop_add (float *x*, float *y*, int *slow*)

Definition at line 49 of file main.c.

References drop, DROP_MAX, maxsize, x, and y.

Referenced by ckb_keypress(), and ckb_time().

```
                                        {
    for(int i = 0; i < DROP_MAX; i++){
        if(drop[i].active)
            continue;
        drop[i].active = 1;
        drop[i].x = x;
        drop[i].y = y;
        float msize = maxsize * (0.9 + (rand() / (double)RAND_MAX * 0.2));
        drop[i].size = -msize / 2. * slow;
        drop[i].msize = msize;
        return;
    }
}
```

Here is the caller graph for this function:

13.36.3 Variable Documentation

13.36.3.1 float aa = 1.

Definition at line 41 of file main.c.

Referenced by ckb_frame(), and ckb_parameter().

13.36.3.2 unsigned char ab = 255

Definition at line 40 of file main.c.

Referenced by ckb_frame(), and ckb_parameter().

13.36.3.3 unsigned char ag = 255

Definition at line 40 of file main.c.

Referenced by ckb_frame(), and ckb_parameter().

13.36.3.4 unsigned char ar = 255

Definition at line 40 of file main.c.

Referenced by ckb_frame(), and ckb_parameter().

13.36.3.5 struct { ... } drop[1000]

Referenced by ckb_frame(), ckb_time(), and drop_add().

13.36.3.6 double maxsize = 100.

Definition at line 38 of file main.c.

Referenced by ckb_parameter(), ckb_time(), and drop_add().

13.36.3.7 double period = 0.1

Definition at line 37 of file main.c.

Referenced by ckb_parameter(), and ckb_time().

13.36.3.8 int spawn = 0

Definition at line 36 of file main.c.

Referenced by ckb_parameter(), and ckb_time().

13.36.3.9 double speed = 100.

Definition at line 39 of file main.c.

Referenced by ckb_parameter(), and ckb_time().

13.36.3.10 double tick = -1.

Definition at line 92 of file main.c.

Referenced by ckb_start(), and ckb_time().

13.37 src/ckb-random/main.c File Reference

```
#include "../ckb/ckb-anim.h"
#include <math.h>
#include <stdlib.h>
#include <time.h>
```

Include dependency graph for main.c:

Data Structures

- struct rgb

Functions

- void ckb_info ()
- void ckb_parameter (ckb_runctx ∗context, const char ∗name, const char ∗value)
- void ckb_keypress (ckb_runctx ∗context, ckb_key ∗key, int x, int y, int state)
- void newtarget (rgb ∗data, unsigned count)
- void ckb_init (ckb_runctx ∗context)
- void ckb_start (ckb_runctx ∗context, int state)
- void ckb_time (ckb_runctx ∗context, double delta)
- int ckb_frame (ckb_runctx ∗context)

Variables

- int fadein = 0
- int useopacity = 0
- rgb ∗ current = 0
- rgb ∗ target = 0
- double phase = -1.

13.37.1 Data Structure Documentation

13.37.1.1 struct rgb

Definition at line 42 of file main.c.

Collaboration diagram for rgb:

Data Fields

unsigned char	a	
unsigned char	b	
unsigned char	g	
unsigned char	r	

13.37.2 Function Documentation

13.37.2.1 int ckb_frame (ckb_runctx * *context*)

Definition at line 109 of file main.c.

References ckb_key::a, ckb_key::b, CKB_KEYCLEAR, ckb_key::g, ckb_runctx::keycount, ckb_runctx::keys, phase, and ckb_key::r.

```
109                                 {
110     if(phase < 0.){
111         CKB_KEYCLEAR(context);
112         return 0;
113     }
114     ckb_key* keys = context->keys;
115     unsigned count = context->keycount;
116     for(unsigned i = 0; i < count; i++){
117         // Color each key according to the position between the last color set and the new color set
118         ckb_key* key = keys + i;
119         key->a = round(current[i].a * (1. - phase) + target[i].a *
    phase);
120         key->r = round(current[i].r * (1. - phase) + target[i].r *
    phase);
121         key->g = round(current[i].g * (1. - phase) + target[i].g *
    phase);
122         key->b = round(current[i].b * (1. - phase) + target[i].b *
    phase);
123     }
124     return 0;
125 }
```

13.37.2.2 void ckb_info ( )

Definition at line 6 of file main.c.

References CKB_COPYRIGHT, CKB_DESCRIPTION, CKB_GUID, CKB_KP_NONE, CKB_KPMODE, CKB_LICENSE, CKB_LIVEPARAMS, CKB_NAME, CKB_PARAM_BOOL, CKB_PRESET_END, CKB_PRESET_PARAM, CKB_PRESET_START, CKB_REPEAT, CKB_TIME_DURATION, CKB_TIMEMODE, CKB_VERSION, FALSE, and TRUE.

```
6                {
7     // Plugin info
8     CKB_NAME("Random");
9     CKB_VERSION("0.9");
10     CKB_COPYRIGHT("2014-2016", "MSC");
11     CKB_LICENSE("GPLv2");
12     CKB_GUID("{22418DA4-A181-4B93-A4D3-03682BA283D2}");
13     CKB_DESCRIPTION("An effect that changes key colors randomly.");
14
15     // Effect parameters
16     CKB_PARAM_BOOL("fade", "Fade in", 0);
17     CKB_PARAM_BOOL("useopacity", "Randomize opacity", 0);
18
19     // Timing/input parameters
20     CKB_KPMODE(CKB_KP_NONE);
21     CKB_TIMEMODE(CKB_TIME_DURATION);
22     CKB_LIVEPARAMS(TRUE);
23     CKB_REPEAT(FALSE);
24
25     // Presets
26     CKB_PRESET_START("Default");
27     CKB_PRESET_PARAM("duration", "1.");
28     CKB_PRESET_END;
29 }
```

13.37.2.3 void ckb_init (ckb_runctx * *context*)

Definition at line 61 of file main.c.

References ckb_runctx::keycount.

```
61                                  {
62     unsigned count = context->keycount;
63     current = malloc(count * sizeof(rgb));
64     target = malloc(count * sizeof(rgb));
65     srand(time(NULL));
66 }
```

13.37.2.4 void ckb_keypress (ckb_runctx * *context,* ckb_key * *key,* int *x,* int *y,* int *state*)

Definition at line 38 of file main.c.

```
38                                                                                  {
39     // Unused
40 }
```

13.37.2.5 void ckb_parameter (ckb_runctx * *context,* const char * *name,* const char * *value*)

Definition at line 33 of file main.c.

References CKB_PARSE_BOOL, fadein, and useopacity.

```
33                                                                                  {
34     CKB_PARSE_BOOL("fade", &fadein) {}
35     CKB_PARSE_BOOL("useopacity", &useopacity) {}
36 }
```

13.37.2.6 void ckb_start (ckb_runctx * *context,* int *state*)

Definition at line 68 of file main.c.

References rgb::a, ckb_key::a, rgb::b, ckb_key::b, fadein, rgb::g, ckb_key::g, ckb_runctx::keycount, ckb_runctx::keys, newtarget(), phase, rgb::r, and ckb_key::r.

```
68                                          {
69     if(state == 0){
70         // Stop animation
71         phase = -1.;
72         return;
73     }
74     // Start animation
75     phase = 0.;
76     ckb_key* keys = context->keys;
77     unsigned count = context->keycount;
78     // Randomize starting colors and pick a random target
79     newtarget(current, count);
80     // Over the course of the animation, the keys fade between the current pattern and the target pattern
81     newtarget(target, count);
82     // Set all keys to current
83     for(unsigned i = 0; i < count; i++){
84         ckb_key* key = keys + i;
85         if(fadein)
86             current[i].a = 0;
87         key->a = current[i].a;
88         key->r = current[i].r;
89         key->g = current[i].g;
90         key->b = current[i].b;
91     }
92 }
```

Here is the call graph for this function:

13.37.2.7 void ckb_time (ckb_runctx * *context,* double *delta*)

Definition at line 94 of file main.c.

References current, ckb_runctx::keycount, newtarget(), phase, and target.

```
94                                                  {
95     if(phase < 0.)
96         return;
97     // Advance animation
98     phase += delta;
99     if(phase > 1.){
100         // If the animation is complete, pick a new target pattern and start again
101         phase -= 1.;
102         rgb* temp = target;
103         target = current;
104         current = temp;
105         newtarget(target, context->keycount);
106     }
107 }
```

Here is the call graph for this function:

13.37.2.8 void newtarget (rgb * *data,* unsigned *count*)

Definition at line 51 of file main.c.

References rgb::a, rgb::b, rgb::g, rgb::r, and useopacity.

Referenced by ckb_start(), and ckb_time().

```
51                                          {
52     for(unsigned i = 0; i < count; i++){
53         rgb* key = data + i;
54         key->a = useopacity ? rand() % 256 : 255;
55         key->r = rand() % 256;
56         key->g = rand() % 256;
57         key->b = rand() % 256;
58     }
59 }
```

Here is the caller graph for this function:

13.37.3 Variable Documentation

13.37.3.1 rgb* current = 0

Definition at line 46 of file main.c.

Referenced by CkbSettings::childGroups(), CkbSettings::childKeys(), ckb_time(), KbProfile::KbProfile(), Kb::load(), GradientDialog::on_presetDelete_clicked(), KbWidget::profileChanged(), KbProfileDialog::repopulate(), QuaZip::setCurrentFile(), and GradientDialog::setPreset().

13.37.3.2 int fadein = 0

Definition at line 31 of file main.c.

Referenced by ckb_parameter(), and ckb_start().

13.37.3.3 double phase = -1.

Definition at line 48 of file main.c.

Referenced by ckb_frame(), ckb_start(), ckb_time(), kiss_fft_alloc(), and kiss_fftr_alloc().

13.37.3.4 rgb* target = 0

Definition at line 47 of file main.c.

Referenced by ckb_time().

13.37.3.5 int useopacity = 0

Definition at line 31 of file main.c.

Referenced by ckb_parameter(), and newtarget().

13.38 src/ckb-ripple/main.c File Reference

```
#include "../ckb/ckb-anim.h"
#include <math.h>
#include <time.h>
```

Include dependency graph for main.c:

Macros

- #define ANIM_MAX (144 ∗ 2)

Functions

- void ckb_info ()
- void ckb_init (ckb_runctx ∗context)
- void ckb_parameter (ckb_runctx ∗context, const char ∗name, const char ∗value)
- void anim_add (float x, float y, float width, float height)
- void anim_remove (float x, float y)
- void ckb_keypress (ckb_runctx ∗context, ckb_key ∗key, int x, int y, int state)
- void ckb_start (ckb_runctx ∗context, int state)
- void ckb_time (ckb_runctx ∗context, double delta)
- int ckb_frame (ckb_runctx ∗context)

Variables

- float kbsize = 0.f
- ckb_gradient animcolor = { 0 }
- int symmetric = 0
- int kprelease = 0
- int randomize = 0
- double animlength = 0.
- double x_offset = 0
- double y_offset = 0
- struct {
  int **active**
  float **x**
  float **y**
  float **maxsize**
  float **cursize**
  float **choice**
  } anim [(144 ∗2)] = { }

13.38.1 Macro Definition Documentation

13.38.1.1 #define ANIM_MAX (144 ∗ 2)

Definition at line 75 of file main.c.

Referenced by anim_add(), anim_remove(), ckb_frame(), and ckb_time().

13.38.2 Function Documentation

13.38.2.1 void anim_add (float *x*, float *y*, float *width*, float *height*)

Definition at line 84 of file main.c.

References anim, ANIM_MAX, animlength, symmetric, x, and y.

```
84                                                          {
85     for(int i = 0; i < ANIM_MAX; i++){
86         if(anim[i].active)
87             continue;
88         anim[i].active = 1;
89         anim[i].x = x;
90         anim[i].y = y;
91         float sizex = fmax(x, width - x);
92         float sizey = fmax(y, height - y);
93         anim[i].maxsize = sqrt(sizex * sizex + sizey * sizey) + animlength;
94         anim[i].cursize = (symmetric) ? -animlength : 0;
95         anim[i].choice = (float)rand()/(float)(RAND_MAX);
96         return;
97     }
98 }
```

13.38.2.2 void anim_remove (float *x*, float *y*)

Definition at line 100 of file main.c.

References anim, and ANIM_MAX.

```
100                                 {
101     for(int i = 0; i < ANIM_MAX; i++){
102         if(anim[i].active && anim[i].x == x && anim[i].y == y)
103             anim[i].active = 0;
104     }
105 }
```

13.38.2.3 int ckb_frame (ckb_runctx ∗ *context*)

Definition at line 134 of file main.c.

References anim, ANIM_MAX, animlength, ckb_alpha_blend(), ckb_grad_color(), CKB_KEYCLEAR, ckb_runctx::keycount, ckb_runctx::keys, randomize, and symmetric.

```
134                                 {
135     CKB_KEYCLEAR(context);
136     // Draw rings
137     unsigned count = context->keycount;
138     ckb_key* keys = context->keys;
139     for(unsigned i = 0; i < ANIM_MAX; i++){
140         if(anim[i].active){
141             for(ckb_key* key = keys; key < keys + count; key++){
142                 // Calculate distance between this key and the ring
143                 float distance = anim[i].cursize - sqrt(pow(key->x - anim[i].x, 2.f) + pow(
    key->y - anim[i].y, 2.f));
144                 // Divide distance by ring size (use absolute distance if symmetric)
145                 distance /= animlength;
146                 if(symmetric)
147                     distance = fabs(distance);
148                 else if(distance >= -0.005f && distance < 0.f)
```

```
                    // If not symmetric, round down values very close to zero
                    distance = 0.f;
                if(distance > 1.f && distance <= 1.005f)
                    // Round values close to 1
                    distance = 1.f;

                // Blend color gradient according to position
                if(distance >= 0. && distance <= 1.f){
                    float a, r, g, b;
                    float gradChoice = randomize ? anim[i].choice : distance;
                    ckb_grad_color(&a, &r, &g, &b, &animcolor, gradChoice * 100.);
                    ckb_alpha_blend(key, a, r, g, b);
                }
            }
        }
    }
    return 0;
}
```

Here is the call graph for this function:

13.38.2.4 void ckb_info ( )

Definition at line 5 of file main.c.

References CKB_COPYRIGHT, CKB_DESCRIPTION, CKB_GUID, CKB_KP_POSITION, CKB_KPMODE, CKB_-LICENSE, CKB_LIVEPARAMS, CKB_NAME, CKB_PARAM_AGRADIENT, CKB_PARAM_BOOL, CKB_PARAM_-DOUBLE, CKB_PREEMPT, CKB_PRESET_END, CKB_PRESET_PARAM, CKB_PRESET_START, CKB_TIME_-DURATION, CKB_TIMEMODE, CKB_VERSION, and TRUE.

```
5               {
6     // Plugin info
7     CKB_NAME("Ripple");
8     CKB_VERSION("0.10");
9     CKB_COPYRIGHT("2014-2016", "MSC");
10     CKB_LICENSE("GPLv2");
11     CKB_GUID("{097D69F0-70B2-48B8-AFE2-25A1CDB02C9D}");
12     CKB_DESCRIPTION("An expanding ring effect.");
13
14     // Effect parameters
15     CKB_PARAM_AGRADIENT("color", "Ripple color:", "", "ffffffff");
16     CKB_PARAM_DOUBLE("length", "Ring length:", "%", 100, 1, 100);
17     CKB_PARAM_DOUBLE("x_offset", "X offset:", "%", 0, -100, 100);
18     CKB_PARAM_DOUBLE("y_offset", "Y offset:", "%", 0, -100, 100);
19     CKB_PARAM_BOOL("symmetric", "Symmetric", 0);
20     CKB_PARAM_BOOL("randomize", "Randomly select from gradient", 0);
21
22     // Timing/input parameters
23     CKB_KPMODE(CKB_KP_POSITION);
24     CKB_TIMEMODE(CKB_TIME_DURATION);
25     CKB_LIVEPARAMS(TRUE);
26     CKB_PREEMPT(TRUE);
27
28     // Presets
29     CKB_PRESET_START("Shimmer");
30     CKB_PRESET_PARAM("duration", "2.0");
31     CKB_PRESET_PARAM("length", "50.0");
32     CKB_PRESET_PARAM("symmetric", "1");
```

```
    CKB_PRESET_END;

    CKB_PRESET_START("Rainbow");
    CKB_PRESET_PARAM("color", "0:ffff0000 17:ffffff00 33:ff00ff00 50:ff00ffff 67:ff0000ff
    83:ffff00ff 100:ffff0000");
    CKB_PRESET_PARAM("duration", "2.0");
    CKB_PRESET_END;

    CKB_PRESET_START("Type lighting");
    CKB_PRESET_PARAM("duration", "1.0");
    CKB_PRESET_PARAM("length", "25.0");
    CKB_PRESET_PARAM("symmetric", "1");
    CKB_PRESET_PARAM("trigger", "0");
    CKB_PRESET_PARAM("kptrigger", "1");
    CKB_PRESET_END;
}
```

13.38.2.5 void ckb_init (ckb_runctx * *context*)

Definition at line 55 of file main.c.

References ckb_runctx::height, kbsize, and ckb_runctx::width.

```
55                                  {
56     kbsize = sqrt(context->width * context->width / 4.f + context->
      height * context->height / 4.f);
57     srand((unsigned)time(NULL));
58 }
```

13.38.2.6 void ckb_keypress (ckb_runctx * *context,* ckb_key * *key,* int *x,* int *y,* int *state*)

Definition at line 107 of file main.c.

References anim_add(), anim_remove(), ckb_runctx::height, kprelease, and ckb_runctx::width.

```
107                                                                                    {
108     // Add or remove a ring on this key
109     if(state)
110         anim_add(x, y, context->width, context->height);
111     else if(kprelease)
112         anim_remove(x, y);
113 }
```

Here is the call graph for this function:

13.38.2.7 void ckb_parameter (ckb_runctx * *context,* const char * *name,* const char * *value*)

Definition at line 60 of file main.c.

References animlength, CKB_PARSE_AGRADIENT, CKB_PARSE_BOOL, CKB_PARSE_DOUBLE, ckb_runctx::height, kprelease, randomize, symmetric, ckb_runctx::width, x_offset, and y_offset.

```
60                                                                                  {
61     CKB_PARSE_AGRADIENT("color", &animcolor){}
62     double len;
63     CKB_PARSE_DOUBLE("length", &len){
64         double sizex = context->width / 2.;
65         double sizey = context->height / 2.;
66         animlength = len / 100. * sqrt(sizex * sizex + sizey * sizey);
67     }
68     CKB_PARSE_BOOL("symmetric", &symmetric){}
69     CKB_PARSE_BOOL("kprelease", &kprelease){}
70     CKB_PARSE_BOOL("randomize", &randomize){}
71     CKB_PARSE_DOUBLE("x_offset", &x_offset) {}
72     CKB_PARSE_DOUBLE("y_offset", &y_offset) {}
73 }
```

13.38.2.8 void ckb_start (ckb_runctx * *context*, int *state*)

Definition at line 115 of file main.c.

References anim_add(), anim_remove(), ckb_runctx::height, ckb_runctx::width, x_offset, and y_offset.

```
115                                                 {
116     // Add or remove a ring in the center of the keyboard
117     if(state)
118         anim_add((context->width + (context->width * x_offset * 0.01)) / 2.f, (
      context->height - (context->height * y_offset * 0.01)) / 2.f, context->
      width, context->height);
119     else
120         anim_remove(context->width / 2.f, context->height / 2.f);
121 }
```

Here is the call graph for this function:

13.38.2.9 void ckb_time (ckb_runctx * *context*, double *delta*)

Definition at line 123 of file main.c.

References anim, ANIM_MAX, kbsize, and maxsize.

```
123                                                 {
124     // Advance animation on all rings
125     for(unsigned i = 0; i < ANIM_MAX; i++){
126         if(anim[i].active){
127             anim[i].cursize += kbsize * delta;
128             if(anim[i].cursize > anim[i].maxsize)
129                 anim[i].active = 0;
130         }
131     }
132 }
```

13.38.3 Variable Documentation

13.38.3.1 struct { ... } anim[(144 ∗ 2)]

13.38.3.2 ckb_gradient animcolor = { 0 }

Definition at line 50 of file main.c.

13.38.3.3 double animlength = 0.

Definition at line 52 of file main.c.

13.38.3.4 float kbsize = 0.f

Definition at line 49 of file main.c.

Referenced by ckb_init(), and ckb_time().

13.38.3.5 int kprelease = 0

Definition at line 51 of file main.c.

13.38.3.6 int randomize = 0

Definition at line 51 of file main.c.

13.38.3.7 int symmetric = 0

Definition at line 51 of file main.c.

13.38.3.8 double x_offset = 0

Definition at line 53 of file main.c.

13.38.3.9 double y_offset = 0

Definition at line 53 of file main.c.

13.39 src/ckb-wave/main.c File Reference

```
#include "../ckb/ckb-anim.h"
#include <math.h>
```

Include dependency graph for main.c:

Macros

- #define ANIM_MAX (144 ∗ 2)

Functions

- void ckb_info ()
- void ckb_init (ckb_runctx ∗context)
- void ckb_parameter (ckb_runctx ∗context, const char ∗name, const char ∗value)
- void anim_add (float x, float y)
- void anim_remove (float x, float y)
- void ckb_keypress (ckb_runctx ∗context, ckb_key ∗key, int x, int y, int state)
- void ckb_start (ckb_runctx ∗context, int state)
- void ckb_time (ckb_runctx ∗context, double delta)
- int ckb_frame (ckb_runctx ∗context)

Variables

- ckb_gradient animcolor = { 0 }
- int symmetric = 0
- int kprelease = 0
- double angle = 0.
- double left = 0.
- double top = 0.
- double animlength = 0.
- double width = 0.
- struct {
  int **active**
  float **x**
  float **y**
  float **curx**
  } anim [(144 ∗2)] = { }

13.39.1 Macro Definition Documentation

13.39.1.1 #define ANIM_MAX (144 ∗ 2)

Definition at line 98 of file main.c.

Referenced by anim_add(), anim_remove(), ckb_frame(), and ckb_time().

13.39.2 Function Documentation

13.39.2.1 void anim_add (float *x*, float *y*)

Definition at line 105 of file main.c.

References anim, ANIM_MAX, animlength, symmetric, width, x, and y.

```
105                                 {
106     for(int i = 0; i < ANIM_MAX; i++){
107         if(anim[i].active)
108             continue;
109         anim[i].active = 1;
110         anim[i].x = x;
111         anim[i].y = y;
112         anim[i].curx = symmetric ? -animlength * width : 0.f;
113         return;
114     }
115 }
```

13.39.2.2 void anim_remove (float *x*, float *y*)

Definition at line 117 of file main.c.

References anim, and ANIM_MAX.

```
117                                 {
118     for(int i = 0; i < ANIM_MAX; i++){
119         if(anim[i].active && anim[i].x == x && anim[i].y == y)
120             anim[i].active = 0;
121     }
122 }
```

13.39.2.3 int ckb_frame (ckb_runctx ∗ *context*)

Definition at line 152 of file main.c.

References angle, anim, ANIM_MAX, animlength, ckb_alpha_blend(), ckb_grad_color(), CKB_KEYCLEAR, ckb_runctx::keycount, ckb_runctx::keys, symmetric, width, x, and y.

Referenced by main().

```
152                                 {
153     CKB_KEYCLEAR(context);
154     // Draw keys
155     double length = animlength * width;
156     unsigned count = context->keycount;
157     ckb_key* keys = context->keys;
158     for(unsigned i = 0; i < ANIM_MAX; i++){
159         if(anim[i].active){
160             for(ckb_key* key = keys; key < keys + count; key++){
161                 // Translate and rotate the key position into the animation's coordinate system
162                 float x = key->x - anim[i].x, y = key->y - anim[i].y;
163                 // Distance is the current X minus the key's X
164                 float distance = anim[i].curx - (x * cos(angle) - y * sin(
    angle));
165                 distance /= length;
166                 // If symmetric, use absolute distance
167                 if(symmetric)
168                     distance = fabs(distance);
```

```
                else if(distance >= -0.005f && distance < 0.f)
                    // If not symmetric, round values close to 0
                    distance = 0.f;
                if(distance > 1.f && distance <= 1.005f)
                    // Round values close to 1
                    distance = 1.f;
                // Pick gradient position based on distance
                if(distance <= 1.f && distance >= 0.){
                    float a, r, g, b;
                    ckb_grad_color(&a, &r, &g, &b, &animcolor, distance * 100.);
                    ckb_alpha_blend(key, a, r, g, b);
                }
            }
        }
    }
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.39.2.4 void ckb_info ( )

Definition at line 4 of file main.c.

References CKB_COPYRIGHT, CKB_DESCRIPTION, CKB_GUID, CKB_KP_POSITION, CKB_KPMODE, CKB_-LICENSE, CKB_LIVEPARAMS, CKB_NAME, CKB_PARAM_AGRADIENT, CKB_PARAM_ANGLE, CKB_PARAM-_BOOL, CKB_PARAM_DOUBLE, CKB_PREEMPT, CKB_PRESET_END, CKB_PRESET_PARAM, CKB_PRESE-T_START, CKB_TIME_DURATION, CKB_TIMEMODE, CKB_VERSION, and TRUE.

Referenced by main().

```
4               {
5     // Plugin info
6     CKB_NAME("Wave");
7     CKB_VERSION("0.10");
8     CKB_COPYRIGHT("2014-2016", "MSC");
9     CKB_LICENSE("GPLv2");
10     CKB_GUID("{E0BBA19E-C328-4C0E-8E3C-A06D5722B4FC}");
11     CKB_DESCRIPTION("A moving wave effect.");
```

```

    // Effect parameters
    CKB_PARAM_ANGLE("angle", "Angle:", "", 90);
    CKB_PARAM_AGRADIENT("color", "Wave color:", "", "ffffffff");
    CKB_PARAM_DOUBLE("length", "Wave length:", "%", 100, 1., 100.);
    CKB_PARAM_BOOL("symmetric", "Symmetric", 0);

    // Timing/input parameters
    CKB_KPMODE(CKB_KP_POSITION);
    CKB_TIMEMODE(CKB_TIME_DURATION);
    CKB_LIVEPARAMS(TRUE);
    CKB_PREEMPT(TRUE);

    // Presets
    CKB_PRESET_START("Shimmer");
    CKB_PRESET_PARAM("duration", "2.0");
    CKB_PRESET_PARAM("length", "50.0");
    CKB_PRESET_PARAM("symmetric", "1");
    CKB_PRESET_END;

    CKB_PRESET_START("Rainbow");
    CKB_PRESET_PARAM("color", "0:ffff0000 17:ffffff00 33:ff00ff00 50:ff00ffff 67:ff0000ff
    83:ffff00ff 100:ffff0000");
    CKB_PRESET_PARAM("duration", "2.0");
    CKB_PRESET_END;

    CKB_PRESET_START("Vertical rainbow");
    CKB_PRESET_PARAM("color", "0:ffff0000 17:ffffff00 33:ff00ff00 50:ff00ffff 67:ff0000ff
    83:ffff00ff 100:ffff0000");
    CKB_PRESET_PARAM("duration", "2.0");
    CKB_PRESET_PARAM("angle", "180");
    CKB_PRESET_END;
}
```

Here is the caller graph for this function:

13.39.2.5 void ckb_init (ckb_runctx * *context*)

Definition at line 44 of file main.c.

Referenced by main().

```
{
    // Nothing to do
}
```

Here is the caller graph for this function:

13.39.2.6 void ckb_keypress (ckb_runctx * *context*, ckb_key * *key*, int *x*, int *y*, int *state*)

Definition at line 124 of file main.c.

References anim_add(), and anim_remove().

Referenced by main().

```
124                                                                    {
125     // Start or stop animation on a key
126     if(state)
127         anim_add(x, y);
128     else
129         anim_remove(x, y);
130 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.39.2.7 void ckb_parameter (ckb_runctx * *context*, const char * *name*, const char * *value*)

Definition at line 54 of file main.c.

References angle, animlength, CKB_PARSE_AGRADIENT, CKB_PARSE_ANGLE, CKB_PARSE_BOOL, CKB_PARSE_DOUBLE, CKB_REAL_ANGLE, ckb_runctx::height, kprelease, left, symmetric, top, width, ckb_runctx::width, x, and y.

Referenced by ckb_read_params().

```
54                                                                     {
55     CKB_PARSE_AGRADIENT("color", &animcolor){}
56     double len;
57     CKB_PARSE_DOUBLE("length", &len){
58         animlength = len / 100.;
59     }
60     CKB_PARSE_BOOL("symmetric", &symmetric){}
61     CKB_PARSE_BOOL("kprelease", &kprelease){}
62     long _angle;
```

```
    CKB_PARSE_ANGLE("angle", &_angle){
        angle = CKB_REAL_ANGLE(_angle);
        // Get each of the four corners of the keyboard, relative to the center
        double wOver2 = context->width / 2., hOver2 = context->height / 2.;
        double x[4] = {
            -wOver2, wOver2,
            -wOver2, wOver2
        };
        double y[4] = {
            -hOver2, -hOver2,
            hOver2, hOver2
        };
        // Rotate them in the direction that the animation will travel
        for(int i = 0; i < 4; i++){
            double x2 = x[i] * cos(angle) - y[i] * sin(angle);
            y[i] = x[i] * sin(angle) + y[i] * cos(angle);
            x[i] = x2;
        }
        // Determine the leftmost and rightmost points
        double min_x = INFINITY, max_x = -INFINITY;
        for(int i = 0; i < 4; i++){
            if(x[i] < min_x)
                min_x = x[i];
            if(x[i] > max_x)
                max_x = x[i];
        }
        // The leftmost point is where the animation will begin when started with the mode,
        // and the difference between the two is the animation width.
        // Animations always travel left to right in their own coordinate system.
        left = min_x * cos(-angle) + wOver2;
        top = min_x * sin(-angle) + hOver2;
        width = max_x - min_x;
    }
}
```

Here is the caller graph for this function:

13.39.2.8 void ckb_start (ckb_runctx * *context*, int *state*)

Definition at line 132 of file main.c.

References anim_add(), anim_remove(), kprelease, left, and top.

Referenced by main().

```
132                                                 {
133     // Start or stop animation on the edge of the keyboard
134     if(state)
135         anim_add(left, top);
136     else if(kprelease)
137         anim_remove(left, top);
138 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.39.2.9 void ckb_time (ckb_runctx * *context*, double *delta*)

Definition at line 140 of file main.c.

References anim, ANIM_MAX, animlength, and width.

Referenced by main().

```
140                                                 {
141     // Advance all waves, remove them if they pass the edge
142     double length = animlength * width;
143     for(unsigned i = 0; i < ANIM_MAX; i++){
144         if(anim[i].active){
145             anim[i].curx += width * delta;
146             if(anim[i].curx > width + length)
147                 anim[i].active = 0;
148         }
149     }
150 }
```

Here is the caller graph for this function:

13.39.3 Variable Documentation

13.39.3.1 double angle = 0.

Definition at line 50 of file main.c.

Referenced by angleFlip(), ckb_frame(), and ckb_parameter().

13.39.3.2 struct { ... } anim[(144 ∗ 2)]

13.39.3.3 ckb_gradient animcolor = { 0 }

Definition at line 48 of file main.c.

13.39.3.4 double animlength = 0.

Definition at line 52 of file main.c.

13.39.3.5 int kprelease = 0

Definition at line 49 of file main.c.

13.39.3.6 double left = 0.

Definition at line 51 of file main.c.

Referenced by _cmd_macro(), ckb_parameter(), ckb_start(), cmd_dpi(), GradientDialogWidget::mouseMoveEvent(), readcmd(), and right().

13.39.3.7 int symmetric = 0

Definition at line 49 of file main.c.

13.39.3.8 double top = 0.

Definition at line 51 of file main.c.

Referenced by ckb_parameter(), ckb_start(), and GradientDialogWidget::mouseMoveEvent().

13.39.3.9 double width = 0.

Definition at line 52 of file main.c.

Referenced by anim_add(), ckb_frame(), ckb_parameter(), ckb_time(), KeyWidget::drawInfo(), GradientDialogWidget::fillRect(), KeyWidget::map(), and KeyWidget::paintEvent().

13.40 src/ckb-daemon/notify.c File Reference

```
#include "device.h"
```

```
#include "devnode.h"
#include "dpi.h"
#include "led.h"
#include "notify.h"
#include "profile.h"
```

Include dependency graph for notify.c:

Macros

- #define HWMODE_OR_RETURN(kb, index)
- #define HW_STANDARD

Functions

- void nprintf (usbdevice ∗kb, int nodenumber, usbmode ∗mode, const char ∗format,...)
- void nprintkey (usbdevice ∗kb, int nnumber, int keyindex, int down)
- void nprintind (usbdevice ∗kb, int nnumber, int led, int on)
- void cmd_notify (usbdevice ∗kb, usbmode ∗mode, int nnumber, int keyindex, const char ∗toggle)
- static void _cmd_get (usbdevice ∗kb, usbmode ∗mode, int nnumber, const char ∗setting)
- void cmd_get (usbdevice ∗kb, usbmode ∗mode, int nnumber, int dummy, const char ∗setting)
- int restart ()
- void cmd_restart (usbdevice ∗kb, usbmode ∗mode, int nnumber, int dummy, const char ∗content)

13.40.1 Macro Definition Documentation

13.40.1.1 #define HW_STANDARD

Value:

```
if(!kb->hw)                                     \
        return;                                 \
    unsigned index = INDEX_OF(mode, profile->mode); \
    /* Make sure the mode number is valid */    \
    HWMODE_OR_RETURN(kb, index)
```

Definition at line 83 of file notify.c.

Referenced by _cmd_get().

13.40.1.2 #define HWMODE_OR_RETURN(*kb, index*)

Value:

```
if(IS_K95(kb)){                 \
        if((index) >= HWMODE_K95)   \
            return;                 \
    } else {                        \
        if((index) >= HWMODE_K70)   \
            return;                 \
    }
```

Definition at line 73 of file notify.c.

13.40.2 Function Documentation

13.40.2.1 static void _cmd_get (usbdevice * *kb,* usbmode * *mode,* int *nnumber,* const char * *setting*) [static]

Definition at line 90 of file notify.c.

References dpiset::current, usbmode::dpi, hwprofile::dpi, gethwmodename(), gethwprofilename(), getid(), getmodename(), getprofilename(), usbdevice::hw, usbdevice::hw_ileds, HW_STANDARD, I_CAPS, I_NUM, I_SCROLL, usbmode::id, usbprofile::id, hwprofile::id, usbdevice::input, keymap, usbinput::keys, dpiset::lift, usbmode::light, hwprofile::light, usbid::modified, N_KEYS_INPUT, nprintf(), nprintind(), nprintkey(), printdpi(), printrgb(), usbdevice::profile, and dpiset::snap.

Referenced by cmd_get().

```
90                                                                                  {
91      usbprofile* profile = kb->profile;
92      if(!strcmp(setting, ":mode")){
93          // Get the current mode number
94          nprintf(kb, nnumber, mode, "switch\n");
95          return;
96      } else if(!strcmp(setting, ":rgb")){
97          // Get the current RGB settings
98          char* rgb = printrgb(&mode->light, kb);
99          nprintf(kb, nnumber, mode, "rgb %s\n", rgb);
100          free(rgb);
101          return;
102      } else if(!strcmp(setting, ":hwrgb")){
103          // Get the current hardware RGB settings
104          HW_STANDARD;
105          char* rgb = printrgb(kb->hw->light + index, kb);
106          nprintf(kb, nnumber, mode, "hwrgb %s\n", rgb);
107          free(rgb);
108          return;
109      } else if(!strcmp(setting, ":profilename")){
110          // Get the current profile name
111          char* name = getprofilename(profile);
112          nprintf(kb, nnumber, 0, "profilename %s\n", name[0] ? name : "Unnamed");
113          free(name);
114      } else if(!strcmp(setting, ":name")){
115          // Get the current mode name
116          char* name = getmodename(mode);
117          nprintf(kb, nnumber, mode, "name %s\n", name[0] ? name : "Unnamed");
118          free(name);
119      } else if(!strcmp(setting, ":hwprofilename")){
120          // Get the current hardware profile name
121          if(!kb->hw)
122              return;
123          char* name = gethwprofilename(kb->hw);
124          nprintf(kb, nnumber, 0, "hwprofilename %s\n", name[0] ? name : "Unnamed");
125          free(name);
126      } else if(!strcmp(setting, ":hwname")){
127          // Get the current hardware mode name
128          HW_STANDARD;
129          char* name = gethwmodename(kb->hw, index);
130          nprintf(kb, nnumber, mode, "hwname %s\n", name[0] ? name : "Unnamed");
131          free(name);
132      } else if(!strcmp(setting, ":profileid")){
133          // Get the current profile ID
134          char* guid = getid(&profile->id);
135          int modified;
136          memcpy(&modified, &profile->id.modified, sizeof(modified));
137          nprintf(kb, nnumber, 0, "profileid %s %x\n", guid, modified);
```

```
        free(guid);
    } else if(!strcmp(setting, ":id")){
        // Get the current mode ID
        char* guid = getid(&mode->id);
        int modified;
        memcpy(&modified, &mode->id.modified, sizeof(modified));
        nprintf(kb, nnumber, mode, "id %s %x\n", guid, modified);
        free(guid);
    } else if(!strcmp(setting, ":hwprofileid")){
        // Get the current hardware profile ID
        if(!kb->hw)
            return;
        char* guid = getid(&kb->hw->id[0]);
        int modified;
        memcpy(&modified, &kb->hw->id[0].modified, sizeof(modified));
        nprintf(kb, nnumber, 0, "hwprofileid %s %x\n", guid, modified);
        free(guid);
    } else if(!strcmp(setting, ":hwid")){
        // Get the current hardware mode ID
        HW_STANDARD;
        char* guid = getid(&kb->hw->id[index + 1]);
        int modified;
        memcpy(&modified, &kb->hw->id[index + 1].modified, sizeof(modified));
        nprintf(kb, nnumber, mode, "hwid %s %x\n", guid, modified);
        free(guid);
    } else if(!strcmp(setting, ":keys")){
        // Get the current state of all keys
        for(int i = 0; i < N_KEYS_INPUT; i++){
            if(!keymap[i].name)
                continue;
            int byte = i / 8, bit = 1 << (i & 7);
            uchar state = kb->input.keys[byte] & bit;
            if(state)
                nprintkey(kb, nnumber, i, 1);
        }
    } else if(!strcmp(setting, ":i")){
        // Get the current state of all indicator LEDs
        if(kb->hw_ileds & I_NUM) nprintind(kb, nnumber, I_NUM, 1);
        if(kb->hw_ileds & I_CAPS) nprintind(kb, nnumber, I_CAPS, 1);
        if(kb->hw_ileds & I_SCROLL) nprintind(kb, nnumber, I_SCROLL, 1);
    } else if(!strcmp(setting, ":dpi")){
        // Get the current DPI levels
        char* dpi = printdpi(&mode->dpi, kb);
        nprintf(kb, nnumber, mode, "dpi %s\n", dpi);
        free(dpi);
        return;
    } else if(!strcmp(setting, ":hwdpi")){
        // Get the current hardware DPI levels
        HW_STANDARD;
        char* dpi = printdpi(kb->hw->dpi + index, kb);
        nprintf(kb, nnumber, mode, "hwdpi %s\n", dpi);
        free(dpi);
        return;
    } else if(!strcmp(setting, ":dpisel")){
        // Get the currently-selected DPI
        nprintf(kb, nnumber, mode, "dpisel %d\n", mode->dpi.current);
    } else if(!strcmp(setting, ":hwdpisel")){
        // Get the currently-selected hardware DPI
        HW_STANDARD;
        nprintf(kb, nnumber, mode, "hwdpisel %d\n", kb->hw->dpi[index].current);
    } else if(!strcmp(setting, ":lift")){
        // Get the mouse lift height
        nprintf(kb, nnumber, mode, "lift %d\n", mode->dpi.lift);
    } else if(!strcmp(setting, ":hwlift")){
        // Get the hardware lift height
        HW_STANDARD;
        nprintf(kb, nnumber, mode, "hwlift %d\n", kb->hw->dpi[index].lift);
    } else if(!strcmp(setting, ":snap")){
        // Get the angle snap status
        nprintf(kb, nnumber, mode, "snap %s\n", mode->dpi.snap ? "on" : "off");
    } else if(!strcmp(setting, ":hwsnap")){
        // Get the hardware angle snap status
        HW_STANDARD;
        nprintf(kb, nnumber, mode, "hwsnap %s\n", kb->hw->dpi[index].snap ? "on" : "off");
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.40.2.2 void cmd_get (usbdevice * *kb*, usbmode * *mode*, int *nnumber*, int *dummy*, const char * *setting*)

Definition at line 215 of file notify.c.

References _cmd_get(), and imutex.

```
215                                                                                    {
216     pthread_mutex_lock(imutex(kb));
217     _cmd_get(kb, mode, nnumber, setting);
218     pthread_mutex_unlock(imutex(kb));
219 }
```

Here is the call graph for this function:

13.40.2.3 void cmd_notify (usbdevice * *kb*, usbmode * *mode*, int *nnumber*, int *keyindex*, const char * *toggle*)

Definition at line 61 of file notify.c.

References CLEAR_KEYBIT, imutex, N_KEYS_INPUT, usbmode::notify, and SET_KEYBIT.

```
61                                                                                                  {
62     if(keyindex >= N_KEYS_INPUT)
63         return;
64     pthread_mutex_lock(imutex(kb));
65     if(!strcmp(toggle, "on") || *toggle == 0)
66         SET_KEYBIT(mode->notify[nnumber], keyindex);
67     else if(!strcmp(toggle, "off"))
68         CLEAR_KEYBIT(mode->notify[nnumber], keyindex);
69     pthread_mutex_unlock(imutex(kb));
70 }
```

13.40.2.4 void cmd_restart (usbdevice * *kb*, usbmode * *mode*, int *nnumber*, int *dummy*, const char * *content*)

Definition at line 223 of file notify.c.

References ckb_info, nprintf(), and restart().

```
223                                                                                                 {
224     ckb_info("RESTART called with %s\n", content);
225     nprintf(kb, -1, 0, "RESTART called with %s\n", content);
226     restart();
227 }
```

Here is the call graph for this function:

13.40.2.5 void nprintf (usbdevice * *kb*, int *nodenumber*, usbmode * *mode*, const char * *format*, ...)

Definition at line 8 of file notify.c.

References INDEX_OF, usbprofile::mode, usbdevice::outfifo, OUTFIFO_MAX, and usbdevice::profile.

Referenced by _cmd_get(), cmd_fwupdate(), cmd_restart(), fwupdate(), nprintind(), and nprintkey().

```
8                                                                                    {
9     if(!kb)
10        return;
11     usbprofile* profile = kb->profile;
12     va_list va_args;
13     int fifo;
14     if(nodenumber >= 0){
15         // If node number was given, print to that node (if open)
16         if((fifo = kb->outfifo[nodenumber] - 1) != -1){
17             va_start(va_args, format);
18             if(mode)
19                 dprintf(fifo, "mode %d ", INDEX_OF(mode, profile->mode) + 1);
20             vdprintf(fifo, format, va_args);
21         }
22         return;
23     }
24     // Otherwise, print to all nodes
25     for(int i = 0; i < OUTFIFO_MAX; i++){
26         if((fifo = kb->outfifo[i] - 1) != -1){
27             va_start(va_args, format);
28             if(mode)
29                 dprintf(fifo, "mode %d ", INDEX_OF(mode, profile->mode) + 1);
30             vdprintf(fifo, format, va_args);
31         }
32     }
33 }
```

Here is the caller graph for this function:

13.40.2.6 void nprintind (usbdevice * *kb*, int *nnumber*, int *led*, int *on*)

Definition at line 43 of file notify.c.

References I_CAPS, I_NUM, I_SCROLL, and nprintf().

Referenced by _cmd_get(), and updateindicators_kb().

```
43                                                          {
44     const char* name = 0;
45     switch(led){
46     case I_NUM:
47         name = "num";
48         break;
49     case I_CAPS:
50         name = "caps";
51         break;
52     case I_SCROLL:
53         name = "scroll";
54         break;
55     default:
56         return;
57     }
58     nprintf(kb, nnumber, 0, "i %c%s\n", on ? '+' : '-', name);
59 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.40.2.7 void nprintkey (usbdevice * *kb*, int *nnumber*, int *keyindex*, int *down*)

Definition at line 35 of file notify.c.

References keymap, key::name, and nprintf().

Referenced by _cmd_get(), and inputupdate_keys().

```
35                                                          {
36     const key* map = keymap + keyindex;
37     if(map->name)
```

```
        nprintf(kb, nnumber, 0, "key %c%s\n", down ? '+' : '-', map->name);
    else
        nprintf(kb, nnumber, 0, "key %c#%d\n", down ? '+' : '-', keyindex);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.40.2.8 int restart ( )

Definition at line 228 of file main.c.

References ckb_err, main(), main_ac, main_av, and quitWithLock().

Referenced by cmd_restart(), and main().

```
228             {
229     ckb_err("restart called, running quit without mutex-lock.\n");
230     quitWithLock(0);
231     return main(main_ac, main_av);
232 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.41 src/ckb-daemon/notify.h File Reference

```
#include "includes.h"
#include "device.h"
```

Include dependency graph for notify.h:

This graph shows which files directly or indirectly include this file:

Functions

- void nprintf (usbdevice ∗kb, int nodenumber, usbmode ∗mode, const char ∗format,...)
- void nprintkey (usbdevice ∗kb, int nnumber, int keyindex, int down)
- void nprintind (usbdevice ∗kb, int nnumber, int led, int on)
- void cmd_notify (usbdevice ∗kb, usbmode ∗mode, int nnumber, int keyindex, const char ∗toggle)
- void cmd_get (usbdevice ∗kb, usbmode ∗mode, int nnumber, int dummy, const char ∗setting)
- void cmd_restart (usbdevice ∗kb, usbmode ∗mode, int nnumber, int dummy, const char ∗content)

13.41.1 Function Documentation

13.41.1.1 void cmd_get (usbdevice ∗ *kb*, usbmode ∗ *mode*, int *nnumber*, int *dummy*, const char ∗ *setting*)

Definition at line 215 of file notify.c.

References _cmd_get(), and imutex.

```
215                                                                                                    {
216     pthread_mutex_lock(imutex(kb));
217     _cmd_get(kb, mode, nnumber, setting);
218     pthread_mutex_unlock(imutex(kb));
219 }
```

Here is the call graph for this function:

13.41.1.2 void cmd_notify (usbdevice * *kb*, usbmode * *mode*, int *nnumber*, int *keyindex*, const char * *toggle*)

Definition at line 61 of file notify.c.

References CLEAR_KEYBIT, imutex, N_KEYS_INPUT, usbmode::notify, and SET_KEYBIT.

```
61                                                                                                  {
62     if(keyindex >= N_KEYS_INPUT)
63         return;
64     pthread_mutex_lock(imutex(kb));
65     if(!strcmp(toggle, "on") || *toggle == 0)
66         SET_KEYBIT(mode->notify[nnumber], keyindex);
67     else if(!strcmp(toggle, "off"))
68         CLEAR_KEYBIT(mode->notify[nnumber], keyindex);
69     pthread_mutex_unlock(imutex(kb));
70 }
```

13.41.1.3 void cmd_restart (usbdevice * *kb*, usbmode * *mode*, int *nnumber*, int *dummy*, const char * *content*)

Definition at line 223 of file notify.c.

References ckb_info, nprintf(), and restart().

```
223                                                                                                 {
224     ckb_info("RESTART called with %s\n", content);
225     nprintf(kb, -1, 0, "RESTART called with %s\n", content);
226     restart();
227 }
```

Here is the call graph for this function:

13.41.1.4 void nprintf (usbdevice * *kb*, int *nodenumber*, usbmode * *mode*, const char * *format*, ...)

Definition at line 8 of file notify.c.

References INDEX_OF, usbprofile::mode, usbdevice::outfifo, OUTFIFO_MAX, and usbdevice::profile.

Referenced by _cmd_get(), cmd_fwupdate(), cmd_restart(), fwupdate(), nprintind(), and nprintkey().

```
8                                                                                                   {
9     if(!kb)
10        return;
11     usbprofile* profile = kb->profile;
12     va_list va_args;
13     int fifo;
```

```
    if(nodenumber >= 0){
        // If node number was given, print to that node (if open)
        if((fifo = kb->outfifo[nodenumber] - 1) != -1){
            va_start(va_args, format);
            if(mode)
                dprintf(fifo, "mode %d ", INDEX_OF(mode, profile->mode) + 1);
            vdprintf(fifo, format, va_args);
        }
        return;
    }
    // Otherwise, print to all nodes
    for(int i = 0; i < OUTFIFO_MAX; i++){
        if((fifo = kb->outfifo[i] - 1) != -1){
            va_start(va_args, format);
            if(mode)
                dprintf(fifo, "mode %d ", INDEX_OF(mode, profile->mode) + 1);
            vdprintf(fifo, format, va_args);
        }
    }
}
```

Here is the caller graph for this function:

13.41.1.5 void nprintind (usbdevice * *kb*, int *nnumber*, int *led*, int *on*)

Definition at line 43 of file notify.c.

References I_CAPS, I_NUM, I_SCROLL, and nprintf().

Referenced by _cmd_get(), and updateindicators_kb().

```
{
    const char* name = 0;
    switch(led){
    case I_NUM:
        name = "num";
        break;
    case I_CAPS:
        name = "caps";
        break;
    case I_SCROLL:
        name = "scroll";
        break;
    default:
        return;
    }
    nprintf(kb, nnumber, 0, "i %c%s\n", on ? '+' : '-', name);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.41.1.6 void nprintkey (usbdevice * *kb*, int *nnumber*, int *keyindex*, int *down*)

Definition at line 35 of file notify.c.

References keymap, key::name, and nprintf().

Referenced by _cmd_get(), and inputupdate_keys().

```
35                                                                  {
36     const key* map = keymap + keyindex;
37     if(map->name)
38         nprintf(kb, nnumber, 0, "key %c%s\n", down ? '+' : '-', map->name);
39     else
40         nprintf(kb, nnumber, 0, "key %c#%d\n", down ? '+' : '-', keyindex);
41 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.42 src/ckb-daemon/os.h File Reference

```
#include <features.h>
```

```
#include <libudev.h>
#include <linux/uinput.h>
#include <linux/usbdevice_fs.h>
```

Include dependency graph for os.h:

This graph shows which files directly or indirectly include this file:

Macros

- #define _DEFAULT_SOURCE
- #define _GNU_SOURCE
- #define UINPUT_VERSION 2
- #define euid_guard_start
- #define euid_guard_stop

13.42.1 Macro Definition Documentation

13.42.1.1 #define _DEFAULT_SOURCE

Definition at line 22 of file os.h.

13.42.1.2 #define _GNU_SOURCE

Definition at line 26 of file os.h.

13.42.1.3 #define euid_guard_start

Definition at line 40 of file os.h.

Referenced by mkdevpath(), mknotifynode(), rmdevpath(), rmnotifynode(), and updateconnected().

13.42.1.4 #define euid_guard_stop

Definition at line 41 of file os.h.

Referenced by mkdevpath(), mknotifynode(), rmdevpath(), rmnotifynode(), and updateconnected().

13.42.1.5 #define UINPUT_VERSION 2

Definition at line 35 of file os.h.

13.43 src/ckb-daemon/profile.c File Reference

```
#include "command.h"
#include "device.h"
#include "input.h"
#include "led.h"
#include "profile.h"
```

Include dependency graph for profile.c:

Functions

- void urldecode2 (char ∗dst, const char ∗src)
- void urlencode2 (char ∗dst, const char ∗src)
- int setid (usbid ∗id, const char ∗guid)
- char ∗ getid (usbid ∗id)
- void u16enc (char ∗in, ushort ∗out, size_t ∗srclen, size_t ∗dstlen)
- void u16dec (ushort ∗in, char ∗out, size_t ∗srclen, size_t ∗dstlen)
- void cmd_name (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗name)
- void cmd_profilename (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int dummy3, const char ∗name)
- char ∗ printname (ushort ∗name, int length)
- char ∗ getmodename (usbmode ∗mode)
- char ∗ getprofilename (usbprofile ∗profile)
- char ∗ gethwmodename (hwprofile ∗profile, int index)
- char ∗ gethwprofilename (hwprofile ∗profile)
- void cmd_id (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗id)
- void cmd_profileid (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗id)
- static void initmode (usbmode ∗mode)
- void allocprofile (usbdevice ∗kb)
- int loadprofile (usbdevice ∗kb)
- static void freemode (usbmode ∗mode)
- void cmd_erase (usbdevice ∗kb, usbmode ∗mode, int dummy1, int dummy2, const char ∗dummy3)
- static void _freeprofile (usbdevice ∗kb)
- void cmd_eraseprofile (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int dummy3, const char ∗dummy4)
- void freeprofile (usbdevice ∗kb)
- void hwtonative (usbprofile ∗profile, hwprofile ∗hw, int modecount)
- void nativetohw (usbprofile ∗profile, hwprofile ∗hw, int modecount)

Variables

- static iconv_t utf8to16 = 0
- static iconv_t utf16to8 = 0

13.43.1 Function Documentation

13.43.1.1 static void _freeprofile (usbdevice * kb) [static]

Definition at line 210 of file profile.c.

References freemode(), usbprofile::mode, MODE_COUNT, and usbdevice::profile.

Referenced by cmd_eraseprofile(), and freeprofile().

```
210                                     {
211     usbprofile* profile = kb->profile;
212     if(!profile)
213         return;
214     // Clear all mode data
215     for(int i = 0; i < MODE_COUNT; i++)
216         freemode(profile->mode + i);
217     free(profile);
218     kb->profile = 0;
219 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.43.1.2 void allocprofile (usbdevice * kb)

Definition at line 182 of file profile.c.

References usbprofile::currentmode, dpiset::forceupdate, lighting::forceupdate, initmode(), usbprofile::lastdpi, usbprofile::lastlight, usbprofile::mode, MODE_COUNT, and usbdevice::profile.

Referenced by cmd_eraseprofile().

```
182                                 {
183     if(kb->profile)
184         return;
185     usbprofile* profile = kb->profile = calloc(1, sizeof(
      usbprofile));
186     for(int i = 0; i < MODE_COUNT; i++)
187         initmode(profile->mode + i);
188     profile->currentmode = profile->mode;
189     profile->lastlight.forceupdate = profile->lastdpi.
      forceupdate = 1;
190 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.43.1.3 void cmd_erase (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *dummy3*)

Definition at line 203 of file profile.c.

References freemode(), imutex, and initmode().

```
203                                                                                 {
204     pthread_mutex_lock(imutex(kb));
205     freemode(mode);
206     initmode(mode);
207     pthread_mutex_unlock(imutex(kb));
208 }
```

Here is the call graph for this function:

13.43.1.4 void cmd_eraseprofile (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *dummy4*)

Definition at line 221 of file profile.c.

References _freeprofile(), allocprofile(), and imutex.

```
221                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
220 {
221     pthread_mutex_lock(imutex(kb));
222     _freeprofile(kb);
223     allocprofile(kb);
224     pthread_mutex_unlock(imutex(kb));
225 }
```

Here is the call graph for this function:

13.43.1.5 void cmd_id (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *id*)

Definition at line 160 of file profile.c.

References usbmode::id, usbid::modified, and setid().

```
159 {
160     // ID is either a GUID or an 8-digit hex number
161     int newmodified;
162     if(!setid(&mode->id, id) && sscanf(id, "%08x", &newmodified) == 1)
163         memcpy(mode->id.modified, &newmodified, sizeof(newmodified));
164 }
```

Here is the call graph for this function:

13.43.1.6 void cmd_name (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *name*)

Definition at line 117 of file profile.c.

References MD_NAME_LEN, usbmode::name, u16enc(), and urldecode2().

```
117                                                                                                {
118     char decoded[strlen(name) + 1];
119     urldecode2(decoded, name);
120     size_t srclen = strlen(decoded), dstlen = MD_NAME_LEN;
121     u16enc(decoded, mode->name, &srclen, &dstlen);
122 }
```

Here is the call graph for this function:

13.43.1.7 void cmd_profileid (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *id*)

Definition at line 167 of file profile.c.

References usbprofile::id, usbid::modified, usbdevice::profile, and setid().

```
167                                                                                                {
168     usbprofile* profile = kb->profile;
169     int newmodified;
170     if(!setid(&profile->id, id) && sscanf(id, "%08x", &newmodified) == 1)
171         memcpy(profile->id.modified, &newmodified, sizeof(newmodified));
172
173 }
```

Here is the call graph for this function:

13.43.1.8 void cmd_profilename (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *name*)

Definition at line 124 of file profile.c.

References usbprofile::name, PR_NAME_LEN, usbdevice::profile, u16enc(), and urldecode2().

```
124                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
125     usbprofile* profile = kb->profile;
126     char decoded[strlen(name) + 1];
127     urldecode2(decoded, name);
128     size_t srclen = strlen(decoded), dstlen = PR_NAME_LEN;
129     u16enc(decoded, profile->name, &srclen, &dstlen);
130 }
```

Here is the call graph for this function:

13.43.1.9 static void freemode (usbmode * *mode*) [static]

Definition at line 198 of file profile.c.

References usbmode::bind, and freebind().

Referenced by _freeprofile(), and cmd_erase().

```
198                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
```
{
```
199     freebind(&mode->bind);
200     memset(mode, 0, sizeof(*mode));
201 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.43.1.10 void freeprofile (usbdevice * *kb*)

Definition at line 228 of file profile.c.

References _freeprofile(), and usbdevice::hw.

```
228                                 {
229     _freeprofile(kb);
230     // Also free HW profile
231     free(kb->hw);
232     kb->hw = 0;
233 }
```

Here is the call graph for this function:

13.43.1.11 char* gethwmodename (hwprofile * *profile*, int *index*)

Definition at line 152 of file profile.c.

References MD_NAME_LEN, hwprofile::name, and printname().

Referenced by _cmd_get().

```
152                                                 {
153     return printname(profile->name[index + 1], MD_NAME_LEN);
154 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.43.1.12 char* gethwprofilename (hwprofile * *profile*)

Definition at line 156 of file profile.c.

References MD_NAME_LEN, hwprofile::name, and printname().

Referenced by _cmd_get().

```
156                                                 {
157     return printname(profile->name[0], MD_NAME_LEN);
158 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.43.1.13 char* getid (usbid * *id*)

Definition at line 79 of file profile.c.

References usbid::guid.

Referenced by _cmd_get().

```
79                      {
80     int32_t data1;
81     int16_t data2, data3, data4a;
82     char data4b[6];
83     memcpy(&data1, id->guid + 0x0, 4);
84     memcpy(&data2, id->guid + 0x4, 2);
85     memcpy(&data3, id->guid + 0x6, 2);
86     memcpy(&data4a, id->guid + 0x8, 2);
87     memcpy(data4b, id->guid + 0xA, 6);
88     char* guid = malloc(39);
89     snprintf(guid, 39, "{%08X-%04hX-%04hX-%04hX-%02hhX%02hhX%02hhX%02hhX%02hhX%02hhX}",
90             data1, data2, data3, data4a, data4b[0], data4b[1], data4b[2], data4b[3], data4b[4], data4b[5])
    ;
91     return guid;
92 }
```

Here is the caller graph for this function:

13.43.1.14 char* getmodename (usbmode * *mode*)

Definition at line 144 of file profile.c.

References MD_NAME_LEN, usbmode::name, and printname().

Referenced by _cmd_get().

```
144                                 {
145     return printname(mode->name, MD_NAME_LEN);
146 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.43.1.15 char* getprofilename (usbprofile * *profile*)

Definition at line 148 of file profile.c.

References usbprofile::name, PR_NAME_LEN, and printname().

Referenced by _cmd_get().

```
148                                         {
149     return printname(profile->name, PR_NAME_LEN);
150 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.43.1.16 void hwtonative (usbprofile * *profile,* hwprofile * *hw,* int *modecount*)

Definition at line 235 of file profile.c.

References usbmode::dpi, hwprofile::dpi, dpiset::forceupdate, lighting::forceupdate, usbmode::id, usbprofile::id, hwprofile::id, usbprofile::lastdpi, usbprofile::lastlight, usbmode::light, hwprofile::light, MD_NAME_LEN, usbprofile::mode, usbmode::name, usbprofile::name, hwprofile::name, and PR_NAME_LEN.

Referenced by cmd_hwload_kb(), and cmd_hwload_mouse().

```
235                                                                 {
236     // Copy the profile name and ID
237     memcpy(profile->name, hw->name[0], PR_NAME_LEN * 2);
238     memcpy(&profile->id, hw->id, sizeof(usbid));
239     // Copy the mode settings
240     for(int i = 0; i < modecount; i++){
241         usbmode* mode = profile->mode + i;
242         memcpy(mode->name, hw->name[i + 1], MD_NAME_LEN * 2);
243         memcpy(&mode->id, hw->id + i + 1, sizeof(usbid));
244         memcpy(&mode->light, hw->light + i, sizeof(lighting));
245         memcpy(&mode->dpi, hw->dpi + i, sizeof(dpiset));
246         // Set a force update on the light/DPI since they've been overwritten
247         mode->light.forceupdate = mode->dpi.forceupdate = 1;
248     }
249     profile->lastlight.forceupdate = profile->lastdpi.
      forceupdate = 1;
250 }
```

Here is the caller graph for this function:

13.43.1.17 static void initmode (usbmode * *mode*) [static]

Definition at line 175 of file profile.c.

References usbmode::bind, usbmode::dpi, dpiset::forceupdate, lighting::forceupdate, initbind(), and usbmode::light.

Referenced by allocprofile(), and cmd_erase().

```
{
    memset(mode, 0, sizeof(*mode));
    mode->light.forceupdate = 1;
    mode->dpi.forceupdate = 1;
    initbind(&mode->bind);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.43.1.18 int loadprofile (usbdevice * *kb*)

Definition at line 192 of file profile.c.

References hwloadprofile.

```
{
    if(hwloadprofile(kb, 1))
        return -1;
    return 0;
}
```

13.43.1.19 void nativetohw (usbprofile * *profile*, hwprofile * *hw*, int *modecount*)

Definition at line 252 of file profile.c.

References usbmode::dpi, hwprofile::dpi, usbmode::id, usbprofile::id, hwprofile::id, usbmode::light, hwprofile::light, MD_NAME_LEN, usbprofile::mode, usbmode::name, usbprofile::name, hwprofile::name, and PR_NAME_LEN.

Referenced by cmd_hwsave_kb(), and cmd_hwsave_mouse().

```
{
    // Copy name and ID
    memcpy(hw->name[0], profile->name, PR_NAME_LEN * 2);
    memcpy(hw->id, &profile->id, sizeof(usbid));
    // Copy the mode settings
```

```
    for(int i = 0; i < modecount; i++){
        usbmode* mode = profile->mode + i;
        memcpy(hw->name[i + 1], mode->name, MD_NAME_LEN * 2);
        memcpy(hw->id + i + 1, &mode->id, sizeof(usbid));
        memcpy(hw->light + i, &mode->light, sizeof(lighting));
        memcpy(hw->dpi + i, &mode->dpi, sizeof(dpiset));
    }
}
```

Here is the caller graph for this function:

13.43.1.20 char* printname (ushort * *name*, int *length*)

Definition at line 132 of file profile.c.

References u16dec(), and urlencode2().

Referenced by gethwmodename(), gethwprofilename(), getmodename(), and getprofilename().

```
132                                         {
133     // Convert the name to UTF-8
134     char* buffer = calloc(1, length * 4 - 3);
135     size_t srclen = length, dstlen = length * 4 - 4;
136     u16dec(name, buffer, &srclen, &dstlen);
137     // URL-encode it
138     char* buffer2 = malloc(strlen(buffer) * 3 + 1);
139     urlencode2(buffer2, buffer);
140     free(buffer);
141     return buffer2;
142 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.43.1.21 int setid (usbid * *id*, const char * *guid*)

Definition at line 64 of file profile.c.

References usbid::guid.

Referenced by cmd_id(), and cmd_profileid().

```
64                                      {
65     int32_t data1;
66     int16_t data2, data3, data4a;
67     char data4b[6];
68     if(sscanf(guid, "{%08X-%04hX-%04hX-%04hX-%02hhX%02hhX%02hhX%02hhX%02hhX%02hhX}",
69               &data1, &data2, &data3, &data4a, data4b, data4b + 1, data4b + 2, data4b + 3, data4b + 4,
      data4b + 5) != 10)
70         return 0;
71     memcpy(id->guid + 0x0, &data1, 4);
72     memcpy(id->guid + 0x4, &data2, 2);
73     memcpy(id->guid + 0x6, &data3, 2);
74     memcpy(id->guid + 0x8, &data4a, 2);
75     memcpy(id->guid + 0xA, data4b, 6);
76     return 1;
77 }
```

Here is the caller graph for this function:

13.43.1.22 void u16dec (ushort * *in*, char * *out*, size_t * *srclen*, size_t * *dstlen*)

Definition at line 105 of file profile.c.

References utf16to8.

Referenced by printname().

```
105                                                                 {
106     if(!utf16to8)
107         utf16to8 = iconv_open("UTF-8", "UTF-16LE");
108     size_t srclen2 = 0, srclenmax = *srclen;
109     for(; srclen2 < srclenmax; srclen2++){
110         if(!in[srclen2])
111             break;
112     }
113     *srclen = srclen2 * 2;
114     iconv(utf16to8, (char**)&in, srclen, &out, dstlen);
115 }
```

Here is the caller graph for this function:

13.43.1.23 void u16enc (char * *in*, ushort * *out*, size_t * *srclen*, size_t * *dstlen*)

Definition at line 97 of file profile.c.

References utf8to16.

Referenced by cmd_name(), and cmd_profilename().

```
97                                                                  {
98     if(!utf8to16)
99         utf8to16 = iconv_open("UTF-16LE", "UTF-8");
100     memset(out, 0, *dstlen * 2);
101     *dstlen = *dstlen * 2 - 2;
102     iconv(utf8to16, &in, srclen, (char**)&out, dstlen);
103 }
```

Here is the caller graph for this function:

13.43.1.24 void urldecode2 (char * *dst*, const char * *src*)

Definition at line 8 of file profile.c.

Referenced by cmd_name(), and cmd_profilename().

```
8                                                   {
9     char a, b;
10     char s;
11     while((s = *src)){
12         if((s == '%') &&
13                 ((a = src[1]) && (b = src[2])) &&
14                 (isxdigit(a) && isxdigit(b))){
15             if(a >= 'a')
16                 a -= 'a'-'A';
17             if(a >= 'A')
18                 a -= 'A' - 10;
19             else
20                 a -= '0';
21             if(b >= 'a')
22                 b -= 'a'-'A';
23             if(b >= 'A')
24                 b -= 'A' - 10;
25             else
26                 b -= '0';
27             *dst++ = 16 * a + b;
28             src += 3;
29         } else {
30             *dst++ = s;
31             src++;
32         }
33     }
34     *dst = '\0';
35 }
```

Here is the caller graph for this function:

13.43.1.25 void urlencode2 (char * *dst*, const char * *src*)

Definition at line 37 of file profile.c.

Referenced by printname().

```
37                                                  {
38     char s;
39     while((s = *src++)){
40         if(s <= ',' || s == '/' ||
41                 (s >= ':' && s <= '@') ||
42                 s == '[' || s == ']' ||
43                 s >= 0x7F){
44             char a = s >> 4, b = s & 0xF;
45             if(a >= 10)
46                 a += 'A' - 10;
47             else
48                 a += '0';
49             if(b >= 10)
50                 b += 'A' - 10;
51             else
```

```
                b += '0';
            dst[0] = '%';
            dst[1] = a;
            dst[2] = b;
            dst += 3;
        } else
            *dst++ = s;
    }
    *dst = '\0';
}
```

Here is the caller graph for this function:

13.43.2 Variable Documentation

13.43.2.1 iconv_t utf16to8 = 0 [static]

Definition at line 95 of file profile.c.

Referenced by u16dec().

13.43.2.2 iconv_t utf8to16 = 0 [static]

Definition at line 95 of file profile.c.

Referenced by u16enc().

13.44 src/ckb-daemon/profile.h File Reference

```
#include "includes.h"
#include "device.h"
```

Include dependency graph for profile.h:

This graph shows which files directly or indirectly include this file:

Macros

- #define hwloadprofile(kb, apply) (kb)->vtable->hwload(kb, 0, 0, apply, 0)

Functions

- void allocprofile (usbdevice *kb)
- int loadprofile (usbdevice *kb)
- void freeprofile (usbdevice *kb)
- void cmd_erase (usbdevice *kb, usbmode *mode, int dummy1, int dummy2, const char *dummy3)
- void cmd_eraseprofile (usbdevice *kb, usbmode *dummy1, int dummy2, int dummy3, const char *dummy4)
- void cmd_name (usbdevice *kb, usbmode *mode, int dummy1, int dummy2, const char *name)
- void cmd_profilename (usbdevice *kb, usbmode *dummy1, int dummy2, int dummy3, const char *name)
- char * getmodename (usbmode *mode)
- char * getprofilename (usbprofile *profile)
- char * gethwmodename (hwprofile *profile, int index)
- char * gethwprofilename (hwprofile *profile)
- int setid (usbid *id, const char *guid)
- char * getid (usbid *id)
- void hwtonative (usbprofile *profile, hwprofile *hw, int modecount)
- void nativetohw (usbprofile *profile, hwprofile *hw, int modecount)
- void cmd_id (usbdevice *kb, usbmode *mode, int dummy1, int dummy2, const char *id)
- void cmd_profileid (usbdevice *kb, usbmode *mode, int dummy1, int dummy2, const char *id)
- int cmd_hwload_kb (usbdevice *kb, usbmode *dummy1, int dummy2, int apply, const char *dummy3)
- int cmd_hwload_mouse (usbdevice *kb, usbmode *dummy1, int dummy2, int apply, const char *dummy3)
- int cmd_hwsave_kb (usbdevice *kb, usbmode *dummy1, int dummy2, int dummy3, const char *dummy4)
- int cmd_hwsave_mouse (usbdevice *kb, usbmode *dummy1, int dummy2, int dummy3, const char *dummy4)

13.44.1 Macro Definition Documentation

13.44.1.1 #define hwloadprofile(*kb, apply*) (kb)->vtable->hwload(kb, 0, 0, apply, 0)

Definition at line 52 of file profile.h.

Referenced by _start_dev(), and loadprofile().

13.44.2 Function Documentation

13.44.2.1 void allocprofile (usbdevice * *kb*)

Definition at line 182 of file profile.c.

References usbprofile::currentmode, dpiset::forceupdate, lighting::forceupdate, initmode(), usbprofile::lastdpi, usbprofile::lastlight, usbprofile::mode, MODE_COUNT, and usbdevice::profile.

Referenced by cmd_eraseprofile().

```
{
    if(kb->profile)
        return;
    usbprofile* profile = kb->profile = calloc(1, sizeof(usbprofile));
    for(int i = 0; i < MODE_COUNT; i++)
        initmode(profile->mode + i);
    profile->currentmode = profile->mode;
    profile->lastlight.forceupdate = profile->lastdpi.forceupdate = 1;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.44.2.2 void cmd_erase (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *dummy3*)

Definition at line 203 of file profile.c.

References freemode(), imutex, and initmode().

```
{
    pthread_mutex_lock(imutex(kb));
    freemode(mode);
    initmode(mode);
    pthread_mutex_unlock(imutex(kb));
}
```

Here is the call graph for this function:

13.44.2.3 void cmd_eraseprofile (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *dummy4*)

Definition at line 221 of file profile.c.

References _freeprofile(), allocprofile(), and imutex.

```
221                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
222     pthread_mutex_lock(imutex(kb));
223     _freeprofile(kb);
224     allocprofile(kb);
225     pthread_mutex_unlock(imutex(kb));
226 }
```

Here is the call graph for this function:

13.44.2.4 int cmd_hwload_kb (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *apply*, const char * *dummy3*)

Definition at line 16 of file profile_keyboard.c.

References DELAY_LONG, usbdevice::hw, hwloadmode(), HWMODE_K70, HWMODE_K95, hwtonative(), hwprofile::id, IS_K95, MSG_SIZE, hwprofile::name, PR_NAME_LEN, usbdevice::profile, and usbrecv.

```
16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
17     DELAY_LONG(kb);
18     hwprofile* hw = calloc(1, sizeof(hwprofile));
19     // Ask for profile and mode IDs
20     uchar data_pkt[2][MSG_SIZE] = {
21         { 0x0e, 0x15, 0x01, 0 },
22         { 0x0e, 0x16, 0x01, 0 }
23     };
24     uchar in_pkt[MSG_SIZE];
25     int modes = (IS_K95(kb) ? HWMODE_K95 : HWMODE_K70);
26     for(int i = 0; i <= modes; i++){
27         data_pkt[0][3] = i;
28         if(!usbrecv(kb, data_pkt[0], in_pkt)){
```

```
            free(hw);
            return -1;
        }
        memcpy(hw->id + i, in_pkt + 4, sizeof(usbid));
    }
    // Ask for profile name
    if(!usbrecv(kb, data_pkt[1], in_pkt)){
        free(hw);
        return -1;
    }
    memcpy(hw->name[0], in_pkt + 4, PR_NAME_LEN * 2);
    // Load modes
    for(int i = 0; i < modes; i++){
        if(hwloadmode(kb, hw, i)){
            free(hw);
            return -1;
        }
    }
    // Make the profile active (if requested)
    if(apply)
        hwtonative(kb->profile, hw, modes);
    // Free the existing profile (if any)
    free(kb->hw);
    kb->hw = hw;
    DELAY_LONG(kb);
    return 0;
}
```

Here is the call graph for this function:

13.44.2.5 int cmd_hwload_mouse (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *apply*, const char * *dummy3*)

Definition at line 6 of file profile_mouse.c.

References DELAY_LONG, hwprofile::dpi, usbdevice::hw, hwtonative(), hwprofile::id, hwprofile::light, loaddpi(), loadrgb_mouse(), MSG_SIZE, hwprofile::name, PR_NAME_LEN, usbdevice::profile, and usbrecv.

```
6                                                                                                                {
7     DELAY_LONG(kb);
8     hwprofile* hw = calloc(1, sizeof(hwprofile));
9     // Ask for profile and mode IDs
10     uchar data_pkt[2][MSG_SIZE] = {
11         { 0x0e, 0x15, 0x01, 0 },
12         { 0x0e, 0x16, 0x01, 0 }
13     };
14     uchar in_pkt[MSG_SIZE];
15     for(int i = 0; i <= 1; i++){
16         data_pkt[0][3] = i;
17         if(!usbrecv(kb, data_pkt[0], in_pkt)){
18             free(hw);
19             return -1;
20         }
21         memcpy(hw->id + i, in_pkt + 4, sizeof(usbid));
22     }
23     // Ask for profile and mode names
24     for(int i = 0; i <= 1; i++){
25         data_pkt[1][3] = i;
26         if(!usbrecv(kb, data_pkt[1],in_pkt)){
27             free(hw);
28             return -1;
29         }
```

```
        memcpy(hw->name[i], in_pkt + 4, PR_NAME_LEN * 2);
    }

    // Load the RGB and DPI settings
    if(loadrgb_mouse(kb, hw->light, 0)
            || loaddpi(kb, hw->dpi, hw->light)){
        free(hw);
        return -1;
    }

    // Make the profile active (if requested)
    if(apply)
        hwtonative(kb->profile, hw, 1);
    // Free the existing profile (if any)
    free(kb->hw);
    kb->hw = hw;
    DELAY_LONG(kb);
    return 0;
}
```

Here is the call graph for this function:

13.44.2.6 int cmd_hwsave_kb (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *dummy4*)

Definition at line 57 of file profile_keyboard.c.

References DELAY_LONG, usbdevice::hw, HWMODE_K70, HWMODE_K95, hwprofile::id, IS_K95, hwprofile::light, MD_NAME_LEN, MSG_SIZE, hwprofile::name, nativetohw(), usbdevice::profile, savergb_kb(), and usbsend.

```
{
    DELAY_LONG(kb);
    hwprofile* hw = kb->hw;
    if(!hw)
        hw = kb->hw = calloc(1, sizeof(hwprofile));
    int modes = (IS_K95(kb) ? HWMODE_K95 : HWMODE_K70);
    nativetohw(kb->profile, hw, modes);
    // Save the profile and mode names
    uchar data_pkt[2][MSG_SIZE] = {
        { 0x07, 0x16, 0x01, 0 },
        { 0x07, 0x15, 0x01, 0 },
    };
    // Save the mode names
    for(int i = 0; i <= modes; i++){
        data_pkt[0][3] = i;
        memcpy(data_pkt[0] + 4, hw->name[i], MD_NAME_LEN * 2);
        if(!usbsend(kb, data_pkt[0], 1))
            return -1;
    }
    // Save the IDs
    for(int i = 0; i <= modes; i++){
        data_pkt[1][3] = i;
        memcpy(data_pkt[1] + 4, hw->id + i, sizeof(usbid));
        if(!usbsend(kb, data_pkt[1], 1))
            return -1;
    }
```

```
    // Save the RGB data
    for(int i = 0; i < modes; i++){
        if(savergb_kb(kb, hw->light + i, i))
            return -1;
    }
    DELAY_LONG(kb);
    return 0;
}
```

Here is the call graph for this function:

13.44.2.7 int cmd_hwsave_mouse (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *dummy4*)

Definition at line 50 of file profile_mouse.c.

References DELAY_LONG, hwprofile::dpi, usbdevice::hw, hwprofile::id, hwprofile::light, MD_NAME_LEN, MSG_SIZE, hwprofile::name, nativetohw(), usbdevice::profile, savedpi(), savergb_mouse(), and usbsend.

```
50                                                                                                                  {
51      DELAY_LONG(kb);
52      hwprofile* hw = kb->hw;
53      if(!hw)
54          hw = kb->hw = calloc(1, sizeof(hwprofile));
55      nativetohw(kb->profile, hw, 1);
56      // Save the profile and mode names
57      uchar data_pkt[2][MSG_SIZE] = {
58          { 0x07, 0x16, 0x01, 0 },
59          { 0x07, 0x15, 0x01, 0 },
60      };
61      for(int i = 0; i <= 1; i++){
62          data_pkt[0][3] = i;
63          memcpy(data_pkt[0] + 4, hw->name[i], MD_NAME_LEN * 2);
64          if(!usbsend(kb, data_pkt[0], 1))
65              return -1;
66      }
67      // Save the IDs
68      for(int i = 0; i <= 1; i++){
69          data_pkt[1][3] = i;
70          memcpy(data_pkt[1] + 4, hw->id + i, sizeof(usbid));
71          if(!usbsend(kb, data_pkt[1], 1))
72              return -1;
73      }
74      // Save the RGB data for the non-DPI zones
75      if(savergb_mouse(kb, hw->light, 0))
76          return -1;
77      // Save the DPI data (also saves RGB for those states)
78      if(savedpi(kb, hw->dpi, hw->light))
79          return -1;
80      DELAY_LONG(kb);
81      return 0;
82  }
```

Here is the call graph for this function:

13.44.2.8 void cmd_id (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *id*)

Definition at line 160 of file profile.c.

References usbmode::id, usbid::modified, and setid().

```
160                                                                                 {
161     // ID is either a GUID or an 8-digit hex number
162     int newmodified;
163     if(!setid(&mode->id, id) && sscanf(id, "%08x", &newmodified) == 1)
164         memcpy(mode->id.modified, &newmodified, sizeof(newmodified));
165 }
```

Here is the call graph for this function:

13.44.2.9 void cmd_name (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *name*)

Definition at line 117 of file profile.c.

References MD_NAME_LEN, usbmode::name, u16enc(), and urldecode2().

```
117                                                                                 {
118     char decoded[strlen(name) + 1];
119     urldecode2(decoded, name);
120     size_t srclen = strlen(decoded), dstlen = MD_NAME_LEN;
121     u16enc(decoded, mode->name, &srclen, &dstlen);
122 }
```

Here is the call graph for this function:

13.44.2.10 void cmd_profileid (usbdevice * *kb*, usbmode * *mode*, int *dummy1*, int *dummy2*, const char * *id*)

Definition at line 167 of file profile.c.

References usbprofile::id, usbid::modified, usbdevice::profile, and setid().

```
167                                                                                                 {
168     usbprofile* profile = kb->profile;
169     int newmodified;
170     if(!setid(&profile->id, id) && sscanf(id, "%08x", &newmodified) == 1)
171         memcpy(profile->id.modified, &newmodified, sizeof(newmodified));
172
173 }
```

Here is the call graph for this function:

13.44.2.11 void cmd_profilename (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *name*)

Definition at line 124 of file profile.c.

References usbprofile::name, PR_NAME_LEN, usbdevice::profile, u16enc(), and urldecode2().

```
124                                                                                                 {
125     usbprofile* profile = kb->profile;
126     char decoded[strlen(name) + 1];
127     urldecode2(decoded, name);
128     size_t srclen = strlen(decoded), dstlen = PR_NAME_LEN;
129     u16enc(decoded, profile->name, &srclen, &dstlen);
130 }
```

Here is the call graph for this function:

13.44.2.12 void freeprofile (usbdevice * *kb*)

Definition at line 228 of file profile.c.

References _freeprofile(), and usbdevice::hw.

```
228                                 {
229     _freeprofile(kb);
230     // Also free HW profile
231     free(kb->hw);
232     kb->hw = 0;
233 }
```

Here is the call graph for this function:

13.44.2.13 char* gethwmodename (hwprofile * *profile*, int *index*)

Definition at line 152 of file profile.c.

References MD_NAME_LEN, hwprofile::name, and printname().

Referenced by _cmd_get().

```
152                                             {
153     return printname(profile->name[index + 1], MD_NAME_LEN);
154 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.44.2.14 char* gethwprofilename (hwprofile * *profile*)

Definition at line 156 of file profile.c.

References MD_NAME_LEN, hwprofile::name, and printname().

Referenced by _cmd_get().

```
156                                         {
157     return printname(profile->name[0], MD_NAME_LEN);
158 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.44.2.15 char* getid (usbid * *id*)

Definition at line 79 of file profile.c.

References usbid::guid.

Referenced by _cmd_get().

```
79                      {
80     int32_t data1;
81     int16_t data2, data3, data4a;
82     char data4b[6];
83     memcpy(&data1, id->guid + 0x0, 4);
84     memcpy(&data2, id->guid + 0x4, 2);
85     memcpy(&data3, id->guid + 0x6, 2);
86     memcpy(&data4a, id->guid + 0x8, 2);
87     memcpy(data4b, id->guid + 0xA, 6);
88     char* guid = malloc(39);
89     snprintf(guid, 39, "{%08X-%04hX-%04hX-%04hX-%02hhX%02hhX%02hhX%02hhX%02hhX%02hhX}",
90              data1, data2, data3, data4a, data4b[0], data4b[1], data4b[2], data4b[3], data4b[4], data4b[5])
    ;
91     return guid;
92 }
```

Here is the caller graph for this function:

13.44.2.16 char* getmodename (usbmode * *mode*)

Definition at line 144 of file profile.c.

References MD_NAME_LEN, usbmode::name, and printname().

Referenced by _cmd_get().

```
144                                 {
145     return printname(mode->name, MD_NAME_LEN);
146 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.44.2.17 char* getprofilename (usbprofile * *profile*)

Definition at line 148 of file profile.c.

References usbprofile::name, PR_NAME_LEN, and printname().

Referenced by _cmd_get().

```
148                                         {
149     return printname(profile->name, PR_NAME_LEN);
150 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.44.2.18 void hwtonative (usbprofile * *profile,* hwprofile * *hw,* int *modecount*)

Definition at line 235 of file profile.c.

References usbmode::dpi, hwprofile::dpi, dpiset::forceupdate, lighting::forceupdate, usbmode::id, usbprofile::id, hwprofile::id, usbprofile::lastdpi, usbprofile::lastlight, usbmode::light, hwprofile::light, MD_NAME_LEN, usbprofile::mode, usbmode::name, usbprofile::name, hwprofile::name, and PR_NAME_LEN.

Referenced by cmd_hwload_kb(), and cmd_hwload_mouse().

```
235                                                                 {
236     // Copy the profile name and ID
237     memcpy(profile->name, hw->name[0], PR_NAME_LEN * 2);
238     memcpy(&profile->id, hw->id, sizeof(usbid));
239     // Copy the mode settings
240     for(int i = 0; i < modecount; i++){
241         usbmode* mode = profile->mode + i;
242         memcpy(mode->name, hw->name[i + 1], MD_NAME_LEN * 2);
243         memcpy(&mode->id, hw->id + i + 1, sizeof(usbid));
244         memcpy(&mode->light, hw->light + i, sizeof(lighting));
245         memcpy(&mode->dpi, hw->dpi + i, sizeof(dpiset));
246         // Set a force update on the light/DPI since they've been overwritten
247         mode->light.forceupdate = mode->dpi.forceupdate = 1;
248     }
249     profile->lastlight.forceupdate = profile->lastdpi.
      forceupdate = 1;
250 }
```

Here is the caller graph for this function:

13.44.2.19 int loadprofile (usbdevice * *kb*)

Definition at line 192 of file profile.c.

References hwloadprofile.

```
                                {
    if(hwloadprofile(kb, 1))
        return -1;
    return 0;
}
```

13.44.2.20 void nativetohw (usbprofile * *profile,* hwprofile * *hw,* int *modecount*)

Definition at line 252 of file profile.c.

References usbmode::dpi, hwprofile::dpi, usbmode::id, usbprofile::id, hwprofile::id, usbmode::light, hwprofile::light, MD_NAME_LEN, usbprofile::mode, usbmode::name, usbprofile::name, hwprofile::name, and PR_NAME_LEN.

Referenced by cmd_hwsave_kb(), and cmd_hwsave_mouse().

```
                                                                {
    // Copy name and ID
    memcpy(hw->name[0], profile->name, PR_NAME_LEN * 2);
    memcpy(hw->id, &profile->id, sizeof(usbid));
    // Copy the mode settings
    for(int i = 0; i < modecount; i++){
        usbmode* mode = profile->mode + i;
        memcpy(hw->name[i + 1], mode->name, MD_NAME_LEN * 2);
        memcpy(hw->id + i + 1, &mode->id, sizeof(usbid));
        memcpy(hw->light + i, &mode->light, sizeof(lighting));
        memcpy(hw->dpi + i, &mode->dpi, sizeof(dpiset));
    }
}
```

Here is the caller graph for this function:

13.44.2.21 int setid (usbid * *id,* const char * *guid*)

Definition at line 64 of file profile.c.

References usbid::guid.

Referenced by cmd_id(), and cmd_profileid().

```
                                    {
    int32_t data1;
    int16_t data2, data3, data4a;
    char data4b[6];
    if(sscanf(guid, "{%08X-%04hX-%04hX-%04hX-%02hhX%02hhX%02hhX%02hhX%02hhX%02hhX}",
              &data1, &data2, &data3, &data4a, data4b, data4b + 1, data4b + 2, data4b + 3, data4b + 4,
    data4b + 5) != 10)
        return 0;
    memcpy(id->guid + 0x0, &data1, 4);
    memcpy(id->guid + 0x4, &data2, 2);
    memcpy(id->guid + 0x6, &data3, 2);
    memcpy(id->guid + 0x8, &data4a, 2);
    memcpy(id->guid + 0xA, data4b, 6);
    return 1;
}
```

Here is the caller graph for this function:

13.45 src/ckb-daemon/profile_keyboard.c File Reference

```
#include "profile.h"
#include "usb.h"
#include "led.h"
```

Include dependency graph for profile_keyboard.c:

Functions

- static int hwloadmode (usbdevice ∗kb, hwprofile ∗hw, int mode)
- int cmd_hwload_kb (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int apply, const char ∗dummy3)
- int cmd_hwsave_kb (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int dummy3, const char ∗dummy4)

13.45.1 Function Documentation

13.45.1.1 int cmd_hwload_kb (usbdevice ∗ *kb*, usbmode ∗ *dummy1*, int *dummy2*, int *apply*, const char ∗ *dummy3*)

Definition at line 16 of file profile_keyboard.c.

References DELAY_LONG, usbdevice::hw, hwloadmode(), HWMODE_K70, HWMODE_K95, hwtonative(), hwprofile::id, IS_K95, MSG_SIZE, hwprofile::name, PR_NAME_LEN, usbdevice::profile, and usbrecv.

```
16                                                                                  {
17     DELAY_LONG(kb);
18     hwprofile* hw = calloc(1, sizeof(hwprofile));
19     // Ask for profile and mode IDs
```

```
    uchar data_pkt[2][MSG_SIZE] = {
        { 0x0e, 0x15, 0x01, 0 },
        { 0x0e, 0x16, 0x01, 0 }
    };
    uchar in_pkt[MSG_SIZE];
    int modes = (IS_K95(kb) ? HWMODE_K95 : HWMODE_K70);
    for(int i = 0; i <= modes; i++){
        data_pkt[0][3] = i;
        if(!usbrecv(kb, data_pkt[0], in_pkt)){
            free(hw);
            return -1;
        }
        memcpy(hw->id + i, in_pkt + 4, sizeof(usbid));
    }
    // Ask for profile name
    if(!usbrecv(kb, data_pkt[1], in_pkt)){
        free(hw);
        return -1;
    }
    memcpy(hw->name[0], in_pkt + 4, PR_NAME_LEN * 2);
    // Load modes
    for(int i = 0; i < modes; i++){
        if(hwloadmode(kb, hw, i)){
            free(hw);
            return -1;
        }
    }
    // Make the profile active (if requested)
    if(apply)
        hwtonative(kb->profile, hw, modes);
    // Free the existing profile (if any)
    free(kb->hw);
    kb->hw = hw;
    DELAY_LONG(kb);
    return 0;
}
```

Here is the call graph for this function:

13.45.1.2 int cmd_hwsave_kb (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *dummy4*)

Definition at line 57 of file profile_keyboard.c.

References DELAY_LONG, usbdevice::hw, HWMODE_K70, HWMODE_K95, hwprofile::id, IS_K95, hwprofile::light, MD_NAME_LEN, MSG_SIZE, hwprofile::name, nativetohw(), usbdevice::profile, savergb_kb(), and usbsend.

```
{
    DELAY_LONG(kb);
    hwprofile* hw = kb->hw;
    if(!hw)
        hw = kb->hw = calloc(1, sizeof(hwprofile));
    int modes = (IS_K95(kb) ? HWMODE_K95 : HWMODE_K70);
    nativetohw(kb->profile, hw, modes);
    // Save the profile and mode names
    uchar data_pkt[2][MSG_SIZE] = {
        { 0x07, 0x16, 0x01, 0 },
        { 0x07, 0x15, 0x01, 0 },
    };
    // Save the mode names
    for(int i = 0; i <= modes; i++){
        data_pkt[0][3] = i;
```

```
        memcpy(data_pkt[0] + 4, hw->name[i], MD_NAME_LEN * 2);
        if(!usbsend(kb, data_pkt[0], 1))
            return -1;
    }
    // Save the IDs
    for(int i = 0; i <= modes; i++){
        data_pkt[1][3] = i;
        memcpy(data_pkt[1] + 4, hw->id + i, sizeof(usbid));
        if(!usbsend(kb, data_pkt[1], 1))
            return -1;
    }
    // Save the RGB data
    for(int i = 0; i < modes; i++){
        if(savergb_kb(kb, hw->light + i, i))
            return -1;
    }
    DELAY_LONG(kb);
    return 0;
}
```

Here is the call graph for this function:

13.45.1.3 static int hwloadmode (usbdevice * *kb*, hwprofile * *hw*, int *mode*) [static]

Definition at line 5 of file profile_keyboard.c.

References hwprofile::light, loadrgb_kb(), MD_NAME_LEN, MSG_SIZE, hwprofile::name, and usbrecv.

Referenced by cmd_hwload_kb().

```
5                                                       {
6     // Ask for mode's name
7     uchar data_pkt[MSG_SIZE] = { 0x0e, 0x16, 0x01, mode + 1, 0 };
8     uchar in_pkt[MSG_SIZE];
9     if(!usbrecv(kb, data_pkt, in_pkt))
10        return -1;
11     memcpy(hw->name[mode + 1], in_pkt + 4, MD_NAME_LEN * 2);
12     // Load the RGB setting
13     return loadrgb_kb(kb, hw->light + mode, mode);
14 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.46 src/ckb-daemon/profile_mouse.c File Reference

```
#include "dpi.h"
#include "profile.h"
#include "usb.h"
#include "led.h"
```

Include dependency graph for profile_mouse.c:

Functions

- int cmd_hwload_mouse (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int apply, const char ∗dummy3)
- int cmd_hwsave_mouse (usbdevice ∗kb, usbmode ∗dummy1, int dummy2, int dummy3, const char ∗dummy4)

13.46.1 Function Documentation

13.46.1.1 int cmd_hwload_mouse (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *apply*, const char * *dummy3*)

Definition at line 6 of file profile_mouse.c.

References DELAY_LONG, hwprofile::dpi, usbdevice::hw, hwtonative(), hwprofile::id, hwprofile::light, loaddpi(), loadrgb_mouse(), MSG_SIZE, hwprofile::name, PR_NAME_LEN, usbdevice::profile, and usbrecv.

```
6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                {
7     DELAY_LONG(kb);
8     hwprofile* hw = calloc(1, sizeof(hwprofile));
9     // Ask for profile and mode IDs
10     uchar data_pkt[2][MSG_SIZE] = {
11         { 0x0e, 0x15, 0x01, 0 },
12         { 0x0e, 0x16, 0x01, 0 }
13     };
14     uchar in_pkt[MSG_SIZE];
15     for(int i = 0; i <= 1; i++){
16         data_pkt[0][3] = i;
17         if(!usbrecv(kb, data_pkt[0], in_pkt)){
18             free(hw);
19             return -1;
20         }
21         memcpy(hw->id + i, in_pkt + 4, sizeof(usbid));
22     }
23     // Ask for profile and mode names
24     for(int i = 0; i <= 1; i++){
25         data_pkt[1][3] = i;
26         if(!usbrecv(kb, data_pkt[1],in_pkt)){
27             free(hw);
28             return -1;
29         }
30         memcpy(hw->name[i], in_pkt + 4, PR_NAME_LEN * 2);
31     }
32
33     // Load the RGB and DPI settings
34     if(loadrgb_mouse(kb, hw->light, 0)
35             || loaddpi(kb, hw->dpi, hw->light)){
36         free(hw);
37         return -1;
38     }
39
40     // Make the profile active (if requested)
41     if(apply)
42         hwtonative(kb->profile, hw, 1);
43     // Free the existing profile (if any)
44     free(kb->hw);
45     kb->hw = hw;
46     DELAY_LONG(kb);
47     return 0;
48 }
```

Here is the call graph for this function:

13.46.1.2 int cmd_hwsave_mouse (usbdevice * *kb*, usbmode * *dummy1*, int *dummy2*, int *dummy3*, const char * *dummy4*)

Definition at line 50 of file profile_mouse.c.

References DELAY_LONG, hwprofile::dpi, usbdevice::hw, hwprofile::id, hwprofile::light, MD_NAME_LEN, MSG_SIZE, hwprofile::name, nativetohw(), usbdevice::profile, savedpi(), savergb_mouse(), and usbsend.

```
50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
51     DELAY_LONG(kb);
52     hwprofile* hw = kb->hw;
53     if(!hw)
54         hw = kb->hw = calloc(1, sizeof(hwprofile));
55     nativetohw(kb->profile, hw, 1);
56     // Save the profile and mode names
57     uchar data_pkt[2][MSG_SIZE] = {
58         { 0x07, 0x16, 0x01, 0 },
59         { 0x07, 0x15, 0x01, 0 },
60     };
61     for(int i = 0; i <= 1; i++){
62         data_pkt[0][3] = i;
63         memcpy(data_pkt[0] + 4, hw->name[i], MD_NAME_LEN * 2);
64         if(!usbsend(kb, data_pkt[0], 1))
65             return -1;
66     }
67     // Save the IDs
68     for(int i = 0; i <= 1; i++){
69         data_pkt[1][3] = i;
70         memcpy(data_pkt[1] + 4, hw->id + i, sizeof(usbid));
71         if(!usbsend(kb, data_pkt[1], 1))
72             return -1;
73     }
74     // Save the RGB data for the non-DPI zones
75     if(savergb_mouse(kb, hw->light, 0))
76         return -1;
77     // Save the DPI data (also saves RGB for those states)
78     if(savedpi(kb, hw->dpi, hw->light))
79         return -1;
80     DELAY_LONG(kb);
81     return 0;
82 }
```

Here is the call graph for this function:

13.47 src/ckb-daemon/structures.h File Reference

```
#include "includes.h"
#include "keymap.h"
```

Include dependency graph for structures.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct usbid
- struct macroaction
- struct keymacro
- struct binding
- struct dpiset
- struct lighting
- struct usbmode
- struct usbprofile
- struct hwprofile
- struct usbinput
- struct usbdevice

Macros

- #define SET_KEYBIT(array, index) do { (array)[(index) / 8] |= 1 << ((index) % 8); } while(0)
- #define CLEAR_KEYBIT(array, index) do { (array)[(index) / 8] &= ~(1 << ((index) % 8)); } while(0)
- #define I_NUM 1
- #define I_CAPS 2
- #define I_SCROLL 4
- #define OUTFIFO_MAX 10
- #define MACRO_MAX 1024
- #define DPI_COUNT 6
- #define LIFT_MIN 1
- #define LIFT_MAX 5
- #define MD_NAME_LEN 16
- #define PR_NAME_LEN 16
- #define MODE_COUNT 6
- #define HWMODE_K70 1
- #define HWMODE_K95 3
- #define HWMODE_MAX 3
- #define FEAT_RGB 0x001
- #define FEAT_MONOCHROME 0x002
- #define FEAT_POLLRATE 0x004

- #define FEAT_ADJRATE 0x008
- #define FEAT_BIND 0x010
- #define FEAT_NOTIFY 0x020
- #define FEAT_FWVERSION 0x040
- #define FEAT_FWUPDATE 0x080
- #define FEAT_HWLOAD 0x100
- #define FEAT_ANSI 0x200
- #define FEAT_ISO 0x400
- #define FEAT_MOUSEACCEL 0x800
- #define FEAT_COMMON (FEAT_BIND | FEAT_NOTIFY | FEAT_FWVERSION | FEAT_MOUSEACCEL | FEAT_HWLOAD)
- #define FEAT_STD_RGB (FEAT_COMMON | FEAT_RGB | FEAT_POLLRATE | FEAT_FWUPDATE)
- #define FEAT_STD_NRGB (FEAT_COMMON)
- #define FEAT_LMASK (FEAT_ANSI | FEAT_ISO)
- #define HAS_FEATURES(kb, feat) (((kb)->features & (feat)) == (feat))
- #define HAS_ANY_FEATURE(kb, feat) (!!((kb)->features & (feat)))
- #define NEEDS_FW_UPDATE(kb) ((kb)->fwversion == 0 && HAS_FEATURES((kb), FEAT_FWUPDATE | FEAT_FWVERSION))
- #define SCROLL_ACCELERATED 0
- #define SCROLL_MIN 1
- #define SCROLL_MAX 10
- #define KB_NAME_LEN 40
- #define SERIAL_LEN 34
- #define MSG_SIZE 64
- #define IFACE_MAX 4

Variables

- const union devcmd vtable_keyboard
- const union devcmd vtable_keyboard_nonrgb
- const union devcmd vtable_mouse

13.47.1 Data Structure Documentation

13.47.1.1 struct usbid

Definition at line 8 of file structures.h.

Collaboration diagram for usbid:

Data Fields

char	guid[16]	
char	modified[4]	

13.47.1.2 struct macroaction

Definition at line 27 of file structures.h.

Collaboration diagram for macroaction:

Data Fields

char	down	
short	rel_x	
short	rel_y	
short	scan	

13.47.1.3 struct keymacro

Definition at line 34 of file structures.h.

Collaboration diagram for keymacro:

Data Fields

int	actioncount	
macroaction *	actions	
uchar	combo[(((((152+3+12)+25)+7)/8)]	
char	triggered	

13.47.1.4 struct binding

Definition at line 42 of file structures.h.

Collaboration diagram for binding:

Data Fields

int	base[((152+3+12)+25)]	
int	macrocap	
int	macrocount	
keymacro *	macros	

13.47.1.5 struct dpiset

Definition at line 56 of file structures.h.

Collaboration diagram for dpiset:

Data Fields

uchar	current	
uchar	enabled	
uchar	forceupdate	
uchar	lift	
uchar	snap	
ushort	x[6]	
ushort	y[6]	

13.47.1.6 struct lighting

Definition at line 72 of file structures.h.

Collaboration diagram for lighting:

Data Fields

uchar	b[152+11]	
uchar	forceupdate	
uchar	g[152+11]	
uchar	r[152+11]	
uchar	sidelight	

13.47.1.7 struct usbmode

Definition at line 82 of file structures.h.

Collaboration diagram for usbmode:

Data Fields

binding	bind	
dpiset	dpi	
usbid	id	
uchar	inotify[10]	
uchar	ioff	
uchar	ion	
lighting	light	
ushort	name[16]	
uchar	notify[10][((((152+3+12)+25)+7)/8)]	

13.47.1.8 struct usbprofile

Definition at line 100 of file structures.h.

Collaboration diagram for usbprofile:

Data Fields

usbmode *	currentmode	
usbid	id	
dpiset	lastdpi	
lighting	lastlight	
usbmode	mode[6]	
ushort	name[16]	

13.47.1.9 struct hwprofile

Definition at line 117 of file structures.h.

Collaboration diagram for hwprofile:

Data Fields

dpiset	dpi[3]	
usbid	id[3+1]	
lighting	light[3]	
ushort	name[3+1][16]	

13.47.1.10 struct usbinput

Definition at line 128 of file structures.h.

Collaboration diagram for usbinput:

Data Fields

uchar	keys[((((152+3+12)+25)+7)/8)]	
uchar	prevkeys[((((152+3+12)+25)+7)/8)]	
short	rel_x	
short	rel_y	

13.47.1.11 struct usbdevice

Definition at line 177 of file structures.h.

Collaboration diagram for usbdevice:

Data Fields

char	active	
char	delay	
char	dither	
int	epcount	
ushort	features	
ushort	fwversion	
int	handle	
hwprofile *	hw	
uchar	hw_ileds	
uchar	hw_ileds_old	
uchar	ileds	
int	infifo	
usbinput	input	
pthread_t	inputthread	
char	name[40+1]	
int	outfifo[10]	
char	pollrate	
short	product	

usbprofile *	profile	
char	serial[34]	
pthread_t	thread	
struct udev_device *	udev	
int	uinput_kb	
int	uinput_mouse	
char	usbdelay	
short	vendor	
const union devcmd *	vtable	

13.47.2 Macro Definition Documentation

13.47.2.1 #define CLEAR_KEYBIT(*array, index*) do { (array)[(index) / 8] &= ~(1 << ((index) % 8)); } while(0)

Definition at line 16 of file structures.h.

Referenced by cmd_notify(), corsair_mousecopy(), hid_kb_translate(), and hid_mouse_translate().

13.47.2.2 #define DPI_COUNT 6

Definition at line 53 of file structures.h.

Referenced by cmd_dpi(), cmd_dpisel(), loaddpi(), printdpi(), savedpi(), and updatedpi().

13.47.2.3 #define FEAT_ADJRATE 0x008

Definition at line 138 of file structures.h.

Referenced by _mkdevpath(), _setupusb(), and _start_dev().

13.47.2.4 #define FEAT_ANSI 0x200

Definition at line 145 of file structures.h.

Referenced by readcmd().

13.47.2.5 #define FEAT_BIND 0x010

Definition at line 139 of file structures.h.

Referenced by _mkdevpath(), main(), and readcmd().

13.47.2.6 #define FEAT_COMMON (FEAT_BIND | FEAT_NOTIFY | FEAT_FWVERSION | FEAT_MOUSEACCEL | FEAT_HWLOAD)

Definition at line 150 of file structures.h.

13.47.2.7 #define FEAT_FWUPDATE 0x080

Definition at line 142 of file structures.h.

Referenced by _mkdevpath(), _start_dev(), and cmd_fwupdate().

13.47.2.8 #define FEAT_FWVERSION 0x040

Definition at line 141 of file structures.h.

Referenced by _mkdevpath(), and _start_dev().

13.47.2.9 #define FEAT_HWLOAD 0x100

Definition at line 143 of file structures.h.

Referenced by _start_dev().

13.47.2.10 #define FEAT_ISO 0x400

Definition at line 146 of file structures.h.

Referenced by readcmd().

13.47.2.11 #define FEAT_LMASK (FEAT_ANSI | FEAT_ISO)

Definition at line 153 of file structures.h.

Referenced by readcmd().

13.47.2.12 #define FEAT_MONOCHROME 0x002

Definition at line 136 of file structures.h.

Referenced by _mkdevpath(), and _setupusb().

13.47.2.13 #define FEAT_MOUSEACCEL 0x800

Definition at line 147 of file structures.h.

Referenced by main(), and readcmd().

13.47.2.14 #define FEAT_NOTIFY 0x020

Definition at line 140 of file structures.h.

Referenced by _mkdevpath(), main(), and readcmd().

13.47.2.15 #define FEAT_POLLRATE 0x004

Definition at line 137 of file structures.h.

Referenced by _mkdevpath(), _start_dev(), and getfwversion().

13.47.2.16 #define FEAT_RGB 0x001

Definition at line 135 of file structures.h.

Referenced by _mkdevpath(), _start_dev(), os_setupusb(), revertusb(), and usbunclaim().

13.47.2.17 #define FEAT_STD_NRGB (FEAT_COMMON)

Definition at line 152 of file structures.h.

Referenced by _setupusb().

13.47.2.18 #define FEAT_STD_RGB (FEAT_COMMON | FEAT_RGB | FEAT_POLLRATE | FEAT_FWUPDATE)

Definition at line 151 of file structures.h.

Referenced by _setupusb().

13.47.2.19 #define HAS_ANY_FEATURE(*kb, feat*) (!!((kb)->features & (feat)))

Definition at line 157 of file structures.h.

13.47.2.20 #define HAS_FEATURES(*kb, feat*) (((kb)->features & (feat)) == (feat))

Definition at line 156 of file structures.h.

Referenced by _mkdevpath(), _start_dev(), cmd_fwupdate(), os_setupusb(), readcmd(), revertusb(), and usbunclaim().

13.47.2.21 #define HWMODE_K70 1

Definition at line 114 of file structures.h.

Referenced by cmd_hwload_kb(), and cmd_hwsave_kb().

13.47.2.22 #define HWMODE_K95 3

Definition at line 115 of file structures.h.

Referenced by cmd_hwload_kb(), and cmd_hwsave_kb().

13.47.2.23 #define HWMODE_MAX 3

Definition at line 116 of file structures.h.

13.47.2.24 #define I_CAPS 2

Definition at line 20 of file structures.h.

Referenced by _cmd_get(), iselect(), nprintind(), and updateindicators_kb().

13.47.2.25 #define I_NUM 1

Definition at line 19 of file structures.h.

Referenced by _cmd_get(), iselect(), nprintind(), and updateindicators_kb().

13.47.2.26 #define I_SCROLL 4

Definition at line 21 of file structures.h.

Referenced by _cmd_get(), iselect(), nprintind(), and updateindicators_kb().

13.47.2.27 #define IFACE_MAX 4

Definition at line 176 of file structures.h.

13.47.2.28 #define KB_NAME_LEN 40

Definition at line 173 of file structures.h.

Referenced by _setupusb(), and os_setupusb().

13.47.2.29 #define LIFT_MAX 5

Definition at line 55 of file structures.h.

Referenced by cmd_lift(), and loaddpi().

13.47.2.30 #define LIFT_MIN 1

Definition at line 54 of file structures.h.

Referenced by cmd_lift(), and loaddpi().

13.47.2.31 #define MACRO_MAX 1024

Definition at line 50 of file structures.h.

Referenced by _cmd_macro().

13.47.2.32 #define MD_NAME_LEN 16

Definition at line 81 of file structures.h.

Referenced by cmd_hwsave_kb(), cmd_hwsave_mouse(), cmd_name(), gethwmodename(), gethwprofilename(), getmodename(), hwloadmode(), hwtonative(), and nativetohw().

13.47.2.33 #define MODE_COUNT 6

Definition at line 99 of file structures.h.

Referenced by _freeprofile(), allocprofile(), and readcmd().

13.47.2.34 #define MSG_SIZE 64

Definition at line 175 of file structures.h.

Referenced by _usbsend(), cmd_hwload_kb(), cmd_hwload_mouse(), cmd_hwsave_kb(), cmd_hwsave_mouse(), cmd_pollrate(), fwupdate(), getfwversion(), hwloadmode(), loaddpi(), loadrgb_kb(), loadrgb_mouse(), os_inputmain(), os_usbrecv(), os_usbsend(), savedpi(), savergb_kb(), savergb_mouse(), setactive_kb(), setactive_mouse(), updatedpi(), updatergb_kb(), and updatergb_mouse().

13.47.2.35 #define NEEDS_FW_UPDATE(*kb*) ((kb)->fwversion == 0 && HAS_FEATURES((kb), FEAT_FWUPDATE | FEAT_FWVERSION))

Definition at line 160 of file structures.h.

Referenced by _start_dev(), readcmd(), revertusb(), setactive_kb(), and setactive_mouse().

13.47.2.36 #define OUTFIFO_MAX 10

Definition at line 24 of file structures.h.

Referenced by _mknotifynode(), _rmnotifynode(), inputupdate_keys(), nprintf(), readcmd(), rmdevpath(), and updateindicators_kb().

13.47.2.37 #define PR_NAME_LEN 16

Definition at line 98 of file structures.h.

Referenced by cmd_hwload_kb(), cmd_hwload_mouse(), cmd_profilename(), getprofilename(), hwtonative(), and nativetohw().

13.47.2.38 #define SCROLL_ACCELERATED 0

Definition at line 163 of file structures.h.

Referenced by readcmd().

13.47.2.39 #define SCROLL_MAX 10

Definition at line 165 of file structures.h.

Referenced by readcmd().

13.47.2.40 #define SCROLL_MIN 1

Definition at line 164 of file structures.h.

Referenced by readcmd().

13.47.2.41 #define SERIAL_LEN 34

Definition at line 174 of file structures.h.

Referenced by _setupusb(), and os_setupusb().

13.47.2.42 #define SET_KEYBIT(*array, index*) do { (array)[(index) / 8] |= 1 << ((index) % 8); } while(0)

Definition at line 15 of file structures.h.

Referenced by _cmd_macro(), cmd_notify(), corsair_mousecopy(), hid_kb_translate(), and hid_mouse_translate().

13.47.3 Variable Documentation

13.47.3.1 const union devcmd vtable_keyboard

Definition at line 28 of file device_vtable.c.

Referenced by get_vtable().

13.47.3.2 const union devcmd vtable_keyboard_nonrgb

Definition at line 75 of file device_vtable.c.

Referenced by get_vtable().

13.47.3.3 const union devcmd vtable_mouse

Definition at line 122 of file device_vtable.c.

Referenced by get_vtable().

13.48 src/ckb-daemon/usb.c File Reference

```
#include "command.h"
#include "device.h"
#include "devnode.h"
#include "firmware.h"
#include "input.h"
#include "led.h"
#include "notify.h"
#include "profile.h"
#include "usb.h"
```

Include dependency graph for usb.c:

Functions

- const char ∗ vendor_str (short vendor)
- const char ∗ product_str (short product)
- static const devcmd ∗ get_vtable (short vendor, short product)
- static void ∗ devmain (usbdevice ∗kb)
- static void ∗ _setupusb (void ∗context)
- void setupusb (usbdevice ∗kb)
- int revertusb (usbdevice ∗kb)
- int _resetusb (usbdevice ∗kb, const char ∗file, int line)
- int usb_tryreset (usbdevice ∗kb)
- int _usbsend (usbdevice ∗kb, const uchar ∗messages, int count, const char ∗file, int line)
- int _usbrecv (usbdevice ∗kb, const uchar ∗out_msg, uchar ∗in_msg, const char ∗file, int line)
- int closeusb (usbdevice ∗kb)

Variables

- pthread_mutex_t usbmutex = PTHREAD_MUTEX_INITIALIZER
- volatile int reset_stop = 0
- int features_mask = -1
- int hwload_mode

13.48.1 Function Documentation

13.48.1.1 int _resetusb (usbdevice * *kb*, const char * *file*, int *line*)

Definition at line 149 of file usb.c.

References usbdevice::active, DELAY_LONG, os_resetusb(), and usbdevice::vtable.

```
149                                                     {
150     // Perform a USB reset
151     DELAY_LONG(kb);
152     int res = os_resetusb(kb, file, line);
153     if(res)
154         return res;
155     DELAY_LONG(kb);
156     // Re-initialize the device
157     if(kb->vtable->start(kb, kb->active) != 0)
158         return -1;
159     if(kb->vtable->updatergb(kb, 1) != 0)
160         return -1;
161     return 0;
162 }
```

Here is the call graph for this function:

13.48.1.2 static void* _setupusb (void * *context*) [static]

Definition at line 77 of file usb.c.

References ckb_info, closeusb(), DELAY_LONG, devmain(), devpath, dmutex, FEAT_ADJRATE, FEAT_MONOCHROME, FEAT_STD_NRGB, FEAT_STD_RGB, usbdevice::features, features_mask, get_vtable(), imutex, INDEX_OF, usbdevice::inputthread, IS_MONOCHROME, IS_MOUSE, IS_RGB, KB_NAME_LEN, keyboard, mkdevpath(), usbdevice::name, os_inputmain(), os_inputopen(), os_setupindicators(), os_setupusb(), usbdevice::product, product_str(), usbdevice::serial, SERIAL_LEN, updateconnected(), USB_DELAY_DEFAULT, usb_tryreset(), usbdevice::usbdelay, usbdevice::vendor, vendor_str(), and usbdevice::vtable.

Referenced by setupusb().

```
77                                      {
78     usbdevice* kb = context;
79     // Set standard fields
80     short vendor = kb->vendor, product = kb->product;
81     const devcmd* vt = kb->vtable = get_vtable(vendor, product);
82     kb->features = (IS_RGB(vendor, product) ? FEAT_STD_RGB :
       FEAT_STD_NRGB) & features_mask;
83     if(IS_MOUSE(vendor, product)) kb->features |= FEAT_ADJRATE;
84     if(IS_MONOCHROME(vendor, product)) kb->features |=
       FEAT_MONOCHROME;
85     kb->usbdelay = USB_DELAY_DEFAULT;
86
87     // Perform OS-specific setup
88     DELAY_LONG(kb);
89     if(os_setupusb(kb))
90         goto fail;
```

```
    // Make up a device name and serial if they weren't assigned
    if(!kb->serial[0])
        snprintf(kb->serial, SERIAL_LEN, "%04x:%04x-NoID", kb->vendor, kb->product);
    if(!kb->name[0])
        snprintf(kb->name, KB_NAME_LEN, "%s %s", vendor_str(kb->vendor), product_str(kb->product));

    // Set up an input device for key events
    if(os_inputopen(kb))
        goto fail;
    if(pthread_create(&kb->inputthread, 0, os_inputmain, kb))
        goto fail;
    pthread_detach(kb->inputthread);
    if(os_setupindicators(kb))
        goto fail;

    // Set up device
    vt->allocprofile(kb);
    vt->updateindicators(kb, 1);
    pthread_mutex_unlock(imutex(kb));
    if(vt->start(kb, 0) && usb_tryreset(kb))
        goto fail_noinput;

    // Make /dev path
    if(mkdevpath(kb))
        goto fail_noinput;

    // Finished. Enter main loop
    int index = INDEX_OF(kb, keyboard);
    ckb_info("Setup finished for %s%d\n", devpath, index);
    updateconnected();
    return devmain(kb);

    fail:
    pthread_mutex_unlock(imutex(kb));
    fail_noinput:
    closeusb(kb);
    pthread_mutex_unlock(dmutex(kb));
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.48.1.3 int _usbrecv (usbdevice * *kb*, const uchar * *out_msg*, uchar * *in_msg*, const char * *file*, int *line*)

Definition at line 207 of file usb.c.

References ckb_err_fn, DELAY_LONG, DELAY_MEDIUM, DELAY_SHORT, hwload_mode, os_usbrecv(), os_usbsend(), and reset_stop.

```
207                                                                                                                    {
208     // Try a maximum of 3 times
209     for(int try = 0; try < 5; try++){
210         // Send the output message
211         DELAY_SHORT(kb);
212         int res = os_usbsend(kb, out_msg, 1, file, line);
213         if(res == 0)
```

```
            return 0;
        else if(res == -1){
            // Retry on temporary failure
            if(reset_stop)
                return 0;
            DELAY_LONG(kb);
            continue;
        }
        // Wait for the response
        DELAY_MEDIUM(kb);
        res = os_usbrecv(kb, in_msg, file, line);
        if(res == 0)
            return 0;
        else if(res != -1)
            return res;
        if(reset_stop || hwload_mode != 2)
            return 0;
        DELAY_LONG(kb);
    }
    // Give up
    ckb_err_fn("Too many send/recv failures. Dropping.\n", file, line);
    return 0;
}
```

Here is the call graph for this function:

13.48.1.4 int _usbsend (usbdevice * *kb*, const uchar * *messages*, int *count*, const char * *file*, int *line*)

Definition at line 184 of file usb.c.

References DELAY_LONG, DELAY_SHORT, hwload_mode, MSG_SIZE, os_usbsend(), and reset_stop.

```
184                                                                                                    {
185     int total_sent = 0;
186     for(int i = 0; i < count; i++){
187         // Send each message via the OS function
188         while(1){
189             DELAY_SHORT(kb);
190             int res = os_usbsend(kb, messages + i * MSG_SIZE, 0, file, line);
191             if(res == 0)
192                 return 0;
193             else if(res != -1){
194                 total_sent += res;
195                 break;
196             }
197             // Stop immediately if the program is shutting down or hardware load is set to tryonce
198             if(reset_stop || hwload_mode != 2)
199                 return 0;
200             // Retry as long as the result is temporary failure
201             DELAY_LONG(kb);
202         }
203     }
204     return total_sent;
205 }
```

Here is the call graph for this function:

13.48.1.5 int closeusb (usbdevice * *kb*)

Definition at line 238 of file usb.c.

References ckb_info, devpath, dmutex, usbdevice::handle, imutex, INDEX_OF, keyboard, os_closeusb(), os_inputclose(), rmdevpath(), usbdevice::thread, updateconnected(), and usbdevice::vtable.

Referenced by _setupusb(), devmain(), quitWithLock(), and usb_rm_device().

```
238                             {
239     pthread_mutex_lock(imutex(kb));
240     if(kb->handle){
241         int index = INDEX_OF(kb, keyboard);
242         ckb_info("Disconnecting %s%d\n", devpath, index);
243         os_inputclose(kb);
244         updateconnected();
245         // Close USB device
246         os_closeusb(kb);
247     } else
248         updateconnected();
249     rmdevpath(kb);
250
251     // Wait for thread to close
252     pthread_mutex_unlock(imutex(kb));
253     pthread_mutex_unlock(dmutex(kb));
254     pthread_join(kb->thread, 0);
255     pthread_mutex_lock(dmutex(kb));
256
257     // Delete the profile and the control path
258     if(!kb->vtable)
259         return 0;
260     kb->vtable->freeprofile(kb);
261     memset(kb, 0, sizeof(usbdevice));
262     return 0;
263 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.48.1.6 static void* devmain (usbdevice * *kb*) [static]

Definition at line 50 of file usb.c.

References closeusb(), dmutex, usbdevice::infifo, IS_CONNECTED, readcmd(), readlines(), readlines_ctx_free(), and readlines_ctx_init().

Referenced by _setupusb().

```
50                                  {
51     // dmutex should still be locked when this is called
52     int kbfifo = kb->infifo - 1;
53     readlines_ctx linectx;
54     readlines_ctx_init(&linectx);
55     while(1){
56         pthread_mutex_unlock(dmutex(kb));
57         // Read from FIFO
58         const char* line;
59         int lines = readlines(kbfifo, linectx, &line);
60         pthread_mutex_lock(dmutex(kb));
61         // End thread when the handle is removed
62         if(!IS_CONNECTED(kb))
63             break;
64         if(lines){
65             if(readcmd(kb, line)){
66                 // USB transfer failed; destroy device
67                 closeusb(kb);
68                 break;
69             }
70         }
71     }
72     pthread_mutex_unlock(dmutex(kb));
73     readlines_ctx_free(linectx);
74     return 0;
75 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.48.1.7 static const devcmd* get_vtable (short *vendor*, short *product*) [static]

Definition at line 45 of file usb.c.

References IS_MOUSE, IS_RGB, vtable_keyboard, vtable_keyboard_nonrgb, and vtable_mouse.

Referenced by _setupusb().

```
45                                                          {
46     return IS_MOUSE(vendor, product) ? &vtable_mouse :
      IS_RGB(vendor, product) ? &vtable_keyboard : &
      vtable_keyboard_nonrgb;
47 }
```

Here is the caller graph for this function:

13.48.1.8 const char* product_str (short *product*)

Definition at line 26 of file usb.c.

References P_K65, P_K65_LUX, P_K65_NRGB, P_K65_RFIRE, P_K70, P_K70_LUX, P_K70_LUX_NRGB, P_K70_NRGB, P_K70_RFIRE, P_K70_RFIRE_NRGB, P_K95, P_K95_NRGB, P_K95_PLATINUM, P_M65, P_M65_PRO, P_SABRE_L, P_SABRE_N, P_SABRE_O, P_SABRE_O2, P_SCIMITAR, P_SCIMITAR_PRO, P_STRAFE, and P_STRAFE_NRGB.

Referenced by _mkdevpath(), and _setupusb().

```
{
    if(product == P_K95 || product == P_K95_NRGB || product == P_K95_PLATINUM)
        return "k95";
    if(product == P_K70 || product == P_K70_NRGB || product == P_K70_LUX || product == P_K70_LUX_NRGB || product == P_K70_RFIRE || product == P_K70_RFIRE_NRGB)
        return "k70";
    if(product == P_K65 || product == P_K65_NRGB || product == P_K65_LUX || product == P_K65_RFIRE)
        return "k65";
    if(product == P_STRAFE || product == P_STRAFE_NRGB)
        return "strafe";
    if(product == P_M65 || product == P_M65_PRO)
        return "m65";
    if(product == P_SABRE_O || product == P_SABRE_L || product == P_SABRE_N || product == P_SABRE_O2)
        return "sabre";
    if(product == P_SCIMITAR || product == P_SCIMITAR_PRO)
        return "scimitar";
    return "";
}
```

Here is the caller graph for this function:

13.48.1.9 int revertusb (usbdevice * *kb*)

Definition at line 137 of file usb.c.

References FEAT_RGB, HAS_FEATURES, NEEDS_FW_UPDATE, NK95_HWON, nk95cmd, and setactive.

Referenced by quitWithLock().

```
{
    if(NEEDS_FW_UPDATE(kb))
        return 0;
    if(!HAS_FEATURES(kb, FEAT_RGB)){
        nk95cmd(kb, NK95_HWON);
        return 0;
    }
    if(setactive(kb, 0))
        return -1;
    return 0;
}
```

Here is the caller graph for this function:

13.48.1.10 void setupusb (usbdevice * kb)

Definition at line 131 of file usb.c.

References _setupusb(), ckb_err, imutex, and usbdevice::thread.

Referenced by usbadd().

```
131                                 {
132     pthread_mutex_lock(imutex(kb));
133     if(pthread_create(&kb->thread, 0, _setupusb, kb))
134         ckb_err("Failed to create USB thread\n");
135 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.48.1.11 int usb_tryreset (usbdevice * kb)

Definition at line 164 of file usb.c.

References ckb_err, ckb_info, reset_stop, and resetusb.

Referenced by _setupusb(), and cmd_fwupdate().

```
164                                 {
165     if(reset_stop)
166         return -1;
167     ckb_info("Attempting reset...\n");
168     while(1){
169         int res = resetusb(kb);
170         if(!res){
171             ckb_info("Reset success\n");
172             return 0;
173         }
174         if(res == -2 || reset_stop)
175             break;
176     }
177     ckb_err("Reset failed. Disconnecting.\n");
178     return -1;
179 }
```

Here is the caller graph for this function:

13.48.1.12 const char* vendor_str (short *vendor*)

Definition at line 20 of file usb.c.

References V_CORSAIR.

Referenced by _mkdevpath(), and _setupusb().

```
20                                      {
21     if(vendor == V_CORSAIR)
22         return "corsair";
23     return "";
24 }
```

Here is the caller graph for this function:

13.48.2 Variable Documentation

13.48.2.1 int features_mask = -1

Definition at line 17 of file usb.c.

Referenced by _setupusb(), and main().

13.48.2.2 int hwload_mode

Definition at line 7 of file device.c.

Referenced by _start_dev(), _usbrecv(), and _usbsend().

13.48.2.3 volatile int reset_stop = 0

Definition at line 14 of file usb.c.

Referenced by _usbrecv(), _usbsend(), quitWithLock(), and usb_tryreset().

13.48.2.4 pthread_mutex_t usbmutex = PTHREAD_MUTEX_INITIALIZER

Definition at line 11 of file usb.c.

13.49 src/ckb-daemon/usb.h File Reference

```
#include "includes.h"
#include "keymap.h"
```

Include dependency graph for usb.h:

This graph shows which files directly or indirectly include this file:

Macros

- #define V_CORSAIR 0x1b1c
- #define V_CORSAIR_STR "1b1c"
- #define P_K65 0x1b17
- #define P_K65_STR "1b17"
- #define P_K65_NRGB 0x1b07
- #define P_K65_NRGB_STR "1b07"
- #define P_K65_LUX 0x1b37
- #define P_K65_LUX_STR "1b37"
- #define P_K65_RFIRE 0x1b39
- #define P_K65_RFIRE_STR "1b39"
- #define IS_K65(kb) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_K65 || (kb)->product == P_K65_NRGB || (kb)->product == P_K65_LUX || (kb)->product == P_K65_RFIRE))
- #define P_K70 0x1b13
- #define P_K70_STR "1b13"
- #define P_K70_NRGB 0x1b09
- #define P_K70_NRGB_STR "1b09"
- #define P_K70_LUX 0x1b33

- #define P_K70_LUX_STR "1b33"
- #define P_K70_LUX_NRGB 0x1b36
- #define P_K70_LUX_NRGB_STR "1b36"
- #define P_K70_RFIRE 0x1b38
- #define P_K70_RFIRE_STR "1b38"
- #define P_K70_RFIRE_NRGB 0x1b3a
- #define P_K70_RFIRE_NRGB_STR "1b3a"
- #define IS_K70(kb) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_K70 || (kb)->product == P_K70_NRGB || (kb)->product == P_K70_RFIRE || (kb)->product == P_K70_RFIRE_NRGB || (kb)->product == P_K70_LUX || (kb)->product == P_K70_LUX_NRGB))
- #define P_K95 0x1b11
- #define P_K95_STR "1b11"
- #define P_K95_NRGB 0x1b08
- #define P_K95_NRGB_STR "1b08"
- #define P_K95_PLATINUM 0x1b2d
- #define P_K95_PLATINUM_STR "1b2d"
- #define IS_K95(kb) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_K95 || (kb)->product == P_K95_NRGB || (kb)->product == P_K95_PLATINUM))
- #define P_STRAFE 0x1b20
- #define P_STRAFE_STR "1b20"
- #define P_STRAFE_NRGB 0x1b15
- #define P_STRAFE_NRGB_STR "1b15"
- #define IS_STRAFE(kb) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_STRAFE || (kb)->product == P_STRAFE_NRGB))
- #define P_M65 0x1b12
- #define P_M65_STR "1b12"
- #define P_M65_PRO 0x1b2e
- #define P_M65_PRO_STR "1b2e"
- #define IS_M65(kb) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_M65 || (kb)->product == P_M65_PRO))
- #define P_SABRE_O 0x1b14 /* optical */
- #define P_SABRE_O_STR "1b14"
- #define P_SABRE_L 0x1b19 /* laser */
- #define P_SABRE_L_STR "1b19"
- #define P_SABRE_N 0x1b2f /* new? */
- #define P_SABRE_N_STR "1b2f"
- #define P_SABRE_O2 0x1b32 /* Observed on a CH-9000111-EU model SABRE */
- #define P_SABRE_O2_STR "1b32"
- #define IS_SABRE(kb) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_SABRE_O || (kb)->product == P_SABRE_L || (kb)->product == P_SABRE_N || (kb)->product == P_SABRE_O2))
- #define P_SCIMITAR 0x1b1e
- #define P_SCIMITAR_STR "1b1e"
- #define P_SCIMITAR_PRO 0x1b3e
- #define P_SCIMITAR_PRO_STR "1b3e"
- #define IS_SCIMITAR(kb) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_SCIMITAR || (kb)->product == P_SCIMITAR_PRO))
- #define IS_RGB(vendor, product) ((vendor) == (V_CORSAIR) && (product) != (P_K65_NRGB) && (product) != (P_K70_NRGB) && (product) != (P_K95_NRGB))
- #define IS_MONOCHROME(vendor, product) ((vendor) == (V_CORSAIR) && (product) == (P_STRAFE_NRGB))
- #define IS_RGB_DEV(kb) IS_RGB((kb)->vendor, (kb)->product)
- #define IS_MONOCHROME_DEV(kb) IS_MONOCHROME((kb)->vendor, (kb)->product)
- #define IS_FULLRANGE(kb) (IS_RGB((kb)->vendor, (kb)->product) && (kb)->product != P_K65 && (kb)->product != P_K70 && (kb)->product != P_K95)

- #define IS_MOUSE(vendor, product) ((vendor) == (V_CORSAIR) && ((product) == (P_M65) || (product) == (P_M65_PRO) || (product) == (P_SABRE_O) || (product) == (P_SABRE_L) || (product) == (P_SABRE_N) || (product) == (P_SCIMITAR) || (product) == (P_SCIMITAR_PRO) || (product) == (P_SABRE_O2)))
- #define IS_MOUSE_DEV(kb) IS_MOUSE((kb)->vendor, (kb)->product)
- #define DELAY_SHORT(kb) usleep((int)(kb)->usbdelay * 1000)
- #define DELAY_MEDIUM(kb) usleep((int)(kb)->usbdelay * 10000)
- #define DELAY_LONG(kb) usleep(100000)
- #define USB_DELAY_DEFAULT 5
- #define resetusb(kb) _resetusb(kb, __FILE_NOPATH__, __LINE__)
- #define usbsend(kb, messages, count) _usbsend(kb, messages, count, __FILE_NOPATH__, __LINE__)
- #define usbrecv(kb, out_msg, in_msg) _usbrecv(kb, out_msg, in_msg, __FILE_NOPATH__, __LINE__)
- #define nk95cmd(kb, command) _nk95cmd(kb, (command) >> 16 & 0xFF, (command) & 0xFFFF, __FILE_NOPATH__, __LINE__)
- #define NK95_HWOFF 0x020030
- #define NK95_HWON 0x020001
- #define NK95_M1 0x140001
- #define NK95_M2 0x140002
- #define NK95_M3 0x140003

Functions

- const char * vendor_str (short vendor)
- const char * product_str (short product)
- int usbmain ()
- void usbkill ()
- void setupusb (usbdevice *kb)
- int os_setupusb (usbdevice *kb)
- void * os_inputmain (void *kb)
- int revertusb (usbdevice *kb)
- int closeusb (usbdevice *kb)
- void os_closeusb (usbdevice *kb)
- int _resetusb (usbdevice *kb, const char *file, int line)
- int os_resetusb (usbdevice *kb, const char *file, int line)
- int _usbsend (usbdevice *kb, const uchar *messages, int count, const char *file, int line)
- int _usbrecv (usbdevice *kb, const uchar *out_msg, uchar *in_msg, const char *file, int line)
- int os_usbsend (usbdevice *kb, const uchar *out_msg, int is_recv, const char *file, int line)
- int os_usbrecv (usbdevice *kb, uchar *in_msg, const char *file, int line)
- void os_sendindicators (usbdevice *kb)
- int _nk95cmd (usbdevice *kb, uchar bRequest, ushort wValue, const char *file, int line)
- int usb_tryreset (usbdevice *kb)

13.49.1 Macro Definition Documentation

13.49.1.1 #define DELAY_LONG(*kb*) usleep(100000)

Definition at line 100 of file usb.h.

Referenced by _resetusb(), _setupusb(), _usbrecv(), _usbsend(), cmd_hwload_kb(), cmd_hwload_mouse(), cmd_hwsave_kb(), and cmd_hwsave_mouse().

13.49.1.2 #define DELAY_MEDIUM(*kb*) usleep((int)(kb)->usbdelay * 10000)

Definition at line 99 of file usb.h.

Referenced by _usbrecv(), and setactive_kb().

13.49.1.3 #define DELAY_SHORT(*kb*) usleep((int)(kb)->usbdelay * 1000)

Definition at line 98 of file usb.h.

Referenced by _usbrecv(), _usbsend(), and updateindicators_kb().

13.49.1.4 #define IS_FULLRANGE(*kb*) (IS_RGB((kb)->vendor, (kb)->product) && (kb)->product != P_K65 && (kb)->product != P_K70 && (kb)->product != P_K95)

Definition at line 91 of file usb.h.

Referenced by readcmd(), and updatergb_kb().

13.49.1.5 #define IS_K65(*kb*) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_K65 || (kb)->product == P_K65_NRGB || (kb)->product == P_K65_LUX || (kb)->product == P_K65_RFIRE))

Definition at line 19 of file usb.h.

Referenced by has_key().

13.49.1.6 #define IS_K70(*kb*) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_K70 || (kb)->product == P_K70_NRGB || (kb)->product == P_K70_RFIRE || (kb)->product == P_K70_RFIRE_NRGB || (kb)->product == P_K70_LUX || (kb)->product == P_K70_LUX_NRGB))

Definition at line 33 of file usb.h.

13.49.1.7 #define IS_K95(*kb*) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_K95 || (kb)->product == P_K95_NRGB || (kb)->product == P_K95_PLATINUM))

Definition at line 41 of file usb.h.

Referenced by cmd_hwload_kb(), cmd_hwsave_kb(), and has_key().

13.49.1.8 #define IS_M65(*kb*) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_M65 || (kb)->product == P_M65_PRO))

Definition at line 53 of file usb.h.

Referenced by isblack().

13.49.1.9 #define IS_MONOCHROME(*vendor, product*) ((vendor) == (V_CORSAIR) && (product) == (P_STRAFE_NRGB))

Definition at line 86 of file usb.h.

Referenced by _setupusb().

13.49.1.10 #define IS_MONOCHROME_DEV(*kb*) IS_MONOCHROME((kb)->vendor, (kb)->product)

Definition at line 88 of file usb.h.

13.49.1.11 #define IS_MOUSE(*vendor, product*) ((vendor) == (V_CORSAIR) && ((product) == (P_M65) || (product) == (P_M65_PRO) || (product) == (P_SABRE_O) || (product) == (P_SABRE_L) || (product) == (P_SABRE_N) || (product) == (P_SCIMITAR) || (product) == (P_SCIMITAR_PRO) || (product) == (P_SABRE_O2)))

Definition at line 94 of file usb.h.

Referenced by _setupusb(), get_vtable(), has_key(), and os_inputmain().

13.49.1.12 #define IS_MOUSE_DEV(*kb*) IS_MOUSE((kb)->vendor, (kb)->product)

Definition at line 95 of file usb.h.

Referenced by readcmd().

13.49.1.13 #define IS_RGB(*vendor, product*) ((vendor) == (V_CORSAIR) && (product) != (P_K65_NRGB) && (product) != (P_K70_NRGB) && (product) != (P_K95_NRGB))

Definition at line 85 of file usb.h.

Referenced by _setupusb(), get_vtable(), and os_inputmain().

13.49.1.14 #define IS_RGB_DEV(*kb*) IS_RGB((kb)->vendor, (kb)->product)

Definition at line 87 of file usb.h.

13.49.1.15 #define IS_SABRE(*kb*) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_SABRE_O || (kb)->product == P_SABRE_L || (kb)->product == P_SABRE_N || (kb)->product == P_SABRE_O2))

Definition at line 63 of file usb.h.

Referenced by has_key(), loadrgb_mouse(), and savergb_mouse().

13.49.1.16 #define IS_SCIMITAR(*kb*) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_SCIMITAR || (kb)->product == P_SCIMITAR_PRO))

Definition at line 69 of file usb.h.

Referenced by has_key(), loadrgb_mouse(), and savergb_mouse().

13.49.1.17 #define IS_STRAFE(*kb*) ((kb)->vendor == V_CORSAIR && ((kb)->product == P_STRAFE || (kb)->product == P_STRAFE_NRGB))

Definition at line 47 of file usb.h.

Referenced by savergb_kb().

13.49.1.18 #define NK95_HWOFF 0x020030

Definition at line 146 of file usb.h.

Referenced by start_kb_nrgb().

13.49.1.19 #define NK95_HWON 0x020001

Definition at line 147 of file usb.h.

Referenced by revertusb().

13.49.1.20 #define NK95_M1 0x140001

Definition at line 148 of file usb.h.

Referenced by setmodeindex_nrgb().

13.49.1.21 #define NK95_M2 0x140002

Definition at line 149 of file usb.h.

Referenced by setmodeindex_nrgb().

13.49.1.22 #define NK95_M3 0x140003

Definition at line 150 of file usb.h.

Referenced by setmodeindex_nrgb().

13.49.1.23 #define nk95cmd(*kb, command*) _nk95cmd(kb, (command) >> 16 & 0xFF, (command) & 0xFFFF, __FILE_NOPATH__, __LINE__)

Definition at line 144 of file usb.h.

Referenced by revertusb(), setmodeindex_nrgb(), and start_kb_nrgb().

13.49.1.24 #define P_K65 0x1b17

Definition at line 11 of file usb.h.

Referenced by product_str().

13.49.1.25 #define P_K65_LUX 0x1b37

Definition at line 15 of file usb.h.

Referenced by product_str().

13.49.1.26 #define P_K65_LUX_STR "1b37"

Definition at line 16 of file usb.h.

13.49.1.27 #define P_K65_NRGB 0x1b07

Definition at line 13 of file usb.h.

Referenced by product_str().

13.49.1.28 #define P_K65_NRGB_STR "1b07"

Definition at line 14 of file usb.h.

13.49.1.29 #define P_K65_RFIRE 0x1b39

Definition at line 17 of file usb.h.

Referenced by product_str().

13.49.1.30 #define P_K65_RFIRE_STR "1b39"

Definition at line 18 of file usb.h.

13.49.1.31 #define P_K65_STR "1b17"

Definition at line 12 of file usb.h.

13.49.1.32 #define P_K70 0x1b13

Definition at line 21 of file usb.h.

Referenced by product_str().

13.49.1.33 #define P_K70_LUX 0x1b33

Definition at line 25 of file usb.h.

Referenced by product_str().

13.49.1.34 #define P_K70_LUX_NRGB 0x1b36

Definition at line 27 of file usb.h.

Referenced by product_str().

13.49.1.35 #define P_K70_LUX_NRGB_STR "1b36"

Definition at line 28 of file usb.h.

13.49.1.36 #define P_K70_LUX_STR "1b33"

Definition at line 26 of file usb.h.

13.49.1.37 #define P_K70_NRGB 0x1b09

Definition at line 23 of file usb.h.

Referenced by product_str().

13.49.1.38 #define P_K70_NRGB_STR "1b09"

Definition at line 24 of file usb.h.

13.49.1.39 #define P_K70_RFIRE 0x1b38

Definition at line 29 of file usb.h.

Referenced by product_str().

13.49.1.40 #define P_K70_RFIRE_NRGB 0x1b3a

Definition at line 31 of file usb.h.

Referenced by product_str().

13.49.1.41 #define P_K70_RFIRE_NRGB_STR "1b3a"

Definition at line 32 of file usb.h.

13.49.1.42 #define P_K70_RFIRE_STR "1b38"

Definition at line 30 of file usb.h.

13.49.1.43 #define P_K70_STR "1b13"

Definition at line 22 of file usb.h.

13.49.1.44 #define P_K95 0x1b11

Definition at line 35 of file usb.h.

Referenced by product_str().

13.49.1.45 #define P_K95_NRGB 0x1b08

Definition at line 37 of file usb.h.

Referenced by _nk95cmd(), and product_str().

13.49.1.46 #define P_K95_NRGB_STR "1b08"

Definition at line 38 of file usb.h.

13.49.1.47 #define P_K95_PLATINUM 0x1b2d

Definition at line 39 of file usb.h.

Referenced by product_str().

13.49.1.48 #define P_K95_PLATINUM_STR "1b2d"

Definition at line 40 of file usb.h.

13.49.1.49 #define P_K95_STR "1b11"

Definition at line 36 of file usb.h.

13.49.1.50 #define P_M65 0x1b12

Definition at line 49 of file usb.h.

Referenced by product_str().

13.49.1.51 #define P_M65_PRO 0x1b2e

Definition at line 51 of file usb.h.

Referenced by product_str().

13.49.1.52 #define P_M65_PRO_STR "1b2e"

Definition at line 52 of file usb.h.

13.49.1.53 #define P_M65_STR "1b12"

Definition at line 50 of file usb.h.

13.49.1.54 #define P_SABRE_L 0x1b19 /∗ laser ∗/

Definition at line 57 of file usb.h.

Referenced by product_str().

13.49.1.55 #define P_SABRE_L_STR "1b19"

Definition at line 58 of file usb.h.

13.49.1.56 #define P_SABRE_N 0x1b2f /∗ new? ∗/

Definition at line 59 of file usb.h.

Referenced by product_str().

13.49.1.57 #define P_SABRE_N_STR "1b2f"

Definition at line 60 of file usb.h.

13.49.1.58 #define P_SABRE_O 0x1b14 /∗ optical ∗/

Definition at line 55 of file usb.h.

Referenced by product_str().

13.49.1.59 #define P_SABRE_O2 0x1b32 /∗ Observed on a CH-9000111-EU model SABRE ∗/

Definition at line 61 of file usb.h.

Referenced by product_str().

13.49.1.60 #define P_SABRE_O2_STR "1b32"

Definition at line 62 of file usb.h.

13.49.1.61 #define P_SABRE_O_STR "1b14"

Definition at line 56 of file usb.h.

13.49.1.62 #define P_SCIMITAR 0x1b1e

Definition at line 65 of file usb.h.

Referenced by product_str().

13.49.1.63 #define P_SCIMITAR_PRO 0x1b3e

Definition at line 67 of file usb.h.

Referenced by product_str().

13.49.1.64 #define P_SCIMITAR_PRO_STR "1b3e"

Definition at line 68 of file usb.h.

13.49.1.65 #define P_SCIMITAR_STR "1b1e"

Definition at line 66 of file usb.h.

13.49.1.66 #define P_STRAFE 0x1b20

Definition at line 43 of file usb.h.

Referenced by product_str().

13.49.1.67 #define P_STRAFE_NRGB 0x1b15

Definition at line 45 of file usb.h.

Referenced by product_str().

13.49.1.68 #define P_STRAFE_NRGB_STR "1b15"

Definition at line 46 of file usb.h.

13.49.1.69 #define P_STRAFE_STR "1b20"

Definition at line 44 of file usb.h.

13.49.1.70 #define resetusb(*kb*) _resetusb(kb, __FILE_NOPATH__, __LINE__)

Definition at line 125 of file usb.h.

Referenced by usb_tryreset().

13.49.1.71 #define USB_DELAY_DEFAULT 5

Definition at line 101 of file usb.h.

Referenced by _setupusb(), and start_dev().

13.49.1.72 #define usbrecv(*kb, out_msg, in_msg*) _usbrecv(kb, out_msg, in_msg, __FILE_NOPATH__, __LINE__)

Definition at line 133 of file usb.h.

Referenced by cmd_hwload_kb(), cmd_hwload_mouse(), getfwversion(), hwloadmode(), loaddpi(), loadrgb_kb(), and loadrgb_mouse().

13.49.1.73 #define usbsend(*kb, messages, count*) _usbsend(kb, messages, count, __FILE_NOPATH__, __LINE__)

Definition at line 130 of file usb.h.

Referenced by cmd_hwsave_kb(), cmd_hwsave_mouse(), cmd_pollrate(), fwupdate(), loadrgb_kb(), savedpi(), savergb_kb(), savergb_mouse(), setactive_kb(), setactive_mouse(), updatedpi(), updatergb_kb(), and updatergb_mouse().

13.49.1.74 #define V_CORSAIR 0x1b1c

Definition at line 8 of file usb.h.

Referenced by usb_add_device(), and vendor_str().

13.49.1.75 #define V_CORSAIR_STR "1b1c"

Definition at line 9 of file usb.h.

Referenced by udev_enum(), and usb_add_device().

13.49.2 Function Documentation

13.49.2.1 int _nk95cmd (usbdevice * *kb*, uchar *bRequest*, ushort *wValue*, const char * *file*, int *line*)

Definition at line 74 of file usb_linux.c.

References ckb_err_fn, usbdevice::handle, P_K95_NRGB, and usbdevice::product.

```
74                                                                                                  {
75      if(kb->product != P_K95_NRGB)
76          return 0;
77      struct usbdevfs_ctrltransfer transfer = { 0x40, bRequest, wValue, 0, 0, 5000, 0 };
78      int res = ioctl(kb->handle - 1, USBDEVFS_CONTROL, &transfer);
79      if(res <= 0){
80          ckb_err_fn("%s\n", file, line, res ? strerror(errno) : "No data written");
81          return 1;
82      }
83      return 0;
84  }
```

13.49.2.2 int _resetusb (usbdevice * *kb*, const char * *file*, int *line*)

Definition at line 149 of file usb.c.

References usbdevice::active, DELAY_LONG, os_resetusb(), and usbdevice::vtable.

```
149                                                     {
150     // Perform a USB reset
151     DELAY_LONG(kb);
152     int res = os_resetusb(kb, file, line);
153     if(res)
154         return res;
155     DELAY_LONG(kb);
156     // Re-initialize the device
157     if(kb->vtable->start(kb, kb->active) != 0)
158         return -1;
```

```
    if(kb->vtable->updatergb(kb, 1) != 0)
        return -1;
    return 0;
}
```

Here is the call graph for this function:

13.49.2.3 int _usbrecv (usbdevice * *kb*, const uchar * *out_msg*, uchar * *in_msg*, const char * *file*, int *line*)

Definition at line 207 of file usb.c.

References ckb_err_fn, DELAY_LONG, DELAY_MEDIUM, DELAY_SHORT, hwload_mode, os_usbrecv(), os_usbsend(), and reset_stop.

```
207                                                                                                                 {
208     // Try a maximum of 3 times
209     for(int try = 0; try < 5; try++){
210         // Send the output message
211         DELAY_SHORT(kb);
212         int res = os_usbsend(kb, out_msg, 1, file, line);
213         if(res == 0)
214             return 0;
215         else if(res == -1){
216             // Retry on temporary failure
217             if(reset_stop)
218                 return 0;
219             DELAY_LONG(kb);
220             continue;
221         }
222         // Wait for the response
223         DELAY_MEDIUM(kb);
224         res = os_usbrecv(kb, in_msg, file, line);
225         if(res == 0)
226             return 0;
227         else if(res != -1)
228             return res;
229         if(reset_stop || hwload_mode != 2)
230             return 0;
231         DELAY_LONG(kb);
232     }
233     // Give up
234     ckb_err_fn("Too many send/recv failures. Dropping.\n", file, line);
235     return 0;
236 }
```

Here is the call graph for this function:

13.49.2.4 int _usbsend (usbdevice * *kb*, const uchar * *messages*, int *count*, const char * *file*, int *line*)

Definition at line 184 of file usb.c.

References DELAY_LONG, DELAY_SHORT, hwload_mode, MSG_SIZE, os_usbsend(), and reset_stop.

```
184                                                                                                                 {
185     int total_sent = 0;
186     for(int i = 0; i < count; i++){
187         // Send each message via the OS function
188         while(1){
189             DELAY_SHORT(kb);
190             int res = os_usbsend(kb, messages + i * MSG_SIZE, 0, file, line);
191             if(res == 0)
192                 return 0;
193             else if(res != -1){
194                 total_sent += res;
195                 break;
196             }
197             // Stop immediately if the program is shutting down or hardware load is set to tryonce
198             if(reset_stop || hwload_mode != 2)
199                 return 0;
200             // Retry as long as the result is temporary failure
201             DELAY_LONG(kb);
202         }
203     }
204     return total_sent;
205 }
```

Here is the call graph for this function:

13.49.2.5 int closeusb (usbdevice * *kb*)

Definition at line 238 of file usb.c.

References ckb_info, devpath, dmutex, usbdevice::handle, imutex, INDEX_OF, keyboard, os_closeusb(), os_inputclose(), rmdevpath(), usbdevice::thread, updateconnected(), and usbdevice::vtable.

Referenced by _setupusb(), devmain(), quitWithLock(), and usb_rm_device().

```
                                {
    pthread_mutex_lock(imutex(kb));
    if(kb->handle){
        int index = INDEX_OF(kb, keyboard);
        ckb_info("Disconnecting %s%d\n", devpath, index);
        os_inputclose(kb);
        updateconnected();
        // Close USB device
        os_closeusb(kb);
    } else
        updateconnected();
    rmdevpath(kb);

    // Wait for thread to close
    pthread_mutex_unlock(imutex(kb));
    pthread_mutex_unlock(dmutex(kb));
    pthread_join(kb->thread, 0);
    pthread_mutex_lock(dmutex(kb));

    // Delete the profile and the control path
    if(!kb->vtable)
        return 0;
    kb->vtable->freeprofile(kb);
    memset(kb, 0, sizeof(usbdevice));
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.49.2.6 void os_closeusb (usbdevice * kb)

Definition at line 214 of file usb_linux.c.

References usbdevice::handle, INDEX_OF, kbsyspath, keyboard, usbdevice::udev, and usbunclaim().

Referenced by closeusb().

```
                                {
    if(kb->handle){
        usbunclaim(kb, 0);
        close(kb->handle - 1);
    }
    if(kb->udev)
        udev_device_unref(kb->udev);
    kb->handle = 0;
    kb->udev = 0;
    kbsyspath[INDEX_OF(kb, keyboard)][0] = 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.49.2.7 void∗ os_inputmain (void ∗ *kb*)

Definition at line 93 of file usb_linux.c.

References usbdevice::active, ckb_info, corsair_kbcopy(), corsair_mousecopy(), devpath, usbdevice::epcount, usbdevice::handle, hid_kb_translate(), hid_mouse_translate(), imutex, INDEX_OF, usbdevice::input, inputupdate(), IS_MOUSE, IS_RGB, keyboard, usbinput::keys, MSG_SIZE, usbdevice::product, usbinput::rel_x, usbinput::rel_y, and usbdevice::vendor.

Referenced by _setupusb().

```
                                {
    usbdevice* kb = context;
    int fd = kb->handle - 1;
    short vendor = kb->vendor, product = kb->product;
    int index = INDEX_OF(kb, keyboard);
    ckb_info("Starting input thread for %s%d\n", devpath, index);

    // Monitor input transfers on all endpoints for non-RGB devices
    // For RGB, monitor all but the last, as it's used for input/output
    int urbcount = IS_RGB(vendor, product) ? (kb->epcount - 1) : kb->
epcount;
    struct usbdevfs_urb urbs[urbcount];
    memset(urbs, 0, sizeof(urbs));
    urbs[0].buffer_length = 8;
    if(IS_RGB(vendor, product)){
        if(IS_MOUSE(vendor, product))
            urbs[1].buffer_length = 10;
        else
```

```
            urbs[1].buffer_length = 21;
        urbs[2].buffer_length = MSG_SIZE;
        if(urbcount != 3)
            urbs[urbcount - 1].buffer_length = MSG_SIZE;
    } else {
        urbs[1].buffer_length = 4;
        urbs[2].buffer_length = 15;
    }
    // Submit URBs
    for(int i = 0; i < urbcount; i++){
        urbs[i].type = USBDEVFS_URB_TYPE_INTERRUPT;
        urbs[i].endpoint = 0x80 | (i + 1);
        urbs[i].buffer = malloc(urbs[i].buffer_length);
        ioctl(fd, USBDEVFS_SUBMITURB, urbs + i);
    }
    // Start monitoring input
    while(1){
        struct usbdevfs_urb* urb = 0;
        if(ioctl(fd, USBDEVFS_REAPURB, &urb)){
            if(errno == ENODEV || errno == ENOENT || errno == ESHUTDOWN)
                // Stop the thread if the handle closes
                break;
            else if(errno == EPIPE && urb){
                // On EPIPE, clear halt on the endpoint
                ioctl(fd, USBDEVFS_CLEAR_HALT, &urb->endpoint);
                // Re-submit the URB
                if(urb)
                    ioctl(fd, USBDEVFS_SUBMITURB, urb);
                urb = 0;
            }
        }
        if(urb){
            // Process input (if any)
            pthread_mutex_lock(imutex(kb));
            if(IS_MOUSE(vendor, product)){
                switch(urb->actual_length){
                case 8:
                case 10:
                case 11:
                    // HID mouse input
                    hid_mouse_translate(kb->input.keys, &kb->input.rel_x, &kb->input.rel_y, -(urb->endpoint & 0xF), urb->actual_length, urb->buffer);
                    break;
                case MSG_SIZE:
                    // Corsair mouse input
                    corsair_mousecopy(kb->input.keys, -(urb->endpoint & 0xF), urb->buffer);
                    break;
                }
            } else if(IS_RGB(vendor, product)){
                switch(urb->actual_length){
                case 8:
                    // RGB EP 1: 6KRO (BIOS mode) input
                    hid_kb_translate(kb->input.keys, -1, urb->actual_length, urb->buffer);
                    break;
                case 21:
                case 5:
                    // RGB EP 2: NKRO (non-BIOS) input. Accept only if keyboard is inactive
                    if(!kb->active)
                        hid_kb_translate(kb->input.keys, -2, urb->actual_length, urb->buffer);
                    break;
                case MSG_SIZE:
                    // RGB EP 3: Corsair input
                    corsair_kbcopy(kb->input.keys, -(urb->endpoint & 0xF), urb->buffer);
                    break;
                }
            } else
                // Non-RGB input
                hid_kb_translate(kb->input.keys, urb->endpoint & 0xF, urb->actual_length, urb->buffer);
            inputupdate(kb);
            pthread_mutex_unlock(imutex(kb));
            // Re-submit the URB
            ioctl(fd, USBDEVFS_SUBMITURB, urb);
            urb = 0;
        }
    }
    // Clean up
    ckb_info("Stopping input thread for %s%d\n", devpath, index);
    for(int i = 0; i < urbcount; i++){
        ioctl(fd, USBDEVFS_DISCARDURB, urbs + i);
        free(urbs[i].buffer);
    }
```

```
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.49.2.8 int os_resetusb (usbdevice * *kb*, const char * *file*, int *line*)

Definition at line 245 of file usb_linux.c.

References usbdevice::handle, TEST_RESET, usbclaim(), and usbunclaim().

Referenced by _resetusb().

```
245                                                     {
246     TEST_RESET(usbunclaim(kb, 1));
247     TEST_RESET(ioctl(kb->handle - 1, USBDEVFS_RESET));
248     TEST_RESET(usbclaim(kb));
249     // Success!
250     return 0;
251 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.49.2.9 void os_sendindicators (usbdevice * kb)

Definition at line 86 of file usb_linux.c.

References ckb_err, usbdevice::handle, and usbdevice::ileds.

Referenced by updateindicators_kb().

```
86                                      {
87     struct usbdevfs_ctrltransfer transfer = { 0x21, 0x09, 0x0200, 0x00, 1, 500, &kb->
       ileds };
88     int res = ioctl(kb->handle - 1, USBDEVFS_CONTROL, &transfer);
89     if(res <= 0)
90         ckb_err("%s\n", res ? strerror(errno) : "No data written");
91 }
```

Here is the caller graph for this function:

13.49.2.10 int os_setupusb (usbdevice * kb)

Definition at line 271 of file usb_linux.c.

References ckb_err, ckb_info, ckb_warn, devpath, usbdevice::epcount, FEAT_RGB, usbdevice::fwversion, HAS_-FEATURES, INDEX_OF, KB_NAME_LEN, keyboard, usbdevice::name, usbdevice::serial, SERIAL_LEN, strtrim(), usbdevice::udev, and usbclaim().

Referenced by _setupusb().

```
271                                 {
272     // Copy device description and serial
273     struct udev_device* dev = kb->udev;
274     const char* name = udev_device_get_sysattr_value(dev, "product");
275     if(name)
276         strncpy(kb->name, name, KB_NAME_LEN);
277     strtrim(kb->name);
278     const char* serial = udev_device_get_sysattr_value(dev, "serial");
279     if(serial)
280         strncpy(kb->serial, serial, SERIAL_LEN);
281     strtrim(kb->serial);
282     // Copy firmware version (needed to determine USB protocol)
```

```
    const char* firmware = udev_device_get_sysattr_value(dev, "bcdDevice");
    if(firmware)
        sscanf(firmware, "%hx", &kb->fwversion);
    else
        kb->fwversion = 0;
    int index = INDEX_OF(kb, keyboard);
    ckb_info("Connecting %s at %s%d\n", kb->name, devpath, index);

    // Claim the USB interfaces
    const char* ep_str = udev_device_get_sysattr_value(dev, "bNumInterfaces");
    kb->epcount = 0;
    if(ep_str)
        sscanf(ep_str, "%d", &kb->epcount);
    if(kb->epcount == 0){
        // This shouldn't happen, but if it does, assume EP count based on what the device is supposed to have
        kb->epcount = (HAS_FEATURES(kb, FEAT_RGB) ? 4 : 3);
        ckb_warn("Unable to read endpoint count from udev, assuming %d...\n", kb->epcount);
    }
    if(usbclaim(kb)){
        ckb_err("Failed to claim interfaces: %s\n", strerror(errno));
        return -1;
    }
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.49.2.11 int os_usbrecv (usbdevice * *kb*, uchar * *in_msg*, const char * *file*, int *line*)

Definition at line 42 of file usb_linux.c.

References ckb_err_fn, ckb_warn_fn, usbdevice::epcount, usbdevice::handle, and MSG_SIZE.

Referenced by _usbrecv().

```
42                                                                  {
43     int res;
44     // This is what CUE does, but it doesn't seem to work on linux.
45     /*if(kb->fwversion >= 0x130){
46         struct usbdevfs_bulktransfer transfer;
47         memset(&transfer, 0, sizeof(transfer));
48         transfer.ep = 0x84;
49         transfer.len = MSG_SIZE;
50         transfer.timeout = 5000;
51         transfer.data = in_msg;
52         res = ioctl(kb->handle - 1, USBDEVFS_BULK, &transfer);
```

```
    } else {*/
        struct usbdevfs_ctrltransfer transfer = { 0xa1, 0x01, 0x0300, kb->epcount - 1, MSG_SIZE, 5000, in_msg };
        res = ioctl(kb->handle - 1, USBDEVFS_CONTROL, &transfer);
    //}
    if(res <= 0){
        ckb_err_fn("%s\n", file, line, res ? strerror(errno) : "No data read");
        if(res == -1 && errno == ETIMEDOUT)
            return -1;
        else
            return 0;
    } else if(res != MSG_SIZE)
        ckb_warn_fn("Read %d bytes (expected %d)\n", file, line, res, MSG_SIZE);
#ifdef DEBUG_USB_RECV
    char converted[MSG_SIZE*3 + 1];
    for(int i=0;i<MSG_SIZE;i++)
        sprintf(&converted[i*3], "%02x ", in_msg[i]);
    ckb_warn_fn("Recv %s\n", file, line, converted);
#endif
    return res;
}
```

Here is the caller graph for this function:

13.49.2.12 int os_usbsend (usbdevice * *kb*, const uchar * *out_msg*, int *is_recv*, const char * *file*, int *line*)

Definition at line 11 of file usb_linux.c.

References ckb_err_fn, ckb_warn_fn, usbdevice::epcount, usbdevice::fwversion, usbdevice::handle, and MSG_SIZE.

Referenced by _usbrecv(), and _usbsend().

```
11                                                                                                                  {
12     int res;
13     if(kb->fwversion >= 0x120 && !is_recv){
14         struct usbdevfs_bulktransfer transfer;
15         memset(&transfer, 0, sizeof(transfer));
16         transfer.ep = (kb->fwversion >= 0x130 && kb->fwversion < 0x200) ? 4 : 3;
17         transfer.len = MSG_SIZE;
18         transfer.timeout = 5000;
19         transfer.data = (void*)out_msg;
20         res = ioctl(kb->handle - 1, USBDEVFS_BULK, &transfer);
21     } else {
22         struct usbdevfs_ctrltransfer transfer = { 0x21, 0x09, 0x0200, kb->epcount - 1, MSG_SIZE, 5000, (void*)out_msg };
23         res = ioctl(kb->handle - 1, USBDEVFS_CONTROL, &transfer);
24     }
25     if(res <= 0){
26         ckb_err_fn("%s\n", file, line, res ? strerror(errno) : "No data written");
27         if(res == -1 && errno == ETIMEDOUT)
28             return -1;
29         else
30             return 0;
31     } else if(res != MSG_SIZE)
32         ckb_warn_fn("Wrote %d bytes (expected %d)\n", file, line, res, MSG_SIZE);
33 #ifdef DEBUG_USB
34     char converted[MSG_SIZE*3 + 1];
35     for(int i=0;i<MSG_SIZE;i++)
36         sprintf(&converted[i*3], "%02x ", out_msg[i]);
37     ckb_warn_fn("Sent %s\n", file, line, converted);
38 #endif
```

```
    return res;
}
```

Here is the caller graph for this function:

13.49.2.13 const char* product_str (short *product*)

Definition at line 26 of file usb.c.

References P_K65, P_K65_LUX, P_K65_NRGB, P_K65_RFIRE, P_K70, P_K70_LUX, P_K70_LUX_NRGB, P_K70_NRGB, P_K70_RFIRE, P_K70_RFIRE_NRGB, P_K95, P_K95_NRGB, P_K95_PLATINUM, P_M65, P_M65_PRO, P_SABRE_L, P_SABRE_N, P_SABRE_O, P_SABRE_O2, P_SCIMITAR, P_SCIMITAR_PRO, P_STRAFE, and P_STRAFE_NRGB.

Referenced by _mkdevpath(), and _setupusb().

```
26                                          {
27     if(product == P_K95 || product == P_K95_NRGB || product ==
       P_K95_PLATINUM)
28         return "k95";
29     if(product == P_K70 || product == P_K70_NRGB || product ==
       P_K70_LUX || product == P_K70_LUX_NRGB || product ==
       P_K70_RFIRE || product == P_K70_RFIRE_NRGB)
30         return "k70";
31     if(product == P_K65 || product == P_K65_NRGB || product ==
       P_K65_LUX || product == P_K65_RFIRE)
32         return "k65";
33     if(product == P_STRAFE || product == P_STRAFE_NRGB)
34         return "strafe";
35     if(product == P_M65 || product == P_M65_PRO)
36         return "m65";
37     if(product == P_SABRE_O || product == P_SABRE_L || product ==
       P_SABRE_N || product == P_SABRE_O2)
38         return "sabre";
39     if(product == P_SCIMITAR || product == P_SCIMITAR_PRO)
40         return "scimitar";
41     return "";
42 }
```

Here is the caller graph for this function:

13.49.2.14 int revertusb (usbdevice * *kb*)

Definition at line 137 of file usb.c.

References FEAT_RGB, HAS_FEATURES, NEEDS_FW_UPDATE, NK95_HWON, nk95cmd, and setactive.

Referenced by quitWithLock().

```
{
    if(NEEDS_FW_UPDATE(kb))
        return 0;
    if(!HAS_FEATURES(kb, FEAT_RGB)){
        nk95cmd(kb, NK95_HWON);
        return 0;
    }
    if(setactive(kb, 0))
        return -1;
    return 0;
}
```

Here is the caller graph for this function:

13.49.2.15 void setupusb (usbdevice * *kb*)

Definition at line 131 of file usb.c.

References _setupusb(), ckb_err, imutex, and usbdevice::thread.

Referenced by usbadd().

```
{
    pthread_mutex_lock(imutex(kb));
    if(pthread_create(&kb->thread, 0, _setupusb, kb))
        ckb_err("Failed to create USB thread\n");
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.49.2.16 int usb_tryreset (usbdevice * *kb*)

Definition at line 164 of file usb.c.

References ckb_err, ckb_info, reset_stop, and resetusb.

Referenced by _setupusb(), and cmd_fwupdate().

```
164                                 {
165     if(reset_stop)
166         return -1;
167     ckb_info("Attempting reset...\n");
168     while(1){
169         int res = resetusb(kb);
170         if(!res){
171             ckb_info("Reset success\n");
172             return 0;
173         }
```

```
        if(res == -2 || reset_stop)
            break;
    }
    ckb_err("Reset failed. Disconnecting.\n");
    return -1;
}
```

Here is the caller graph for this function:

13.49.2.17 void usbkill ( )

Definition at line 492 of file usb_linux.c.

Referenced by quitWithLock().

```
492             {
493     udev_unref(udev);
494     udev = 0;
495 }
```

Here is the caller graph for this function:

13.49.2.18 int usbmain ( )

Definition at line 441 of file usb_linux.c.

References ckb_fatal, ckb_warn, udev_enum(), usb_add_device(), and usb_rm_device().

Referenced by main().

```
441             {
442     // Load the uinput module (if it's not loaded already)
443     if(system("modprobe uinput") != 0)
444         ckb_warn("Failed to load uinput module\n");
445
446     // Create the udev object
447     if(!(udev = udev_new())){
448         ckb_fatal("Failed to initialize udev\n");
449         return -1;
450     }
451
452     // Enumerate all currently connected devices
453     udev_enum();
454
455     // Done scanning. Enter a loop to poll for device updates
456     struct udev_monitor* monitor = udev_monitor_new_from_netlink(udev, "udev");
457     udev_monitor_filter_add_match_subsystem_devtype(monitor, "usb", 0);
458     udev_monitor_enable_receiving(monitor);
459     // Get an fd for the monitor
460     int fd = udev_monitor_get_fd(monitor);
```

```
    fd_set fds;
    while(udev){
        FD_ZERO(&fds);
        FD_SET(fd, &fds);
        // Block until an event is read
        if(select(fd + 1, &fds, 0, 0, 0) > 0 && FD_ISSET(fd, &fds)){
            struct udev_device* dev = udev_monitor_receive_device(monitor);
            if(!dev)
                continue;
            const char* action = udev_device_get_action(dev);
            if(!action){
                udev_device_unref(dev);
                continue;
            }
            // Add/remove device
            if(!strcmp(action, "add")){
                int res = usb_add_device(dev);
                if(res == 0)
                    continue;
                // If the device matched but the handle wasn't opened correctly, re-enumerate (this sometimes solves the problem)
                if(res == -1)
                    udev_enum();
            } else if(!strcmp(action, "remove"))
                usb_rm_device(dev);
            udev_device_unref(dev);
        }
    }
    udev_monitor_unref(monitor);
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.49.2.19 const char∗ vendor_str (short *vendor*)

Definition at line 20 of file usb.c.

References V_CORSAIR.

Referenced by _mkdevpath(), and _setupusb().

```
20                                      {
21     if(vendor == V_CORSAIR)
22         return "corsair";
23     return "";
24 }
```

Here is the caller graph for this function:

13.50 src/ckb-daemon/usb_linux.c File Reference

```
#include "device.h"
#include "devnode.h"
#include "input.h"
#include "notify.h"
#include "usb.h"
```

Include dependency graph for usb_linux.c:

Data Structures

- struct _model

Macros

- #define TEST_RESET(op)
- #define N_MODELS (sizeof(models) / sizeof(_model))

Functions

- int os_usbsend (usbdevice ∗kb, const uchar ∗out_msg, int is_recv, const char ∗file, int line)

- int os_usbrecv (usbdevice ∗kb, uchar ∗in_msg, const char ∗file, int line)
- int _nk95cmd (usbdevice ∗kb, uchar bRequest, ushort wValue, const char ∗file, int line)
- void os_sendindicators (usbdevice ∗kb)
- void ∗ os_inputmain (void ∗context)
- int usbunclaim (usbdevice ∗kb, int resetting)
- void os_closeusb (usbdevice ∗kb)
- int usbclaim (usbdevice ∗kb)
- int os_resetusb (usbdevice ∗kb, const char ∗file, int line)
- void strtrim (char ∗string)
- int os_setupusb (usbdevice ∗kb)
- int usbadd (struct udev_device ∗dev, short vendor, short product)
- static int usb_add_device (struct udev_device ∗dev)
- static void usb_rm_device (struct udev_device ∗dev)
- static void udev_enum ()
- int usbmain ()
- void usbkill ()

Variables

- static char kbsyspath [9][FILENAME_MAX]
- static struct udev ∗ udev
- pthread_t usbthread
- pthread_t udevthread
- static _model models []

13.50.1 Data Structure Documentation

13.50.1.1 struct _model

Definition at line 355 of file usb_linux.c.

Collaboration diagram for _model:

Data Fields

const char *	name	
short	number	

13.50.2 Macro Definition Documentation

13.50.2.1 #define N_MODELS (sizeof(models) / sizeof(_model))

Definition at line 386 of file usb_linux.c.

Referenced by usb_add_device().

13.50.2.2 #define TEST_RESET(*op*)

Value:

```
if(op){                                                                 \
        ckb_err_fn("resetusb failed: %s\n", file, line, strerror(errno));   \
        if(errno == EINTR || errno == EAGAIN)                               \
            return -1;              /* try again if status code says so */  \
        return -2;                  /* else, remove device */               \
    }
```

Definition at line 237 of file usb_linux.c.

Referenced by os_resetusb().

13.50.3 Function Documentation

13.50.3.1 int _nk95cmd (usbdevice * *kb*, uchar *bRequest*, ushort *wValue*, const char * *file*, int *line*)

Definition at line 74 of file usb_linux.c.

References ckb_err_fn, usbdevice::handle, P_K95_NRGB, and usbdevice::product.

```
74                                                                                  {
75      if(kb->product != P_K95_NRGB)
76          return 0;
77      struct usbdevfs_ctrltransfer transfer = { 0x40, bRequest, wValue, 0, 0, 5000, 0 };
78      int res = ioctl(kb->handle - 1, USBDEVFS_CONTROL, &transfer);
79      if(res <= 0){
80          ckb_err_fn("%s\n", file, line, res ? strerror(errno) : "No data written");
81          return 1;
82      }
83      return 0;
84  }
```

13.50.3.2 void os_closeusb (usbdevice * *kb*)

Definition at line 214 of file usb_linux.c.

References usbdevice::handle, INDEX_OF, kbsyspath, keyboard, usbdevice::udev, and usbunclaim().

Referenced by closeusb().

```
214                                 {
215     if(kb->handle){
216         usbunclaim(kb, 0);
217         close(kb->handle - 1);
218     }
219     if(kb->udev)
220         udev_device_unref(kb->udev);
221     kb->handle = 0;
222     kb->udev = 0;
223     kbsyspath[INDEX_OF(kb, keyboard)][0] = 0;
224 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.50.3.3 void∗ os_inputmain (void ∗ *context*)

Definition at line 93 of file usb_linux.c.

References usbdevice::active, ckb_info, corsair_kbcopy(), corsair_mousecopy(), devpath, usbdevice::epcount, usbdevice::handle, hid_kb_translate(), hid_mouse_translate(), imutex, INDEX_OF, usbdevice::input, inputupdate(), IS_MOUSE, IS_RGB, keyboard, usbinput::keys, MSG_SIZE, usbdevice::product, usbinput::rel_x, usbinput::rel_y, and usbdevice::vendor.

Referenced by _setupusb().

```
{
    usbdevice* kb = context;
    int fd = kb->handle - 1;
    short vendor = kb->vendor, product = kb->product;
    int index = INDEX_OF(kb, keyboard);
    ckb_info("Starting input thread for %s%d\n", devpath, index);

    // Monitor input transfers on all endpoints for non-RGB devices
    // For RGB, monitor all but the last, as it's used for input/output
    int urbcount = IS_RGB(vendor, product) ? (kb->epcount - 1) : kb->epcount;
    struct usbdevfs_urb urbs[urbcount];
    memset(urbs, 0, sizeof(urbs));
    urbs[0].buffer_length = 8;
    if(IS_RGB(vendor, product)){
        if(IS_MOUSE(vendor, product))
            urbs[1].buffer_length = 10;
        else
            urbs[1].buffer_length = 21;
        urbs[2].buffer_length = MSG_SIZE;
        if(urbcount != 3)
            urbs[urbcount - 1].buffer_length = MSG_SIZE;
    } else {
        urbs[1].buffer_length = 4;
        urbs[2].buffer_length = 15;
    }
    // Submit URBs
    for(int i = 0; i < urbcount; i++){
        urbs[i].type = USBDEVFS_URB_TYPE_INTERRUPT;
        urbs[i].endpoint = 0x80 | (i + 1);
        urbs[i].buffer = malloc(urbs[i].buffer_length);
        ioctl(fd, USBDEVFS_SUBMITURB, urbs + i);
    }
    // Start monitoring input
```

```
    while(1){
        struct usbdevfs_urb* urb = 0;
        if(ioctl(fd, USBDEVFS_REAPURB, &urb)){
            if(errno == ENODEV || errno == ENOENT || errno == ESHUTDOWN)
                // Stop the thread if the handle closes
                break;
            else if(errno == EPIPE && urb){
                // On EPIPE, clear halt on the endpoint
                ioctl(fd, USBDEVFS_CLEAR_HALT, &urb->endpoint);
                // Re-submit the URB
                if(urb)
                    ioctl(fd, USBDEVFS_SUBMITURB, urb);
                urb = 0;
            }
        }
        if(urb){
            // Process input (if any)
            pthread_mutex_lock(imutex(kb));
            if(IS_MOUSE(vendor, product)){
                switch(urb->actual_length){
                case 8:
                case 10:
                case 11:
                    // HID mouse input
                    hid_mouse_translate(kb->input.keys, &kb->input.rel_x, &kb->input.rel_y, -(urb->endpoint & 0xF), urb->actual_length, urb->buffer);
                    break;
                case MSG_SIZE:
                    // Corsair mouse input
                    corsair_mousecopy(kb->input.keys, -(urb->endpoint & 0xF), urb->buffer);
                    break;
                }
            } else if(IS_RGB(vendor, product)){
                switch(urb->actual_length){
                case 8:
                    // RGB EP 1: 6KRO (BIOS mode) input
                    hid_kb_translate(kb->input.keys, -1, urb->actual_length, urb->buffer);
                    break;
                case 21:
                case 5:
                    // RGB EP 2: NKRO (non-BIOS) input. Accept only if keyboard is inactive
                    if(!kb->active)
                        hid_kb_translate(kb->input.keys, -2, urb->actual_length, urb->buffer);
                    break;
                case MSG_SIZE:
                    // RGB EP 3: Corsair input
                    corsair_kbcopy(kb->input.keys, -(urb->endpoint & 0xF), urb->buffer);
                    break;
                }
            } else
                // Non-RGB input
                hid_kb_translate(kb->input.keys, urb->endpoint & 0xF, urb->actual_length, urb->buffer);
            inputupdate(kb);
            pthread_mutex_unlock(imutex(kb));
            // Re-submit the URB
            ioctl(fd, USBDEVFS_SUBMITURB, urb);
            urb = 0;
        }
    }
    // Clean up
    ckb_info("Stopping input thread for %s%d\n", devpath, index);
    for(int i = 0; i < urbcount; i++){
        ioctl(fd, USBDEVFS_DISCARDURB, urbs + i);
        free(urbs[i].buffer);
    }
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.50.3.4 int os_resetusb (usbdevice * *kb*, const char * *file*, int *line*)

Definition at line 245 of file usb_linux.c.

References usbdevice::handle, TEST_RESET, usbclaim(), and usbunclaim().

Referenced by _resetusb().

```
245                                                         {
246     TEST_RESET(usbunclaim(kb, 1));
247     TEST_RESET(ioctl(kb->handle - 1, USBDEVFS_RESET));
248     TEST_RESET(usbclaim(kb));
249     // Success!
250     return 0;
251 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.50.3.5 void os_sendindicators (usbdevice * kb)

Definition at line 86 of file usb_linux.c.

References ckb_err, usbdevice::handle, and usbdevice::ileds.

Referenced by updateindicators_kb().

```
86                                      {
87     struct usbdevfs_ctrltransfer transfer = { 0x21, 0x09, 0x0200, 0x00, 1, 500, &kb->
       ileds };
88     int res = ioctl(kb->handle - 1, USBDEVFS_CONTROL, &transfer);
89     if(res <= 0)
90         ckb_err("%s\n", res ? strerror(errno) : "No data written");
91 }
```

Here is the caller graph for this function:

13.50.3.6 int os_setupusb (usbdevice * kb)

Definition at line 271 of file usb_linux.c.

References ckb_err, ckb_info, ckb_warn, devpath, usbdevice::epcount, FEAT_RGB, usbdevice::fwversion, HAS_-FEATURES, INDEX_OF, KB_NAME_LEN, keyboard, usbdevice::name, usbdevice::serial, SERIAL_LEN, strtrim(), usbdevice::udev, and usbclaim().

Referenced by _setupusb().

```
271                                     {
272     // Copy device description and serial
273     struct udev_device* dev = kb->udev;
274     const char* name = udev_device_get_sysattr_value(dev, "product");
275     if(name)
276         strncpy(kb->name, name, KB_NAME_LEN);
277     strtrim(kb->name);
278     const char* serial = udev_device_get_sysattr_value(dev, "serial");
279     if(serial)
280         strncpy(kb->serial, serial, SERIAL_LEN);
281     strtrim(kb->serial);
282     // Copy firmware version (needed to determine USB protocol)
```

```
    const char* firmware = udev_device_get_sysattr_value(dev, "bcdDevice");
    if(firmware)
        sscanf(firmware, "%hx", &kb->fwversion);
    else
        kb->fwversion = 0;
    int index = INDEX_OF(kb, keyboard);
    ckb_info("Connecting %s at %s%d\n", kb->name, devpath, index);

    // Claim the USB interfaces
    const char* ep_str = udev_device_get_sysattr_value(dev, "bNumInterfaces");
    kb->epcount = 0;
    if(ep_str)
        sscanf(ep_str, "%d", &kb->epcount);
    if(kb->epcount == 0){
        // This shouldn't happen, but if it does, assume EP count based on what the device is supposed to have
        kb->epcount = (HAS_FEATURES(kb, FEAT_RGB) ? 4 : 3);
        ckb_warn("Unable to read endpoint count from udev, assuming %d...\n", kb->epcount);
    }
    if(usbclaim(kb)){
        ckb_err("Failed to claim interfaces: %s\n", strerror(errno));
        return -1;
    }
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.50.3.7 int os_usbrecv (usbdevice * *kb*, uchar * *in_msg*, const char * *file*, int *line*)

Definition at line 42 of file usb_linux.c.

References ckb_err_fn, ckb_warn_fn, usbdevice::epcount, usbdevice::handle, and MSG_SIZE.

Referenced by _usbrecv().

```
42                                                                  {
43     int res;
44     // This is what CUE does, but it doesn't seem to work on linux.
45     /*if(kb->fwversion >= 0x130){
46         struct usbdevfs_bulktransfer transfer;
47         memset(&transfer, 0, sizeof(transfer));
48         transfer.ep = 0x84;
49         transfer.len = MSG_SIZE;
50         transfer.timeout = 5000;
51         transfer.data = in_msg;
52         res = ioctl(kb->handle - 1, USBDEVFS_BULK, &transfer);
```

```
    } else {*/
        struct usbdevfs_ctrltransfer transfer = { 0xa1, 0x01, 0x0300, kb->epcount - 1, MSG_SIZE, 5000, in_msg };
        res = ioctl(kb->handle - 1, USBDEVFS_CONTROL, &transfer);
    //}
    if(res <= 0){
        ckb_err_fn("%s\n", file, line, res ? strerror(errno) : "No data read");
        if(res == -1 && errno == ETIMEDOUT)
            return -1;
        else
            return 0;
    } else if(res != MSG_SIZE)
        ckb_warn_fn("Read %d bytes (expected %d)\n", file, line, res, MSG_SIZE);
#ifdef DEBUG_USB_RECV
    char converted[MSG_SIZE*3 + 1];
    for(int i=0;i<MSG_SIZE;i++)
        sprintf(&converted[i*3], "%02x ", in_msg[i]);
    ckb_warn_fn("Recv %s\n", file, line, converted);
#endif
    return res;
}
```

Here is the caller graph for this function:

13.50.3.8 int os_usbsend (usbdevice * *kb*, const uchar * *out_msg*, int *is_recv*, const char * *file*, int *line*)

Definition at line 11 of file usb_linux.c.

References ckb_err_fn, ckb_warn_fn, usbdevice::epcount, usbdevice::fwversion, usbdevice::handle, and MSG_SIZE.

Referenced by _usbrecv(), and _usbsend().

```
11                                                                                                                  {
12     int res;
13     if(kb->fwversion >= 0x120 && !is_recv){
14         struct usbdevfs_bulktransfer transfer;
15         memset(&transfer, 0, sizeof(transfer));
16         transfer.ep = (kb->fwversion >= 0x130 && kb->fwversion < 0x200) ? 4 : 3;
17         transfer.len = MSG_SIZE;
18         transfer.timeout = 5000;
19         transfer.data = (void*)out_msg;
20         res = ioctl(kb->handle - 1, USBDEVFS_BULK, &transfer);
21     } else {
22         struct usbdevfs_ctrltransfer transfer = { 0x21, 0x09, 0x0200, kb->epcount - 1, MSG_SIZE, 5000, (void*)out_msg };
23         res = ioctl(kb->handle - 1, USBDEVFS_CONTROL, &transfer);
24     }
25     if(res <= 0){
26         ckb_err_fn("%s\n", file, line, res ? strerror(errno) : "No data written");
27         if(res == -1 && errno == ETIMEDOUT)
28             return -1;
29         else
30             return 0;
31     } else if(res != MSG_SIZE)
32         ckb_warn_fn("Wrote %d bytes (expected %d)\n", file, line, res, MSG_SIZE);
33 #ifdef DEBUG_USB
34     char converted[MSG_SIZE*3 + 1];
35     for(int i=0;i<MSG_SIZE;i++)
36         sprintf(&converted[i*3], "%02x ", out_msg[i]);
37     ckb_warn_fn("Sent %s\n", file, line, converted);
38 #endif
```

```
    return res;
}
```

Here is the caller graph for this function:

13.50.3.9 void strtrim (char * *string*)

Definition at line 253 of file usb_linux.c.

Referenced by os_setupusb().

```
253                         {
254     // Find last non-space
255     char* last = string;
256     for(char* c = string; *c != 0; c++){
257         if(!isspace(*c))
258             last = c;
259     }
260     last[1] = 0;
261     // Find first non-space
262     char* first = string;
263     for(; *first != 0; first++){
264         if(!isspace(*first))
265             break;
266     }
267     if(first != string)
268         memmove(string, first, last - first);
269 }
```

Here is the caller graph for this function:

13.50.3.10 static void udev_enum ( ) [static]

Definition at line 418 of file usb_linux.c.

References usb_add_device(), and V_CORSAIR_STR.

Referenced by usbmain().

```
418                         {
419     struct udev_enumerate* enumerator = udev_enumerate_new(udev);
420     udev_enumerate_add_match_subsystem(enumerator, "usb");
421     udev_enumerate_add_match_sysattr(enumerator, "idVendor", V_CORSAIR_STR);
422     udev_enumerate_scan_devices(enumerator);
423     struct udev_list_entry* devices, *dev_list_entry;
```

```
    devices = udev_enumerate_get_list_entry(enumerator);

    udev_list_entry_foreach(dev_list_entry, devices){
        const char* path = udev_list_entry_get_name(dev_list_entry);
        if(!path)
            continue;
        struct udev_device* dev = udev_device_new_from_syspath(udev, path);
        if(!dev)
            continue;
        // If the device matches a recognized device ID, open it
        if(usb_add_device(dev))
            // Release device if not
            udev_device_unref(dev);
    }
    udev_enumerate_unref(enumerator);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.50.3.11 static int usb_add_device (struct udev_device * *dev*) [static]

Definition at line 389 of file usb_linux.c.

References N_MODELS, usbadd(), V_CORSAIR, and V_CORSAIR_STR.

Referenced by udev_enum(), and usbmain().

```
389                                                 {
```

```
    const char* vendor = udev_device_get_sysattr_value(dev, "idVendor");
    if(vendor && !strcmp(vendor, V_CORSAIR_STR)){
        const char* product = udev_device_get_sysattr_value(dev, "idProduct");
        if(product){
            for(_model* model = models; model < models + N_MODELS; model++){
                if(!strcmp(product, model->name)){
                    return usbadd(dev, V_CORSAIR, model->number);
                }
            }
        }
    }
    return 1;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.50.3.12 static void usb_rm_device (struct udev_device * *dev*) [static]

Definition at line 405 of file usb_linux.c.

References closeusb(), DEV_MAX, devmutex, kbsyspath, and keyboard.

Referenced by usbmain().

```
405                                                 {
```

```
    // Device removed. Look for it in our list of keyboards
    const char* syspath = udev_device_get_syspath(dev);
    if(!syspath || syspath[0] == 0)
        return;
    for(int i = 1; i < DEV_MAX; i++){
        pthread_mutex_lock(devmutex + i);
        if(!strcmp(syspath, kbsyspath[i]))
            closeusb(keyboard + i);
        pthread_mutex_unlock(devmutex + i);
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.50.3.13 int usbadd (struct udev_device * *dev*, short *vendor*, short *product*)

Definition at line 308 of file usb_linux.c.

References ckb_err, DEV_MAX, dmutex, usbdevice::handle, IS_CONNECTED, kbsyspath, keyboard, usbdevice::product, setupusb(), usbdevice::udev, and usbdevice::vendor.

Referenced by usb_add_device().

```
308                                                                 {
309     const char* path = udev_device_get_devnode(dev);
310     const char* syspath = udev_device_get_syspath(dev);
311     if(!path || !syspath || path[0] == 0 || syspath[0] == 0){
312         ckb_err("Failed to get device path\n");
313         return -1;
314     }
315     // Find a free USB slot
316     for(int index = 1; index < DEV_MAX; index++){
317         usbdevice* kb = keyboard + index;
318         if(pthread_mutex_trylock(dmutex(kb))){
319             // If the mutex is locked then the device is obviously in use, so keep going
320             if(!strcmp(syspath, kbsyspath[index])){
321                 // Make sure this existing keyboard doesn't have the same syspath (this shouldn't happen)
322                 return 0;
323             }
324             continue;
325         }
326         if(!IS_CONNECTED(kb)){
327             // Open the sysfs device
```

```
            kb->handle = open(path, O_RDWR) + 1;
            if(kb->handle <= 0){
                ckb_err("Failed to open USB device: %s\n", strerror(errno));
                kb->handle = 0;
                pthread_mutex_unlock(dmutex(kb));
                return -1;
            } else {
                // Set up device
                kb->udev = dev;
                kb->vendor = vendor;
                kb->product = product;
                strncpy(kbsyspath[index], syspath, FILENAME_MAX);
                // Mutex remains locked
                setupusb(kb);
                return 0;
            }
        }
        pthread_mutex_unlock(dmutex(kb));
    }
    ckb_err("No free devices\n");
    return -1;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.50.3.14 int usbclaim (usbdevice * *kb*)

Definition at line 226 of file usb_linux.c.

References usbdevice::epcount, and usbdevice::handle.

Referenced by os_resetusb(), and os_setupusb().

```
226                             {
227     int count = kb->epcount;
228     for(int i = 0; i < count; i++){
229         struct usbdevfs_ioctl ctl = { i, USBDEVFS_DISCONNECT, 0 };
230         ioctl(kb->handle - 1, USBDEVFS_IOCTL, &ctl);
231         if(ioctl(kb->handle - 1, USBDEVFS_CLAIMINTERFACE, &i))
232             return -1;
233     }
234     return 0;
235 }
```

Here is the caller graph for this function:

13.50.3.15 void usbkill ( )

Definition at line 492 of file usb_linux.c.

Referenced by quitWithLock().

```
492                 {
493     udev_unref(udev);
494     udev = 0;
495 }
```

Here is the caller graph for this function:

13.50.3.16 int usbmain ( )

Definition at line 441 of file usb_linux.c.

References ckb_fatal, ckb_warn, udev_enum(), usb_add_device(), and usb_rm_device().

Referenced by main().

```
441                 {
442     // Load the uinput module (if it's not loaded already)
443     if(system("modprobe uinput") != 0)
444         ckb_warn("Failed to load uinput module\n");
445
446     // Create the udev object
447     if(!(udev = udev_new())){
```

```
        ckb_fatal("Failed to initialize udev\n");
        return -1;
    }

    // Enumerate all currently connected devices
    udev_enum();

    // Done scanning. Enter a loop to poll for device updates
    struct udev_monitor* monitor = udev_monitor_new_from_netlink(udev, "udev");
    udev_monitor_filter_add_match_subsystem_devtype(monitor, "usb", 0);
    udev_monitor_enable_receiving(monitor);
    // Get an fd for the monitor
    int fd = udev_monitor_get_fd(monitor);
    fd_set fds;
    while(udev){
        FD_ZERO(&fds);
        FD_SET(fd, &fds);
        // Block until an event is read
        if(select(fd + 1, &fds, 0, 0, 0) > 0 && FD_ISSET(fd, &fds)){
            struct udev_device* dev = udev_monitor_receive_device(monitor);
            if(!dev)
                continue;
            const char* action = udev_device_get_action(dev);
            if(!action){
                udev_device_unref(dev);
                continue;
            }
            // Add/remove device
            if(!strcmp(action, "add")){
                int res = usb_add_device(dev);
                if(res == 0)
                    continue;
                // If the device matched but the handle wasn't opened correctly, re-enumerate (this sometimes solves the problem)
                if(res == -1)
                    udev_enum();
            } else if(!strcmp(action, "remove"))
                usb_rm_device(dev);
            udev_device_unref(dev);
        }
    }
    udev_monitor_unref(monitor);
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.50.3.17 int usbunclaim (usbdevice * *kb*, int *resetting*)

Definition at line 193 of file usb_linux.c.

References usbdevice::epcount, FEAT_RGB, usbdevice::handle, and HAS_FEATURES.

Referenced by os_closeusb(), and os_resetusb().

```
193                                         {
194     int handle = kb->handle - 1;
195     int count = kb->epcount;
196     for(int i = 0; i < count; i++)
197         ioctl(handle, USBDEVFS_RELEASEINTERFACE, &i);
198     // For RGB keyboards, the kernel driver should only be reconnected to interfaces 0 and 1 (HID), and
        only if we're not about to do a USB reset.
199     // Reconnecting any of the others causes trouble.
200     if(!resetting){
201         struct usbdevfs_ioctl ctl = { 0, USBDEVFS_CONNECT, 0 };
202         ioctl(handle, USBDEVFS_IOCTL, &ctl);
203         ctl.ifno = 1;
204         ioctl(handle, USBDEVFS_IOCTL, &ctl);
205         // Also reconnect iface #2 (HID) for non-RGB keyboards
206         if(!HAS_FEATURES(kb, FEAT_RGB)){
207             ctl.ifno = 2;
208             ioctl(handle, USBDEVFS_IOCTL, &ctl);
209         }
210     }
211     return 0;
212 }
```

Here is the caller graph for this function:

13.50.4 Variable Documentation

13.50.4.1 char kbsyspath[9][FILENAME_MAX] [static]

Definition at line 9 of file usb_linux.c.

Referenced by os_closeusb(), usb_rm_device(), and usbadd().

13.50.4.2 _model models[] [static]

Initial value:

```
= {

    {  "1b17" ,  0x1b17  },
    {  "1b07" ,  0x1b07  },
    {  "1b37" ,  0x1b37  },
    {  "1b39" ,  0x1b39  },
    {  "1b13" ,  0x1b13  },
    {  "1b09" ,  0x1b09  },
    {  "1b33" ,  0x1b33  },
    {  "1b36" ,  0x1b36  },
    {  "1b38" ,  0x1b38  },
    {  "1b3a" ,  0x1b3a  },
    {  "1b11" ,  0x1b11  },
    {  "1b08" ,  0x1b08  },
    {  "1b2d" ,  0x1b2d  },
    {  "1b20" ,  0x1b20  },
    {  "1b15" ,  0x1b15  },

    {  "1b12" ,  0x1b12  },
    {  "1b2e" ,  0x1b2e  },
    {  "1b14" ,  0x1b14   },
    {  "1b19" ,  0x1b19   },
    {  "1b2f" ,  0x1b2f   },
    {  "1b1e" ,  0x1b1e  },
    {  "1b3e" ,  0x1b3e  },
    {  "1b32" ,  0x1b32   }
}
```

Definition at line 359 of file usb_linux.c.

13.50.4.3 struct udev* udev [static]

Definition at line 351 of file usb_linux.c.

13.50.4.4 pthread_t udevthread

Definition at line 352 of file usb_linux.c.

13.50.4.5 pthread_t usbthread

Definition at line 352 of file usb_linux.c.

13.51 src/ckb-daemon/usb_mac.c File Reference

```
#include "device.h"
#include "devnode.h"
#include "input.h"
#include "notify.h"
#include "usb.h"
```

Include dependency graph for usb_mac.c:

13.52 src/ckb-mviz/_kiss_fft_guts.h File Reference

```
#include "kiss_fft.h"
#include <limits.h>
```

Include dependency graph for _kiss_fft_guts.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct kiss_fft_state

Macros

- #define MAXFACTORS 32
- #define S_MUL(a, b) ((a)∗(b))
- #define C_MUL(m, a, b)
- #define C_FIXDIV(c, div) /∗ NOOP ∗/
- #define C_MULBYSCALAR(c, s)
- #define CHECK_OVERFLOW_OP(a, op, b) /∗ noop ∗/
- #define C_ADD(res, a, b)
- #define C_SUB(res, a, b)
- #define C_ADDTO(res, a)
- #define C_SUBFROM(res, a)
- #define KISS_FFT_COS(phase) (kiss_fft_scalar) cos(phase)
- #define KISS_FFT_SIN(phase) (kiss_fft_scalar) sin(phase)
- #define HALF_OF(x) ((x)∗.5)
- #define kf_cexp(x, phase)
- #define pcpx(c) fprintf(stderr,"%g + %gi\n",(double)((c)->r),(double)((c)->i))
- #define KISS_FFT_TMP_ALLOC(nbytes) KISS_FFT_MALLOC(nbytes)
- #define KISS_FFT_TMP_FREE(ptr) KISS_FFT_FREE(ptr)

13.52.1 Data Structure Documentation

13.52.1.1 struct kiss_fft_state

Definition at line 28 of file _kiss_fft_guts.h.

Collaboration diagram for kiss_fft_state:

Data Fields

int	factors[2 ∗32]	
int	inverse	
int	nfft	
kiss_fft_cpx	twiddles[1]	

13.52.2 Macro Definition Documentation

13.52.2.1 #define C_ADD(*res, a, b*)

Value:

```
do { \
        CHECK_OVERFLOW_OP((a).r,+,(b).r)\
        CHECK_OVERFLOW_OP((a).i,+,(b).i)\
        (res).r=(a).r+(b).r;  (res).i=(a).i+(b).i; \
    }while(0)
```

Definition at line 100 of file _kiss_fft_guts.h.

Referenced by kf_bfly3(), kf_bfly4(), kf_bfly5(), kiss_fftr(), and kiss_fftri().

13.52.2.2 #define C_ADDTO(*res, a*)

Value:

```
do { \
        CHECK_OVERFLOW_OP((res).r,+,(a).r)\
        CHECK_OVERFLOW_OP((res).i,+,(a).i)\
        (res).r += (a).r;  (res).i += (a).i;\
    }while(0)
```

Definition at line 112 of file _kiss_fft_guts.h.

Referenced by kf_bfly2(), kf_bfly3(), kf_bfly4(), and kf_bfly_generic().

13.52.2.3 #define C_FIXDIV(*c, div*) /∗ NOOP ∗/

Definition at line 90 of file _kiss_fft_guts.h.

Referenced by kf_bfly2(), kf_bfly3(), kf_bfly4(), kf_bfly5(), kf_bfly_generic(), kiss_fftr(), and kiss_fftri().

13.52.2.4 #define C_MUL(*m, a, b*)

Value:

```
do{ (m).r = (a).r*(b).r - (a).i*(b).i;\
        (m).i = (a).r*(b).i + (a).i*(b).r; }while(0)
```

Definition at line 87 of file _kiss_fft_guts.h.

Referenced by kf_bfly2(), kf_bfly3(), kf_bfly4(), kf_bfly5(), kf_bfly_generic(), kiss_fftr(), and kiss_fftri().

13.52.2.5 #define C_MULBYSCALAR(*c, s*)

Value:

```
do{ (c).r *= (s);\
        (c).i *= (s); }while(0)
```

Definition at line 91 of file _kiss_fft_guts.h.

Referenced by kf_bfly3().

13.52.2.6 #define C_SUB(*res, a, b*)

Value:

```
do { \
        CHECK_OVERFLOW_OP((a).r,-,(b).r)\
        CHECK_OVERFLOW_OP((a).i,-,(b).i)\
        (res).r=(a).r-(b).r;  (res).i=(a).i-(b).i; \
    }while(0)
```

Definition at line 106 of file _kiss_fft_guts.h.

Referenced by kf_bfly2(), kf_bfly3(), kf_bfly4(), kf_bfly5(), kiss_fftr(), and kiss_fftri().

13.52.2.7 #define C_SUBFROM(*res, a*)

Value:

```
do {\
        CHECK_OVERFLOW_OP((res).r,-,(a).r)\
        CHECK_OVERFLOW_OP((res).i,-,(a).i)\
        (res).r -= (a).r;  (res).i -= (a).i; \
    }while(0)
```

Definition at line 119 of file _kiss_fft_guts.h.

13.52.2.8 #define CHECK_OVERFLOW_OP(*a, op, b*) /∗ noop ∗/

Definition at line 97 of file _kiss_fft_guts.h.

Referenced by kiss_fftr().

13.52.2.9 #define HALF_OF(x) ((x)∗.5)

Definition at line 138 of file _kiss_fft_guts.h.

Referenced by kf_bfly3(), and kiss_fftr().

13.52.2.10 #define kf_cexp(x, phase)

Value:

```
do{ \
        (x)->r = KISS_FFT_COS(phase);\
        (x)->i = KISS_FFT_SIN(phase);\
    }while(0)
```

Definition at line 141 of file _kiss_fft_guts.h.

Referenced by kiss_fft_alloc(), and kiss_fftr_alloc().

13.52.2.11 #define KISS_FFT_COS(phase) (kiss_fft_scalar) cos(phase)

Definition at line 136 of file _kiss_fft_guts.h.

13.52.2.12 #define KISS_FFT_SIN(phase) (kiss_fft_scalar) sin(phase)

Definition at line 137 of file _kiss_fft_guts.h.

13.52.2.13 #define KISS_FFT_TMP_ALLOC(*nbytes*) KISS_FFT_MALLOC(nbytes)

Definition at line 162 of file _kiss_fft_guts.h.

Referenced by kf_bfly_generic(), and kiss_fft_stride().

13.52.2.14 #define KISS_FFT_TMP_FREE(*ptr*) KISS_FFT_FREE(ptr)

Definition at line 163 of file _kiss_fft_guts.h.

Referenced by kf_bfly_generic(), and kiss_fft_stride().

13.52.2.15 #define MAXFACTORS 32

Definition at line 22 of file _kiss_fft_guts.h.

13.52.2.16 #define pcpx(c) fprintf(stderr,"%g + %gi\n",(double)((c)->r),(double)((c)->i))

Definition at line 149 of file _kiss_fft_guts.h.

13.52.2.17 #define S_MUL(a, b) ((a)*(b))

Definition at line 86 of file _kiss_fft_guts.h.

Referenced by kf_bfly5().

13.53 src/ckb-mviz/kiss_fft.c File Reference

```
#include "_kiss_fft_guts.h"
```

Include dependency graph for kiss_fft.c:

Functions

- static void kf_bfly2 (kiss_fft_cpx *Fout, const size_t fstride, const kiss_fft_cfg st, int m)
- static void kf_bfly4 (kiss_fft_cpx *Fout, const size_t fstride, const kiss_fft_cfg st, const size_t m)
- static void kf_bfly3 (kiss_fft_cpx *Fout, const size_t fstride, const kiss_fft_cfg st, size_t m)
- static void kf_bfly5 (kiss_fft_cpx *Fout, const size_t fstride, const kiss_fft_cfg st, int m)
- static void kf_bfly_generic (kiss_fft_cpx *Fout, const size_t fstride, const kiss_fft_cfg st, int m, int p)
- static void kf_work (kiss_fft_cpx *Fout, const kiss_fft_cpx *f, const size_t fstride, int in_stride, int *factors, const kiss_fft_cfg st)
- static void kf_factor (int n, int *facbuf)
- kiss_fft_cfg kiss_fft_alloc (int nfft, int inverse_fft, void *mem, size_t *lenmem)

- void kiss_fft_stride (kiss_fft_cfg st, const kiss_fft_cpx ∗fin, kiss_fft_cpx ∗fout, int in_stride)
- void kiss_fft (kiss_fft_cfg cfg, const kiss_fft_cpx ∗fin, kiss_fft_cpx ∗fout)
- void kiss_fft_cleanup (void)
- int kiss_fft_next_fast_size (int n)

13.53.1 Function Documentation

13.53.1.1 static void kf_bfly2 (kiss_fft_cpx ∗ *Fout,* const size_t *fstride,* const kiss_fft_cfg *st,* int *m*) [static]

Definition at line 21 of file kiss_fft.c.

References C_ADDTO, C_FIXDIV, C_MUL, C_SUB, and kiss_fft_state::twiddles.

Referenced by kf_work().

```
{
    kiss_fft_cpx * Fout2;
    kiss_fft_cpx * tw1 = st->twiddles;
    kiss_fft_cpx t;
    Fout2 = Fout + m;
    do{
        C_FIXDIV(*Fout,2); C_FIXDIV(*Fout2,2);

        C_MUL (t,  *Fout2 , *tw1);
        tw1 += fstride;
        C_SUB( *Fout2 ,  *Fout , t );
        C_ADDTO( *Fout ,  t );
        ++Fout2;
        ++Fout;
    }while (--m);
}
```

Here is the caller graph for this function:

13.53.1.2 static void kf_bfly3 (kiss_fft_cpx ∗ *Fout,* const size_t *fstride,* const kiss_fft_cfg *st,* size_t *m*) [static]

Definition at line 92 of file kiss_fft.c.

References C_ADD, C_ADDTO, C_FIXDIV, C_MUL, C_MULBYSCALAR, C_SUB, HALF_OF, kiss_fft_cpx::i, kiss_fft_cpx::r, and kiss_fft_state::twiddles.

Referenced by kf_work().

```
{
    size_t k=m;
    const size_t m2 = 2*m;
    kiss_fft_cpx *tw1,*tw2;
    kiss_fft_cpx scratch[5];
    kiss_fft_cpx epi3;
    epi3 = st->twiddles[fstride*m];

    tw1=tw2=st->twiddles;

    do{
        C_FIXDIV(*Fout,3); C_FIXDIV(Fout[m],3); C_FIXDIV(Fout[m2],3);

```

```
        C_MUL(scratch[1],Fout[m] , *tw1);
        C_MUL(scratch[2],Fout[m2] , *tw2);

        C_ADD(scratch[3],scratch[1],scratch[2]);
        C_SUB(scratch[0],scratch[1],scratch[2]);
        tw1 += fstride;
        tw2 += fstride*2;

        Fout[m].r = Fout->r - HALF_OF(scratch[3].r);
        Fout[m].i = Fout->i - HALF_OF(scratch[3].i);

        C_MULBYSCALAR( scratch[0] , epi3.i );

        C_ADDTO(*Fout,scratch[3]);

        Fout[m2].r = Fout[m].r + scratch[0].i;
        Fout[m2].i = Fout[m].i - scratch[0].r;

        Fout[m].r -= scratch[0].i;
        Fout[m].i += scratch[0].r;

        ++Fout;
    }while(--k);
}
```

Here is the caller graph for this function:

13.53.1.3 static void kf_bfly4 (kiss_fft_cpx * *Fout,* const size_t *fstride,* const kiss_fft_cfg *st,* const size_t *m*) [static]

Definition at line 44 of file kiss_fft.c.

References C_ADD, C_ADDTO, C_FIXDIV, C_MUL, C_SUB, kiss_fft_cpx::i, kiss_fft_state::inverse, kiss_fft_cpx::r, and kiss_fft_state::twiddles.

Referenced by kf_work().

```
{
    kiss_fft_cpx *tw1,*tw2,*tw3;
    kiss_fft_cpx scratch[6];
    size_t k=m;
    const size_t m2=2*m;
    const size_t m3=3*m;


    tw3 = tw2 = tw1 = st->twiddles;

    do {
        C_FIXDIV(*Fout,4); C_FIXDIV(Fout[m],4); C_FIXDIV(Fout[m2],4);
    C_FIXDIV(Fout[m3],4);

        C_MUL(scratch[0],Fout[m] , *tw1 );
        C_MUL(scratch[1],Fout[m2] , *tw2 );
        C_MUL(scratch[2],Fout[m3] , *tw3 );

        C_SUB( scratch[5] , *Fout, scratch[1] );
        C_ADDTO(*Fout, scratch[1]);
        C_ADD( scratch[3] , scratch[0] , scratch[2] );
        C_SUB( scratch[4] , scratch[0] , scratch[2] );
        C_SUB( Fout[m2], *Fout, scratch[3] );
        tw1 += fstride;
        tw2 += fstride*2;
        tw3 += fstride*3;
        C_ADDTO( *Fout , scratch[3] );
```

```

        if(st->inverse) {
            Fout[m].r = scratch[5].r - scratch[4].i;
            Fout[m].i = scratch[5].i + scratch[4].r;
            Fout[m3].r = scratch[5].r + scratch[4].i;
            Fout[m3].i = scratch[5].i - scratch[4].r;
        }else{
            Fout[m].r = scratch[5].r + scratch[4].i;
            Fout[m].i = scratch[5].i - scratch[4].r;
            Fout[m3].r = scratch[5].r - scratch[4].i;
            Fout[m3].i = scratch[5].i + scratch[4].r;
        }
        ++Fout;
    }while(--k);
}
```

Here is the caller graph for this function:

13.53.1.4 static void kf_bfly5 (kiss_fft_cpx * *Fout*, const size_t *fstride*, const kiss_fft_cfg *st*, int *m*) [static]

Definition at line 136 of file kiss_fft.c.

References C_ADD, C_FIXDIV, C_MUL, C_SUB, kiss_fft_cpx::i, kiss_fft_cpx::r, S_MUL, and kiss_fft_state::twiddles.

Referenced by kf_work().

```
{
    kiss_fft_cpx *Fout0,*Fout1,*Fout2,*Fout3,*Fout4;
    int u;
    kiss_fft_cpx scratch[13];
    kiss_fft_cpx * twiddles = st->twiddles;
    kiss_fft_cpx *tw;
    kiss_fft_cpx ya,yb;
    ya = twiddles[fstride*m];
    yb = twiddles[fstride*2*m];

    Fout0=Fout;
    Fout1=Fout0+m;
    Fout2=Fout0+2*m;
    Fout3=Fout0+3*m;
    Fout4=Fout0+4*m;

    tw=st->twiddles;
    for ( u=0; u<m; ++u ) {
        C_FIXDIV( *Fout0,5); C_FIXDIV( *Fout1,5); C_FIXDIV( *Fout2,5); C_FIXDIV( *Fout3,5); C_FIXDIV( *Fout4,5);
        scratch[0] = *Fout0;

        C_MUL(scratch[1] ,*Fout1, tw[u*fstride]);
        C_MUL(scratch[2] ,*Fout2, tw[2*u*fstride]);
        C_MUL(scratch[3] ,*Fout3, tw[3*u*fstride]);
        C_MUL(scratch[4] ,*Fout4, tw[4*u*fstride]);

        C_ADD( scratch[7],scratch[1],scratch[4]);
        C_SUB( scratch[10],scratch[1],scratch[4]);
        C_ADD( scratch[8],scratch[2],scratch[3]);
        C_SUB( scratch[9],scratch[2],scratch[3]);

        Fout0->r += scratch[7].r + scratch[8].r;
        Fout0->i += scratch[7].i + scratch[8].i;

        scratch[5].r = scratch[0].r + S_MUL(scratch[7].r,ya.r) + S_MUL(scratch[8].r,yb.r);
```

```
        scratch[5].i = scratch[0].i + S_MUL(scratch[7].i,ya.r) + S_MUL(scratch[8].i,yb.r);

        scratch[6].r =  S_MUL(scratch[10].i,ya.i) + S_MUL(scratch[9].i,yb.i);
        scratch[6].i = -S_MUL(scratch[10].r,ya.i) - S_MUL(scratch[9].r,yb.i);

        C_SUB(*Fout1,scratch[5],scratch[6]);
        C_ADD(*Fout4,scratch[5],scratch[6]);

        scratch[11].r = scratch[0].r + S_MUL(scratch[7].r,yb.r) + S_MUL(scratch[8].r,ya.r);
        scratch[11].i = scratch[0].i + S_MUL(scratch[7].i,yb.r) + S_MUL(scratch[8].i,ya.r);
        scratch[12].r = - S_MUL(scratch[10].i,yb.i) + S_MUL(scratch[9].i,ya.i);
        scratch[12].i = S_MUL(scratch[10].r,yb.i) - S_MUL(scratch[9].r,ya.i);

        C_ADD(*Fout2,scratch[11],scratch[12]);
        C_SUB(*Fout3,scratch[11],scratch[12]);

        ++Fout0;++Fout1;++Fout2;++Fout3;++Fout4;
    }
}
```

Here is the caller graph for this function:

13.53.1.5 static void kf_bfly_generic (kiss_fft_cpx * *Fout*, const size_t *fstride*, const kiss_fft_cfg *st*, int *m*, int *p*) [static]

Definition at line 198 of file kiss_fft.c.

References C_ADDTO, C_FIXDIV, C_MUL, KISS_FFT_TMP_ALLOC, KISS_FFT_TMP_FREE, kiss_fft_state::nfft, and kiss_fft_state::twiddles.

Referenced by kf_work().

```
{
    int u,k,q1,q;
    kiss_fft_cpx * twiddles = st->twiddles;
    kiss_fft_cpx t;
    int Norig = st->nfft;

    kiss_fft_cpx * scratch = (kiss_fft_cpx*)KISS_FFT_TMP_ALLOC(sizeof(kiss_fft_cpx)*p);

    for ( u=0; u<m; ++u ) {
        k=u;
        for ( q1=0 ; q1<p ; ++q1 ) {
            scratch[q1] = Fout[ k  ];
            C_FIXDIV(scratch[q1],p);
            k += m;
        }

        k=u;
        for ( q1=0 ; q1<p ; ++q1 ) {
            int twidx=0;
            Fout[ k ] = scratch[0];
            for (q=1;q<p;++q ) {
                twidx += fstride * k;
                if (twidx>=Norig) twidx-=Norig;
                C_MUL(t,scratch[q] , twiddles[twidx] );
```

```
                C_ADDTO( Fout[ k ] ,t);
            }
            k += m;
        }
    }
    KISS_FFT_TMP_FREE(scratch);
}
```

Here is the caller graph for this function:

13.53.1.6 static void kf_factor (int *n*, int * *facbuf*) [static]

Definition at line 309 of file kiss_fft.c.

Referenced by kiss_fft_alloc().

```
{
    int p=4;
    double floor_sqrt;
    floor_sqrt = floor( sqrt((double)n) );

    /*factor out powers of 4, powers of 2, then any remaining primes */
    do {
        while (n % p) {
            switch (p) {
                case 4: p = 2; break;
                case 2: p = 3; break;
                default: p += 2; break;
            }
            if (p > floor_sqrt)
                p = n;          /* no more factors, skip to end */
        }
        n /= p;
        *facbuf++ = p;
        *facbuf++ = n;
    } while (n > 1);
}
```

Here is the caller graph for this function:

13.53.1.7 static void kf_work (kiss_fft_cpx * *Fout*, const kiss_fft_cpx * *f*, const size_t *fstride*, int *in_stride*, int * *factors*, const kiss_fft_cfg *st*) [static]

Definition at line 238 of file kiss_fft.c.

References kf_bfly2(), kf_bfly3(), kf_bfly4(), kf_bfly5(), and kf_bfly_generic().

Referenced by kiss_fft_stride().

```
{
    kiss_fft_cpx * Fout_beg=Fout;
    const int p=*factors++; /* the radix  */
    const int m=*factors++; /* stage's fft length/p */
    const kiss_fft_cpx * Fout_end = Fout + p*m;

#ifdef _OPENMP
    // use openmp extensions at the
    // top-level (not recursive)
    if (fstride==1 && p<=5)
    {
        int k;

        // execute the p different work units in different threads
#       pragma omp parallel for
        for (k=0;k<p;++k)
            kf_work( Fout +k*m, f+ fstride*in_stride*k,fstride*p,in_stride,factors,st);
        // all threads have joined by this point

        switch (p) {
            case 2: kf_bfly2(Fout,fstride,st,m); break;
            case 3: kf_bfly3(Fout,fstride,st,m); break;
            case 4: kf_bfly4(Fout,fstride,st,m); break;
            case 5: kf_bfly5(Fout,fstride,st,m); break;
            default: kf_bfly_generic(Fout,fstride,st,m,p); break;
        }
        return;
    }
#endif

    if (m==1) {
        do{
            *Fout = *f;
            f += fstride*in_stride;
        }while(++Fout != Fout_end );
    }else{
        do{
            // recursive call:
            // DFT of size m*p performed by doing
            // p instances of smaller DFTs of size m,
            // each one takes a decimated version of the input
            kf_work( Fout , f, fstride*p, in_stride, factors,st);
            f += fstride*in_stride;
        }while( (Fout += m) != Fout_end );
    }

    Fout=Fout_beg;

    // recombine the p smaller DFTs
    switch (p) {
        case 2: kf_bfly2(Fout,fstride,st,m); break;
        case 3: kf_bfly3(Fout,fstride,st,m); break;
        case 4: kf_bfly4(Fout,fstride,st,m); break;
        case 5: kf_bfly5(Fout,fstride,st,m); break;
        default: kf_bfly_generic(Fout,fstride,st,m,p); break;
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.53.1.8 void kiss_fft (kiss_fft_cfg *cfg*, const kiss_fft_cpx ∗ *fin*, kiss_fft_cpx ∗ *fout*)

Definition at line 385 of file kiss_fft.c.

References kiss_fft_stride().

Referenced by getFreqDec(), kiss_fftr(), and kiss_fftri().

```
{
    kiss_fft_stride(cfg,fin,fout,1);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.53.1.9 kiss_fft_cfg kiss_fft_alloc (int *nfft,* int *inverse_fft,* void * *mem,* size_t * *lenmem*)

Definition at line 339 of file kiss_fft.c.

References kiss_fft_state::factors, kiss_fft_state::inverse, kf_cexp, kf_factor(), KISS_FFT_MALLOC, kiss_fft_state::nfft, phase, and kiss_fft_state::twiddles.

Referenced by getFreqDec(), and kiss_fftr_alloc().

```
340 {
341     kiss_fft_cfg st=NULL;
342     size_t memneeded = sizeof(struct kiss_fft_state)
343         + sizeof(kiss_fft_cpx)*(nfft-1); /* twiddle factors*/
344
345     if ( lenmem==NULL ) {
346         st = ( kiss_fft_cfg)KISS_FFT_MALLOC( memneeded );
347     }else{
348         if (mem != NULL && *lenmem >= memneeded)
349             st = (kiss_fft_cfg)mem;
350         *lenmem = memneeded;
351     }
352     if (st) {
353         int i;
```

```
        st->nfft=nfft;
        st->inverse = inverse_fft;

        for (i=0;i<nfft;++i) {
            const double pi=3.14159265358979323846264338327950288419716939937510582097494 4;
            double phase = -2*pi*i / nfft;
            if (st->inverse)
                phase *= -1;
            kf_cexp(st->twiddles+i, phase );
        }

        kf_factor(nfft,st->factors);
    }
    return st;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.53.1.10 void kiss_fft_cleanup (void)

Definition at line 391 of file kiss_fft.c.

Referenced by getFreqDec().

```
{
    // nothing needed any more
}
```

Here is the caller graph for this function:

13.53.1.11 int kiss_fft_next_fast_size (int *n*)

Definition at line 396 of file kiss_fft.c.

```
{
    while(1) {
        int m=n;
        while ( (m%2) == 0 ) m/=2;
        while ( (m%3) == 0 ) m/=3;
        while ( (m%5) == 0 ) m/=5;
        if (m<=1)
            break; /* n is completely factorable by twos, threes, and fives */
        n++;
    }
    return n;
}
```

13.53.1.12 void kiss_fft_stride (kiss_fft_cfg *st*, const kiss_fft_cpx ∗ *fin*, kiss_fft_cpx ∗ *fout*, int *in_stride*)

Definition at line 371 of file kiss_fft.c.

References kiss_fft_state::factors, kf_work(), KISS_FFT_TMP_ALLOC, KISS_FFT_TMP_FREE, and kiss_fft_state::nfft.

Referenced by kiss_fft().

```
{
    if (fin == fout) {
        //NOTE: this is not really an in-place FFT algorithm.
        //It just performs an out-of-place FFT into a temp buffer
        kiss_fft_cpx * tmpbuf = (kiss_fft_cpx*)
    KISS_FFT_TMP_ALLOC( sizeof(kiss_fft_cpx)*st->nfft);
        kf_work(tmpbuf,fin,1,in_stride, st->factors,st);
        memcpy(fout,tmpbuf,sizeof(kiss_fft_cpx)*st->nfft);
        KISS_FFT_TMP_FREE(tmpbuf);
    }else{
        kf_work( fout, fin, 1,in_stride, st->factors,st );
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.54 src/ckb-mviz/kiss_fft.h File Reference

```
#include <stdlib.h>
#include <stdio.h>
#include <math.h>
#include <string.h>
```

Include dependency graph for kiss_fft.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct kiss_fft_cpx

Macros

- #define KISS_FFT_MALLOC malloc
- #define KISS_FFT_FREE free
- #define kiss_fft_scalar float
- #define kiss_fft_free free
- #define kiss_fftr_next_fast_size_real(n) (kiss_fft_next_fast_size(((n)+1)>>1)<<1)

Typedefs

- typedef struct kiss_fft_state * kiss_fft_cfg

Functions

- kiss_fft_cfg kiss_fft_alloc (int nfft, int inverse_fft, void *mem, size_t *lenmem)

- void kiss_fft (kiss_fft_cfg cfg, const kiss_fft_cpx *fin, kiss_fft_cpx *fout)
- void kiss_fft_stride (kiss_fft_cfg cfg, const kiss_fft_cpx *fin, kiss_fft_cpx *fout, int fin_stride)
- void kiss_fft_cleanup (void)
- int kiss_fft_next_fast_size (int n)

13.54.1 Data Structure Documentation

13.54.1.1 struct kiss_fft_cpx

Definition at line 51 of file kiss_fft.h.

Collaboration diagram for kiss_fft_cpx:

Data Fields

float	i	
float	r	

13.54.2 Macro Definition Documentation

13.54.2.1 #define KISS_FFT_FREE free

Definition at line 33 of file kiss_fft.h.

13.54.2.2 #define kiss_fft_free free

Definition at line 102 of file kiss_fft.h.

Referenced by getFreqDec().

13.54.2.3 #define KISS_FFT_MALLOC malloc

Definition at line 32 of file kiss_fft.h.

Referenced by kiss_fft_alloc(), and kiss_fftr_alloc().

13.54.2.4 #define kiss_fft_scalar float

Definition at line 47 of file kiss_fft.h.

13.54.2.5 #define kiss_fftr_next_fast_size_real(*n*) (kiss_fft_next_fast_size(((n)+1)>>1)<<1)

Definition at line 117 of file kiss_fft.h.

13.54.3 Typedef Documentation

13.54.3.1 typedef struct kiss_fft_state* kiss_fft_cfg

Definition at line 56 of file kiss_fft.h.

13.54.4 Function Documentation

13.54.4.1 void kiss_fft (kiss_fft_cfg *cfg*, const kiss_fft_cpx * *fin*, kiss_fft_cpx * *fout*)

Definition at line 385 of file kiss_fft.c.

References kiss_fft_stride().

Referenced by getFreqDec(), kiss_fftr(), and kiss_fftri().

```
{
    kiss_fft_stride(cfg,fin,fout,1);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.54.4.2 kiss_fft_cfg kiss_fft_alloc (int *nfft,* int *inverse_fft,* void * *mem,* size_t * *lenmem*)

Definition at line 339 of file kiss_fft.c.

References kiss_fft_state::factors, kiss_fft_state::inverse, kf_cexp, kf_factor(), KISS_FFT_MALLOC, kiss_fft_state::nfft, phase, and kiss_fft_state::twiddles.

Referenced by getFreqDec(), and kiss_fftr_alloc().

```
{
    kiss_fft_cfg st=NULL;
    size_t memneeded = sizeof(struct kiss_fft_state)
        + sizeof(kiss_fft_cpx)*(nfft-1); /* twiddle factors*/

    if ( lenmem==NULL ) {
        st = ( kiss_fft_cfg)KISS_FFT_MALLOC( memneeded );
    }else{
        if (mem != NULL && *lenmem >= memneeded)
            st = (kiss_fft_cfg)mem;
        *lenmem = memneeded;
    }
    if (st) {
        int i;
        st->nfft=nfft;
        st->inverse = inverse_fft;

        for (i=0;i<nfft;++i) {
            const double pi=3.14159265358979323846264338327950288419716939937510582097494 4;
            double phase = -2*pi*i / nfft;
            if (st->inverse)
                phase *= -1;
            kf_cexp(st->twiddles+i, phase );
        }

        kf_factor(nfft,st->factors);
    }
    return st;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.54.4.3 void kiss_fft_cleanup (void)

Definition at line 391 of file kiss_fft.c.

Referenced by getFreqDec().

```
{
    // nothing needed any more
}
```

Here is the caller graph for this function:

13.54.4.4 int kiss_fft_next_fast_size (int *n*)

Definition at line 396 of file kiss_fft.c.

```
{
    while(1) {
        int m=n;
```

```
        while ( (m%2) == 0 ) m/=2;
        while ( (m%3) == 0 ) m/=3;
        while ( (m%5) == 0 ) m/=5;
        if (m<=1)
            break; /* n is completely factorable by twos, threes, and fives */
        n++;
    }
    return n;
}
```

13.54.4.5 void kiss_fft_stride (kiss_fft_cfg *cfg*, const kiss_fft_cpx ∗ *fin*, kiss_fft_cpx ∗ *fout*, int *fin_stride*)

Definition at line 371 of file kiss_fft.c.

References kiss_fft_state::factors, kf_work(), KISS_FFT_TMP_ALLOC, KISS_FFT_TMP_FREE, and kiss_fft_state::nfft.

Referenced by kiss_fft().

```
{
    if (fin == fout) {
        //NOTE: this is not really an in-place FFT algorithm.
        //It just performs an out-of-place FFT into a temp buffer
        kiss_fft_cpx * tmpbuf = (kiss_fft_cpx*)
    KISS_FFT_TMP_ALLOC( sizeof(kiss_fft_cpx)*st->nfft);
        kf_work(tmpbuf,fin,1,in_stride, st->factors,st);
        memcpy(fout,tmpbuf,sizeof(kiss_fft_cpx)*st->nfft);
        KISS_FFT_TMP_FREE(tmpbuf);
    }else{
        kf_work( fout, fin, 1,in_stride, st->factors,st );
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.55 src/ckb-mviz/kiss_fftr.c File Reference

```
#include "kiss_fftr.h"
#include "_kiss_fft_guts.h"
```

Include dependency graph for kiss_fftr.c:

Data Structures

- struct kiss_fftr_state

Functions

- kiss_fftr_cfg kiss_fftr_alloc (int nfft, int inverse_fft, void ∗mem, size_t ∗lenmem)
- void kiss_fftr (kiss_fftr_cfg st, const float ∗timedata, kiss_fft_cpx ∗freqdata)
- void kiss_fftri (kiss_fftr_cfg st, const kiss_fft_cpx ∗freqdata, float ∗timedata)

13.55.1 Data Structure Documentation

13.55.1.1 struct kiss_fftr_state

Definition at line 18 of file kiss_fftr.c.

Collaboration diagram for kiss_fftr_state:

Data Fields

kiss_fft_cfg	substate	
kiss_fft_cpx *	super_twiddles	

kiss_fft_cpx *	tmpbuf	

13.55.2 Function Documentation

13.55.2.1 void kiss_fftr (kiss_fftr_cfg *st*, const float * *timedata*, kiss_fft_cpx * *freqdata*)

Definition at line 67 of file kiss_fftr.c.

References C_ADD, C_FIXDIV, C_MUL, C_SUB, CHECK_OVERFLOW_OP, HALF_OF, kiss_fft_cpx::i, kiss_fft_state::inverse, kiss_fft(), kiss_fft_state::nfft, kiss_fft_cpx::r, kiss_fftr_state::substate, kiss_fftr_state::super_twiddles, and kiss_fftr_state::tmpbuf.

```
68 {
69     /* input buffer timedata is stored row-wise */
70     int k,ncfft;
71     kiss_fft_cpx fpnk,fpk,f1k,f2k,tw,tdc;
72
73     if ( st->substate->inverse) {
74         fprintf(stderr,"kiss fft usage error: improper alloc\n");
75         exit(1);
76     }
77
78     ncfft = st->substate->nfft;
79
80     /*perform the parallel fft of two real signals packed in real,imag*/
81     kiss_fft( st->substate , (const kiss_fft_cpx*)timedata, st->
    tmpbuf );
82     /* The real part of the DC element of the frequency spectrum in st->tmpbuf
83      * contains the sum of the even-numbered elements of the input time sequence
84      * The imag part is the sum of the odd-numbered elements
85      *
86      * The sum of tdc.r and tdc.i is the sum of the input time sequence.
87      *      yielding DC of input time sequence
88      * The difference of tdc.r - tdc.i is the sum of the input (dot product) [1,-1,1,-1...
89      *      yielding Nyquist bin of input time sequence
90      */
91
92     tdc.r = st->tmpbuf[0].r;
93     tdc.i = st->tmpbuf[0].i;
94     C_FIXDIV(tdc,2);
95     CHECK_OVERFLOW_OP(tdc.r ,+, tdc.i);
96     CHECK_OVERFLOW_OP(tdc.r ,-, tdc.i);
97     freqdata[0].r = tdc.r + tdc.i;
98     freqdata[ncfft].r = tdc.r - tdc.i;
99 #ifdef USE_SIMD
100     freqdata[ncfft].i = freqdata[0].i = _mm_set1_ps(0);
101 #else
102     freqdata[ncfft].i = freqdata[0].i = 0;
103 #endif
104
105     for ( k=1;k <= ncfft/2 ; ++k ) {
106         fpk    = st->tmpbuf[k];
107         fpnk.r =   st->tmpbuf[ncfft-k].r;
108         fpnk.i = - st->tmpbuf[ncfft-k].i;
109         C_FIXDIV(fpk,2);
110         C_FIXDIV(fpnk,2);
111
112         C_ADD( f1k, fpk , fpnk );
113         C_SUB( f2k, fpk , fpnk );
114         C_MUL( tw , f2k , st->super_twiddles[k-1]);
115
116         freqdata[k].r = HALF_OF(f1k.r + tw.r);
117         freqdata[k].i = HALF_OF(f1k.i + tw.i);
118         freqdata[ncfft-k].r = HALF_OF(f1k.r - tw.r);
119         freqdata[ncfft-k].i = HALF_OF(tw.i - f1k.i);
120     }
121 }
```

Here is the call graph for this function:

13.55.2.2 kiss_fftr_cfg kiss_fftr_alloc (int *nfft*, int *inverse_fft*, void * *mem*, size_t * *lenmem*)

Definition at line 27 of file kiss_fftr.c.

References kf_cexp, kiss_fft_alloc(), KISS_FFT_MALLOC, phase, kiss_fftr_state::substate, kiss_fftr_state::super_-twiddles, and kiss_fftr_state::tmpbuf.

```
{
    int i;
    kiss_fftr_cfg st = NULL;
    size_t subsize, memneeded;

    if (nfft & 1) {
        fprintf(stderr,"Real FFT optimization must be even.\n");
        return NULL;
    }
    nfft >>= 1;

    kiss_fft_alloc (nfft, inverse_fft, NULL, &subsize);
    memneeded = sizeof(struct kiss_fftr_state) + subsize + sizeof(
   kiss_fft_cpx) * ( nfft * 3 / 2);

    if (lenmem == NULL) {
        st = (kiss_fftr_cfg) KISS_FFT_MALLOC (memneeded);
    } else {
        if (*lenmem >= memneeded)
            st = (kiss_fftr_cfg) mem;
        *lenmem = memneeded;
    }
    if (!st)
        return NULL;

    st->substate = (kiss_fft_cfg) (st + 1); /*just beyond kiss_fftr_state struct */
    st->tmpbuf = (kiss_fft_cpx *) (((char *) st->substate) + subsize);
    st->super_twiddles = st->tmpbuf + nfft;
    kiss_fft_alloc(nfft, inverse_fft, st->substate, &subsize);

    for (i = 0; i < nfft/2; ++i) {
        double phase =
            -3.141592653589793238462643383 27 * ((double) (i+1) / nfft + .5);
        if (inverse_fft)
            phase *= -1;
        kf_cexp (st->super_twiddles+i,phase);
    }
    return st;
}
```

Here is the call graph for this function:

13.55.2.3 void kiss_fftri (kiss_fftr_cfg *st*, const kiss_fft_cpx * *freqdata*, float * *timedata*)

Definition at line 123 of file kiss_fftr.c.

References C_ADD, C_FIXDIV, C_MUL, C_SUB, kiss_fft_cpx::i, kiss_fft_state::inverse, kiss_fft(), kiss_fft_state::nfft, kiss_fft_cpx::r, kiss_fftr_state::substate, kiss_fftr_state::super_twiddles, and kiss_fftr_state::tmpbuf.

```
{
    /* input buffer timedata is stored row-wise */
    int k, ncfft;

    if (st->substate->inverse == 0) {
        fprintf (stderr, "kiss fft usage error: improper alloc\n");
        exit (1);
    }

    ncfft = st->substate->nfft;

    st->tmpbuf[0].r = freqdata[0].r + freqdata[ncfft].r;
    st->tmpbuf[0].i = freqdata[0].r - freqdata[ncfft].r;
    C_FIXDIV(st->tmpbuf[0],2);

    for (k = 1; k <= ncfft / 2; ++k) {
        kiss_fft_cpx fk, fnkc, fek, fok, tmp;
        fk = freqdata[k];
        fnkc.r = freqdata[ncfft - k].r;
        fnkc.i = -freqdata[ncfft - k].i;
        C_FIXDIV( fk , 2 );
        C_FIXDIV( fnkc , 2 );

        C_ADD (fek, fk, fnkc);
        C_SUB (tmp, fk, fnkc);
        C_MUL (fok, tmp, st->super_twiddles[k-1]);
        C_ADD (st->tmpbuf[k],     fek, fok);
        C_SUB (st->tmpbuf[ncfft - k], fek, fok);
#ifdef USE_SIMD
        st->tmpbuf[ncfft - k].i *= _mm_set1_ps(-1.0);
#else
        st->tmpbuf[ncfft - k].i *= -1;
#endif
    }
    kiss_fft (st->substate, st->tmpbuf, (kiss_fft_cpx *) timedata);
}
```

Here is the call graph for this function:

13.56 src/ckb-mviz/kiss_fftr.h File Reference

```
#include "kiss_fft.h"
```

Include dependency graph for kiss_fftr.h:

This graph shows which files directly or indirectly include this file:

Macros

- #define kiss_fftr_free free

Typedefs

- typedef struct kiss_fftr_state ∗ kiss_fftr_cfg

Functions

- kiss_fftr_cfg kiss_fftr_alloc (int nfft, int inverse_fft, void ∗mem, size_t ∗lenmem)
- void kiss_fftr (kiss_fftr_cfg cfg, const float ∗timedata, kiss_fft_cpx ∗freqdata)
- void kiss_fftri (kiss_fftr_cfg cfg, const kiss_fft_cpx ∗freqdata, float ∗timedata)

13.56.1 Macro Definition Documentation

13.56.1.1 #define kiss_fftr_free free

Definition at line 41 of file kiss_fftr.h.

13.56.2 Typedef Documentation

13.56.2.1 typedef struct kiss_fftr_state∗ kiss_fftr_cfg

Definition at line 18 of file kiss_fftr.h.

13.56.3 Function Documentation

13.56.3.1 void kiss_fftr (kiss_fftr_cfg *cfg,* const float ∗ *timedata,* kiss_fft_cpx ∗ *freqdata*)

Definition at line 67 of file kiss_fftr.c.

References C_ADD, C_FIXDIV, C_MUL, C_SUB, CHECK_OVERFLOW_OP, HALF_OF, kiss_fft_cpx::i, kiss_fft_-state::inverse, kiss_fft(), kiss_fft_state::nfft, kiss_fft_cpx::r, kiss_fftr_state::substate, kiss_fftr_state::super_twiddles, and kiss_fftr_state::tmpbuf.

```
{
    /* input buffer timedata is stored row-wise */
    int k,ncfft;
    kiss_fft_cpx fpnk,fpk,f1k,f2k,tw,tdc;

    if ( st->substate->inverse) {
        fprintf(stderr,"kiss fft usage error: improper alloc\n");
        exit(1);
    }

    ncfft = st->substate->nfft;

    /*perform the parallel fft of two real signals packed in real,imag*/
    kiss_fft( st->substate , (const kiss_fft_cpx*)timedata, st->tmpbuf );
    /* The real part of the DC element of the frequency spectrum in st->tmpbuf
     * contains the sum of the even-numbered elements of the input time sequence
     * The imag part is the sum of the odd-numbered elements
     *
     * The sum of tdc.r and tdc.i is the sum of the input time sequence.
     *      yielding DC of input time sequence
     * The difference of tdc.r - tdc.i is the sum of the input (dot product) [1,-1,1,-1...
     *      yielding Nyquist bin of input time sequence
     */

    tdc.r = st->tmpbuf[0].r;
    tdc.i = st->tmpbuf[0].i;
    C_FIXDIV(tdc,2);
    CHECK_OVERFLOW_OP(tdc.r ,+, tdc.i);
    CHECK_OVERFLOW_OP(tdc.r ,-, tdc.i);
    freqdata[0].r = tdc.r + tdc.i;
    freqdata[ncfft].r = tdc.r - tdc.i;
#ifdef USE_SIMD
    freqdata[ncfft].i = freqdata[0].i = _mm_set1_ps(0);
#else
    freqdata[ncfft].i = freqdata[0].i = 0;
#endif

    for ( k=1;k <= ncfft/2 ; ++k ) {
        fpk    = st->tmpbuf[k];
        fpnk.r =   st->tmpbuf[ncfft-k].r;
        fpnk.i = - st->tmpbuf[ncfft-k].i;
        C_FIXDIV(fpk,2);
        C_FIXDIV(fpnk,2);

        C_ADD( f1k, fpk , fpnk );
        C_SUB( f2k, fpk , fpnk );
        C_MUL( tw , f2k , st->super_twiddles[k-1]);

        freqdata[k].r = HALF_OF(f1k.r + tw.r);
        freqdata[k].i = HALF_OF(f1k.i + tw.i);
        freqdata[ncfft-k].r = HALF_OF(f1k.r - tw.r);
        freqdata[ncfft-k].i = HALF_OF(tw.i - f1k.i);
    }
}
```

Here is the call graph for this function:

13.56.3.2 kiss_fftr_cfg kiss_fftr_alloc (int *nfft*, int *inverse_fft*, void * *mem*, size_t * *lenmem*)

Definition at line 27 of file kiss_fftr.c.

References kf_cexp, kiss_fft_alloc(), KISS_FFT_MALLOC, phase, kiss_fftr_state::substate, kiss_fftr_state::super_twiddles, and kiss_fftr_state::tmpbuf.

```
28 {
29     int i;
30     kiss_fftr_cfg st = NULL;
31     size_t subsize, memneeded;
32
33     if (nfft & 1) {
34         fprintf(stderr,"Real FFT optimization must be even.\n");
35         return NULL;
36     }
37     nfft >>= 1;
38
39     kiss_fft_alloc (nfft, inverse_fft, NULL, &subsize);
40     memneeded = sizeof(struct kiss_fftr_state) + subsize + sizeof(
      kiss_fft_cpx) * ( nfft * 3 / 2);
41
42     if (lenmem == NULL) {
43         st = (kiss_fftr_cfg) KISS_FFT_MALLOC (memneeded);
44     } else {
45         if (*lenmem >= memneeded)
46             st = (kiss_fftr_cfg) mem;
47         *lenmem = memneeded;
48     }
49     if (!st)
50         return NULL;
51
52     st->substate = (kiss_fft_cfg) (st + 1); /*just beyond kiss_fftr_state struct */
53     st->tmpbuf = (kiss_fft_cpx *) (((char *) st->substate) + subsize);
54     st->super_twiddles = st->tmpbuf + nfft;
55     kiss_fft_alloc(nfft, inverse_fft, st->substate, &subsize);
56
57     for (i = 0; i < nfft/2; ++i) {
58         double phase =
59             -3.14159265358979323846264338327 * ((double) (i+1) / nfft + .5);
60         if (inverse_fft)
61             phase *= -1;
62         kf_cexp (st->super_twiddles+i,phase);
63     }
64     return st;
65 }
```

Here is the call graph for this function:

13.56.3.3 void kiss_fftri (kiss_fftr_cfg *cfg*, const kiss_fft_cpx * *freqdata*, float * *timedata*)

Definition at line 123 of file kiss_fftr.c.

References C_ADD, C_FIXDIV, C_MUL, C_SUB, kiss_fft_cpx::i, kiss_fft_state::inverse, kiss_fft(), kiss_fft_state::nfft, kiss_fft_cpx::r, kiss_fftr_state::substate, kiss_fftr_state::super_twiddles, and kiss_fftr_state::tmpbuf.

```
124 {
125     /* input buffer timedata is stored row-wise */
126     int k, ncfft;
127
128     if (st->substate->inverse == 0) {
129         fprintf (stderr, "kiss fft usage error: improper alloc\n");
```

```
        exit (1);
    }

    ncfft = st->substate->nfft;

    st->tmpbuf[0].r = freqdata[0].r + freqdata[ncfft].r;
    st->tmpbuf[0].i = freqdata[0].r - freqdata[ncfft].r;
    C_FIXDIV(st->tmpbuf[0],2);

    for (k = 1; k <= ncfft / 2; ++k) {
        kiss_fft_cpx fk, fnkc, fek, fok, tmp;
        fk = freqdata[k];
        fnkc.r = freqdata[ncfft - k].r;
        fnkc.i = -freqdata[ncfft - k].i;
        C_FIXDIV( fk , 2 );
        C_FIXDIV( fnkc , 2 );

        C_ADD (fek, fk, fnkc);
        C_SUB (tmp, fk, fnkc);
        C_MUL (fok, tmp, st->super_twiddles[k-1]);
        C_ADD (st->tmpbuf[k],     fek, fok);
        C_SUB (st->tmpbuf[ncfft - k], fek, fok);
#ifdef USE_SIMD
        st->tmpbuf[ncfft - k].i *= _mm_set1_ps(-1.0);
#else
        st->tmpbuf[ncfft - k].i *= -1;
#endif
    }
    kiss_fft (st->substate, st->tmpbuf, (kiss_fft_cpx *) timedata);
}
```

Here is the call graph for this function:

13.57 src/ckb/animadddialog.cpp File Reference

```
#include "animadddialog.h"
#include "ui_animadddialog.h"
```

Include dependency graph for animadddialog.cpp:

13.58 src/ckb/animadddialog.h File Reference

```
#include <QDialog>
#include "animscript.h"
#include "kblight.h"
```

Include dependency graph for animadddialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class AnimAddDialog

Namespaces

- Ui

13.59 src/ckb/animscript.cpp File Reference

```
#include <cmath>
```

```
#include <QApplication>
#include <QDateTime>
#include <QDebug>
#include <QDir>
#include <QUrl>
#include "animscript.h"
```

Include dependency graph for animscript.cpp:

Functions

- QString urlParam (const QString &param)

Variables

- static const double ONE_DAY = 24. ∗ 60. ∗ 60.

13.59.1 Function Documentation

13.59.1.1 QString urlParam (const QString & *param*) [inline]

Definition at line 71 of file animscript.cpp.

Referenced by AnimScript::load().

```
71                                                  {
72      return QUrl::fromPercentEncoding(param.trimmed().toLatin1()).trimmed();
73  }
```

Here is the caller graph for this function:

13.59.2 Variable Documentation

13.59.2.1 const double ONE_DAY = 24. ∗ 60. ∗ 60. [static]

Definition at line 75 of file animscript.cpp.

Referenced by AnimScript::load().

13.60 src/ckb/animscript.h File Reference

```
#include <QHash>
#include <QObject>
#include <QMap>
#include <QProcess>
#include <QUuid>
#include <QVariant>
#include "keymap.h"
#include "colormap.h"
```

Include dependency graph for animscript.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class AnimScript
- struct AnimScript::Param

13.60.1 Data Structure Documentation

13.60.1.1 struct AnimScript::Param

Definition at line 21 of file animscript.h.

Collaboration diagram for AnimScript::Param:

Data Fields

	Type	

Data Fields

QVariant	defaultValue	
QVariant	maximum	
QVariant	minimum	
QString	name	
QString	postfix	
QString	prefix	
Type	type	

13.61 src/ckb/animsettingdialog.cpp File Reference

```
#include <cstdio>
#include <QDial>
#include <QDoubleSpinBox>
#include <QLineEdit>
#include <QComboBox>
#include "animsettingdialog.h"
#include "ui_animsettingdialog.h"
#include "colorbutton.h"
#include "gradientbutton.h"
```

Include dependency graph for animsettingdialog.cpp:

Functions

- static int angleFlip (int angle)

13.61.1 Function Documentation

13.61.1.1 static int angleFlip (int *angle*) [inline], [static]

Definition at line 12 of file animsettingdialog.cpp.

References angle.

Referenced by AnimSettingDialog::angleDialChanged(), AnimSettingDialog::angleSpinnerChanged(), AnimSettingDialog::AnimSettingDialog(), and AnimSettingDialog::updateParam().

```
12                                          {
13     if(angle <= 180)
14         return 180 - angle;
15     else
16        return 360 - (angle - 180);
17 }
```

Here is the caller graph for this function:

13.62 src/ckb/animsettingdialog.h File Reference

```
#include <QCheckBox>
#include <QDialog>
#include <QFrame>
#include <QSignalMapper>
#include <QSpinBox>
#include "kbanim.h"
```

Include dependency graph for animsettingdialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class AnimSettingDialog

Namespaces

- Ui

13.63 src/ckb/autorun.cpp File Reference

```
#include <QApplication>
#include <QDir>
#include <QSettings>
#include <QStandardPaths>
#include "autorun.h"
#include "ckbsettings.h"
```

Include dependency graph for autorun.cpp:

Variables

- static const QString settingPath = "Program/DidLoginItem"

13.63.1 Variable Documentation

13.63.1.1 const QString settingPath = "Program/DidLoginItem" [static]

Definition at line 18 of file autorun.cpp.

13.64 src/ckb/autorun.h File Reference

```
#include <QObject>
```

Include dependency graph for autorun.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class AutoRun

13.65 src/ckb/ckb-anim.h File Reference

```
#include <ctype.h>
#include <math.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
```

Include dependency graph for ckb-anim.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct ckb_key
- struct ckb_runctx
- struct ckb_gradient

Macros

- #define M_PI 3.14159265358979323846
- #define TRUE 1
- #define FALSE 0
- #define CKB_DOWN 1
- #define CKB_UP 0
- #define CKB_CONTAINER(macro) do { macro } while(0)
- #define CKB_GUID(guid) CKB_CONTAINER(printf("guid "); printurl(guid); printf("\n");)
- #define CKB_NAME(name) CKB_CONTAINER(printf("name "); printurl(name); printf("\n");)
- #define CKB_VERSION(version) CKB_CONTAINER(printf("version "); printurl(version); printf("\n");)
- #define CKB_COPYRIGHT(year, author) CKB_CONTAINER(printf("author "); printurl(author); printf("\nyear %s\n", year);)
- #define CKB_LICENSE(license) CKB_CONTAINER(printf("license "); printurl(license); printf("\n");)
- #define CKB_DESCRIPTION(description) CKB_CONTAINER(printf("description "); printurl(description); printf("\n");)
- #define CKB_PARAM(type, name, prefix, postfix, extra) CKB_CONTAINER(printf("param %s %s ", type, name); printurl(prefix); printf(" "); printurl(postfix); printf(" "); extra; printf("\n");)
- #define CKB_PARAM_LONG(name, prefix, postfix, default, min, max) CKB_PARAM("long", name, prefix, postfix, printf("%ld %ld %ld", (long)(default), (long)(min), (long)(max)))
- #define CKB_PARAM_DOUBLE(name, prefix, postfix, default, min, max) CKB_PARAM("double", name, prefix, postfix, printf("%lf %lf %lf", (double)(default), (double)(min), (double)(max)))
- #define CKB_PARAM_BOOL(name, text, default) CKB_PARAM("bool", name, text, "", printf((default) ? "1" : "0"))

- #define CKB_PARAM_RGB(name, prefix, postfix, r, g, b) CKB_PARAM("rgb", name, prefix, postfix, printf("%02x%02x%02x", (unsigned char)(r), (unsigned char)(g), (unsigned char)(b)))
- #define CKB_PARAM_ARGB(name, prefix, postfix, a, r, g, b) CKB_PARAM("argb", name, prefix, postfix, printf("%02x%02x%02x%02x", (unsigned char)(a), (unsigned char)(r), (unsigned char)(g), (unsigned char)(b)))
- #define CKB_PARAM_GRADIENT(name, prefix, postfix, default) CKB_PARAM("gradient", name, prefix, postfix, printurl(default))
- #define CKB_PARAM_AGRADIENT(name, prefix, postfix, default) CKB_PARAM("agradient", name, prefix, postfix, printurl(default))
- #define CKB_PARAM_ANGLE(name, prefix, postfix, default) CKB_PARAM("angle", name, prefix, postfix, printf("%ld", (long)(default)))
- #define CKB_PARAM_STRING(name, prefix, postfix, default) CKB_PARAM("string", name, prefix, postfix, printurl(default))
- #define CKB_PARAM_LABEL(name, text) CKB_PARAM("label", name, text, "",)
- #define CKB_PRESET_START(name) CKB_CONTAINER(printf("preset "); printurl(name);)
- #define CKB_PRESET_PARAM(name, value) CKB_CONTAINER(printf(" %s=", name); printurl(value);)
- #define CKB_PRESET_END CKB_CONTAINER(printf("\n");)
- #define CKB_KP_NONE "none"
- #define CKB_KP_NAME "name"
- #define CKB_KP_POSITION "position"
- #define CKB_KPMODE(mode) CKB_CONTAINER(printf("kpmode %s\n", mode);)
- #define CKB_TIME_DURATION "duration"
- #define CKB_TIME_ABSOLUTE "absolute"
- #define CKB_TIMEMODE(mode) CKB_CONTAINER(printf("time %s\n", mode);)
- #define CKB_REPEAT(enable) CKB_CONTAINER(printf("repeat %s\n", (enable) ? "on" : "off");)
- #define CKB_PREEMPT(enable) CKB_CONTAINER(printf("preempt %s\n", (enable) ? "on" : "off");)
- #define CKB_LIVEPARAMS(enable) CKB_CONTAINER(printf("parammode %s\n", (enable) ? "live" : "static");)
- #define CKB_PARSE_LONG(param_name, value_ptr) if(!strcmp(name, param_name) && sscanf(value, "%ld", value_ptr) == 1)
- #define CKB_PARSE_DOUBLE(param_name, value_ptr) if(!strcmp(name, param_name) && sscanf(value, "%lf", value_ptr) == 1)
- #define CKB_PARSE_BOOL(param_name, value_ptr) if(!strcmp(name, param_name) && sscanf(value, "%u", value_ptr) == 1)
- #define CKB_PARSE_RGB(param_name, r_ptr, g_ptr, b_ptr) if(!strcmp(name, param_name) && sscanf(value, "%2hhx%2hhx%2hhx", r_ptr, g_ptr, b_ptr) == 3)
- #define CKB_PARSE_ARGB(param_name, a_ptr, r_ptr, g_ptr, b_ptr) if(!strcmp(name, param_name) && sscanf(value, "%2hhx%2hhx%2hhx%2hhx", a_ptr, r_ptr, g_ptr, b_ptr) == 4)
- #define CKB_PARSE_GRADIENT(param_name, gradient_ptr) if(!strcmp(name, param_name) && ckb_scan_grad(value, gradient_ptr, 0))
- #define CKB_PARSE_AGRADIENT(param_name, gradient_ptr) if(!strcmp(name, param_name) && ckb_scan_grad(value, gradient_ptr, 1))
- #define CKB_PARSE_ANGLE(param_name, value_ptr) if(!strcmp(name, param_name) && sscanf(value, "%ld", value_ptr) == 1)
- #define CKB_PARSE_STRING(param_name) if(!strcmp(name, param_name))
- #define CKB_REAL_ANGLE(angle) fmod((-(angle) + 90.) ∗ M_PI / 180. + M_PI ∗ 2., M_PI ∗ 2.)
- #define CKB_KEYNAME_MAX 12
- #define CKB_KEYCLEAR(context) CKB_CONTAINER(ckb_key∗ key = context->keys; unsigned count = context->keycount; unsigned i = 0; for(; i < count; i++) key[i].a = key[i].r = key[i].g = key[i].b = 0;)
- #define CKB_GRAD_MAX 100
- #define CKB_MAX_WORD (4 ∗ 1024)

Functions

- int ckb_scan_grad (const char ∗string, ckb_gradient ∗gradient, int alpha)
- void ckb_grad_color (float ∗a, float ∗r, float ∗g, float ∗b, const ckb_gradient ∗grad, float pos)
- void ckb_alpha_blend (ckb_key ∗key, float a, float r, float g, float b)
- void printurl (const char ∗src)
- void urldecode (char ∗dst, const char ∗src)
- void ckb_getline (char word1[(4 ∗1024)], char word2[(4 ∗1024)], char word3[(4 ∗1024)])
- void ckb_info ()
- void ckb_init (ckb_runctx ∗context)
- void ckb_parameter (ckb_runctx ∗, const char ∗, const char ∗)
- void ckb_keypress (ckb_runctx ∗, ckb_key ∗, int, int, int)
- void ckb_start (ckb_runctx ∗, int)
- void ckb_time (ckb_runctx ∗, double)
- int ckb_frame (ckb_runctx ∗)
- void ckb_read_params (ckb_runctx ∗ctx)
- int main (int argc, char ∗argv[])

13.65.1 Data Structure Documentation

13.65.1.1 struct ckb_key

Definition at line 131 of file ckb-anim.h.

Collaboration diagram for ckb_key:

Data Fields

unsigned char	a	
unsigned char	b	
unsigned char	g	
char	name[12]	
unsigned char	r	
int	x	
int	y	

13.65.1.2 struct ckb_runctx

Definition at line 138 of file ckb-anim.h.

Collaboration diagram for ckb_runctx:

Data Fields

unsigned	height	
unsigned	keycount	
ckb_key *	keys	

unsigned	width	

13.65.1.3 struct ckb_gradient

Definition at line 152 of file ckb-anim.h.

Collaboration diagram for ckb_gradient:

Data Fields

unsigned char	a[100]	
unsigned char	b[100]	
unsigned char	g[100]	
int	ptcount	
char	pts[100]	
unsigned char	r[100]	

13.65.2 Macro Definition Documentation

13.65.2.1 #define CKB_CONTAINER(*macro*) do { macro } while(0)

Definition at line 57 of file ckb-anim.h.

13.65.2.2 #define CKB_COPYRIGHT(*year, author*) CKB_CONTAINER(printf("author "); printurl(author); printf("\nyear %s\n", year);)

Definition at line 66 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.3 #define CKB_DESCRIPTION(*description*) CKB_CONTAINER(printf("description "); printurl(description); printf("\n");)

Definition at line 70 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.4 #define CKB_DOWN 1

Definition at line 52 of file ckb-anim.h.

13.65.2.5 #define CKB_GRAD_MAX 100

Definition at line 151 of file ckb-anim.h.

13.65.2.6 #define CKB_GUID(*guid*) CKB_CONTAINER(printf("guid "); printurl(guid); printf("\n");)

Definition at line 60 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.7 #define CKB_KEYCLEAR(*context*) CKB_CONTAINER(ckb_key* key = context->keys; unsigned count = context->keycount; unsigned i = 0; for(; i < count; i++) key[i].a = key[i].r = key[i].g = key[i].b = 0;)

Definition at line 148 of file ckb-anim.h.

Referenced by ckb_frame().

13.65.2.8 #define CKB_KEYNAME_MAX 12

Definition at line 130 of file ckb-anim.h.

Referenced by main().

13.65.2.9 #define CKB_KP_NAME "name"

Definition at line 91 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.10 #define CKB_KP_NONE "none"

Definition at line 90 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.11 #define CKB_KP_POSITION "position"

Definition at line 92 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.12 #define CKB_KPMODE(*mode*) CKB_CONTAINER(printf("kpmode %s\n", mode);)

Definition at line 93 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.13 #define CKB_LICENSE(*license*) CKB_CONTAINER(printf("license "); printurl(license); printf("\n");)

Definition at line 68 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.14 #define CKB_LIVEPARAMS(*enable*) CKB_CONTAINER(printf("parammode %s\n", (enable) ? "live" : "static");)

Definition at line 104 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.15 #define CKB_MAX_WORD (4 ∗ 1024)

Definition at line 238 of file ckb-anim.h.

Referenced by ckb_read_params(), and main().

13.65.2.16 #define CKB_NAME(*name*) CKB_CONTAINER(printf("name "); printurl(name); printf("\n");)

Definition at line 62 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.17 #define CKB_PARAM(*type, name, prefix, postfix, extra*) CKB_CONTAINER(printf("param %s %s ", type, name); printurl(prefix); printf(" "); printurl(postfix); printf(" "); extra; printf("\n");)

Definition at line 73 of file ckb-anim.h.

13.65.2.18 #define CKB_PARAM_AGRADIENT(*name, prefix, postfix, default*) CKB_PARAM("agradient", name, prefix, postfix, printurl(default))

Definition at line 80 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.19 #define CKB_PARAM_ANGLE(*name, prefix, postfix, default*) CKB_PARAM("angle", name, prefix, postfix, printf("%ld", (long)(default)))

Definition at line 81 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.20 #define CKB_PARAM_ARGB(*name, prefix, postfix, a, r, g, b*) CKB_PARAM("argb", name, prefix, postfix, printf("%02x%02x%02x%02x", (unsigned char)(a), (unsigned char)(r), (unsigned char)(g), (unsigned char)(b)))

Definition at line 78 of file ckb-anim.h.

13.65.2.21 #define CKB_PARAM_BOOL(*name, text, default*) CKB_PARAM("bool", name, text, "", printf((default) ? "1" : "0"))

Definition at line 76 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.22 #define CKB_PARAM_DOUBLE(*name, prefix, postfix, default,* min, max) CKB_PARAM("double", name, prefix, postfix, printf("%lf %lf %lf", (double)(default), (double)(min), (double)(max)))

Definition at line 75 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.23 #define CKB_PARAM_GRADIENT(*name, prefix, postfix, default*) CKB_PARAM("gradient", name, prefix, postfix, printurl(default))

Definition at line 79 of file ckb-anim.h.

13.65.2.24 #define CKB_PARAM_LABEL(*name, text*) CKB_PARAM("label", name, text, "",)

Definition at line 83 of file ckb-anim.h.

13.65.2.25 #define CKB_PARAM_LONG(*name, prefix, postfix, default,* min, max) CKB_PARAM("long", name, prefix, postfix, printf("%ld %ld %ld", (long)(default), (long)(min), (long)(max)))

Definition at line 74 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.26 #define CKB_PARAM_RGB(*name, prefix, postfix, r, g, b*) CKB_PARAM("rgb", name, prefix, postfix, printf("%02x%02x%02x", (unsigned char)(r), (unsigned char)(g), (unsigned char)(b)))

Definition at line 77 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.27 #define CKB_PARAM_STRING(*name, prefix, postfix, default*) CKB_PARAM("string", name, prefix, postfix, printurl(default))

Definition at line 82 of file ckb-anim.h.

13.65.2.28 #define CKB_PARSE_AGRADIENT(*param_name, gradient_ptr*) if(!strcmp(name, param_name) && ckb_scan_grad(value, gradient_ptr, 1))

Definition at line 121 of file ckb-anim.h.

Referenced by ckb_parameter().

13.65.2.29 #define CKB_PARSE_ANGLE(*param_name, value_ptr*) if(!strcmp(name, param_name) && sscanf(value, "%ld", value_ptr) == 1)

Definition at line 122 of file ckb-anim.h.

Referenced by ckb_parameter().

13.65.2.30 #define CKB_PARSE_ARGB(*param_name, a_ptr, r_ptr, g_ptr, b_ptr*) if(!strcmp(name, param_name) && sscanf(value, "%2hhx%2hhx%2hhx%2hhx", a_ptr, r_ptr, g_ptr, b_ptr) == 4)

Definition at line 119 of file ckb-anim.h.

13.65.2.31 #define CKB_PARSE_BOOL(*param_name, value_ptr*) if(!strcmp(name, param_name) && sscanf(value, "%u", value_ptr) == 1)

Definition at line 117 of file ckb-anim.h.

Referenced by ckb_parameter().

13.65.2.32 #define CKB_PARSE_DOUBLE(*param_name, value_ptr*) if(!strcmp(name, param_name) && sscanf(value, "%lf", value_ptr) == 1)

Definition at line 116 of file ckb-anim.h.

Referenced by ckb_parameter().

13.65.2.33 #define CKB_PARSE_GRADIENT(*param_name, gradient_ptr*) if(!strcmp(name, param_name) && **ckb_scan_grad**(value, gradient_ptr, 0))

Definition at line 120 of file ckb-anim.h.

13.65.2.34 #define CKB_PARSE_LONG(*param_name, value_ptr*) if(!strcmp(name, param_name) && sscanf(value, "%ld", value_ptr) == 1)

Definition at line 115 of file ckb-anim.h.

Referenced by ckb_parameter().

13.65.2.35 #define CKB_PARSE_RGB(*param_name, r_ptr, g_ptr, b_ptr*) if(!strcmp(name, param_name) && sscanf(value, "%2hhx%2hhx%2hhx", r_ptr, g_ptr, b_ptr) == 3)

Definition at line 118 of file ckb-anim.h.

Referenced by ckb_parameter().

13.65.2.36 #define CKB_PARSE_STRING(*param_name*) if(!strcmp(name, param_name))

Definition at line 123 of file ckb-anim.h.

13.65.2.37 #define CKB_PREEMPT(*enable*) **CKB_CONTAINER**(printf("preempt %s\n", (enable) ? "on" : "off");)

Definition at line 102 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.38 #define CKB_PRESET_END **CKB_CONTAINER**(printf("\n");)

Definition at line 87 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.39 #define CKB_PRESET_PARAM(*name, value*) CKB_CONTAINER(printf(" %s=", name); printurl(value);)

Definition at line 86 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.40 #define CKB_PRESET_START(*name*) CKB_CONTAINER(printf("preset "); printurl(name);)

Definition at line 85 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.41 #define CKB_REAL_ANGLE(angle) fmod((-(angle) + 90.) ∗ M_PI / 180. + M_PI ∗ 2., M_PI ∗ 2.)

Definition at line 127 of file ckb-anim.h.

Referenced by ckb_parameter().

13.65.2.42 #define CKB_REPEAT(*enable*) CKB_CONTAINER(printf("repeat %s\n", (enable) ? "on" : "off");)

Definition at line 99 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.43 #define CKB_TIME_ABSOLUTE "absolute"

Definition at line 96 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.44 #define CKB_TIME_DURATION "duration"

Definition at line 95 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.45 #define CKB_TIMEMODE(*mode*) CKB_CONTAINER(printf("time %s\n", mode);)

Definition at line 97 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.46 #define CKB_UP 0

Definition at line 53 of file ckb-anim.h.

13.65.2.47 #define CKB_VERSION(*version*) CKB_CONTAINER(printf("version "); printurl(version); printf("\n");)

Definition at line 64 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.48 #define FALSE 0

Definition at line 49 of file ckb-anim.h.

Referenced by ckb_info().

13.65.2.49 #define M_PI 3.14159265358979323846

Definition at line 42 of file ckb-anim.h.

Referenced by ckb_frame(), and ckb_parameter().

13.65.2.50 #define TRUE 1

Definition at line 46 of file ckb-anim.h.

Referenced by ckb_info().

13.65.3 Function Documentation

13.65.3.1 void ckb_alpha_blend (ckb_key * *key*, float *a*, float *r*, float *g*, float *b*)

Definition at line 283 of file ckb-anim.h.

References ckb_key::a, ckb_key::b, ckb_key::g, and ckb_key::r.

Referenced by ckb_frame().

```
283                                                                     {
284     a /= 255.f;
285     float ka = key->a / 255.f;
286     float a2 = a + (1.f - a) * ka;
287     if(a2 == 0.f){
288         key->a = key->r = key->g = key->b = 0;
289         return;
290     }
291     key->a = round(a2 * 255.f);
292     key->r = round((r * a + key->r * ka * (1.f - a)) / a2);
293     key->g = round((g * a + key->g * ka * (1.f - a)) / a2);
294     key->b = round((b * a + key->b * ka * (1.f - a)) / a2);
295 }
```

Here is the caller graph for this function:

13.65.3.2 int ckb_frame (ckb_runctx *)

Definition at line 137 of file main.c.

References ckb_key::a, aa, ab, ag, angle, ANGLE, anim, ANIM_MAX, animcolor, animlength, ar, ckb_key::b, ckb_alpha_blend(), ckb_grad_color(), CKB_KEYCLEAR, counter_clock, drop, DROP_MAX, ffade, frame, ckb_key::g, getFreqDec(), keyAnim::gradient, ckb_runctx::height, HOLD, ckb_runctx::keycount, ckb_runctx::keys, M_PI, max(),

min(), phase, power, powers, pressestofull, ckb_key::r, randomBright, randomize, symmetric, keyAnim::target, width, ckb_runctx::width, x, and y.

Referenced by main().

```
                                {
    // Draw key colors
    unsigned count = context->keycount;
    for(unsigned i = 0; i < count; i++){
        float phase = anim[i].target;

        if(phase == HOLD)
            phase = 0.f;
        else if(phase < 0.f)
            phase = 1.f;
        ckb_key* key = context->keys + i;
        float a, r, g, b;
        ckb_gradient thisGradient;
        if (randomize) {
            thisGradient = anim[i].gradient;
        } else {
            thisGradient = animcolor;
        }
        ckb_grad_color(&a, &r, &g, &b, &thisGradient, phase * 100.);
        key->a = a;
        key->r = r;
        key->g = g;
        key->b = b;
    }
    return 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.65.3.3 void ckb_getline (char *word1[(4 ∗ 1024)]*, char *word2[(4 ∗ 1024)]*, char *word3[(4 ∗ 1024)]*)

Definition at line 239 of file ckb-anim.h.

References urldecode().

Referenced by ckb_read_params(), and main().

```
{
    char line[CKB_MAX_WORD * 3 + 3];
    fgets(line, sizeof(line), stdin);
    word1[0] = word1[1] = word1[2] = 0;
    int res = sscanf(line, "%s %s %s", word1, word2, word3);
    if(res >= 1)
        urldecode(word1, word1);
    if(res >= 2)
        urldecode(word2, word2);
    if(res >= 3)
        urldecode(word3, word3);
    line[strlen(line) - 1] = 0;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.65.3.4 void ckb_grad_color (float * *a*, float * *r*, float * *g*, float * *b*, const ckb_gradient * *grad*, float *pos*)

Definition at line 254 of file ckb-anim.h.

References ckb_gradient::a, ckb_gradient::b, ckb_gradient::g, ckb_gradient::ptcount, ckb_gradient::pts, and ckb_gradient::r.

Referenced by ckb_frame(), and ckb_keypress().

```
{
    // Find the points surrounding this position
    int count = grad->ptcount;
    if(count == 0){
        *a = *r = *g = *b = 0.f;
        return;
    }
    int i = 1;
    for(; i < count; i++){
        if(grad->pts[i] >= pos)
            break;
    }
    // Get color by linear interpolation. Premultiply the alpha value so that it returns the expected color
    // (i.e. stops with zero opacity won't contribute to color)
```

```
    float distance = grad->pts[i] - grad->pts[i - 1];
    float dx = (pos - grad->pts[i - 1]) / distance;
    float a1 = grad->a[i] / 255., a2 = grad->a[i - 1] / 255.;
    float a3 = *a = a1 * dx + a2 * (1.f - dx);
    if(a3 == 0.){
        *a = *r = *g = *b = 0.f;
        return;
    }
    *a *= 255.f;
    *r = (grad->r[i] * a1 * dx + grad->r[i - 1] * a2 * (1.f - dx)) / a3;
    *g = (grad->g[i] * a1 * dx + grad->g[i - 1] * a2 * (1.f - dx)) / a3;
    *b = (grad->b[i] * a1 * dx + grad->b[i - 1] * a2 * (1.f - dx)) / a3;
}
```

Here is the caller graph for this function:

13.65.3.5 void ckb_info ( )

Definition at line 5 of file main.c.

References CKB_COPYRIGHT, CKB_DESCRIPTION, CKB_GUID, CKB_KP_NAME, CKB_KP_NONE, CKB_KP_POSITION, CKB_KPMODE, CKB_LICENSE, CKB_LIVEPARAMS, CKB_NAME, CKB_PARAM_AGRADIENT, CKB_PARAM_ANGLE, CKB_PARAM_BOOL, CKB_PARAM_DOUBLE, CKB_PARAM_LONG, CKB_PARAM_RGB, CKB_PREEMPT, CKB_PRESET_END, CKB_PRESET_PARAM, CKB_PRESET_START, CKB_REPEAT, CKB_TIME_ABSOLUTE, CKB_TIME_DURATION, CKB_TIMEMODE, CKB_VERSION, FALSE, and TRUE.

Referenced by main(), and quitWithLock().

```
5               {
6     // Plugin info
7     CKB_NAME("Gradient");
8     CKB_VERSION("0.9");
9     CKB_COPYRIGHT("2014-2016", "MSC");
10     CKB_LICENSE("GPLv2");
11     CKB_GUID("{54DD2975-E192-457D-BCFC-D912A24E33B4}");
12     CKB_DESCRIPTION("A transition from one color to another.");
13
14     // Effect parameters
15     CKB_PARAM_AGRADIENT("color", "Color:", "", "ffffffff");
16     CKB_PARAM_BOOL("kphold", "Freeze until key is released", TRUE);
17     CKB_PARAM_BOOL("randomize", "Randomly select from gradient", 0);
18
19     // Timing/input parameters
20     CKB_KPMODE(CKB_KP_NAME);
21     CKB_TIMEMODE(CKB_TIME_DURATION);
22     CKB_LIVEPARAMS(TRUE);
23
24     // Presets
25     CKB_PRESET_START("Fade in");
26     CKB_PRESET_PARAM("color", "ff000000");
27     CKB_PRESET_PARAM("duration", "1.0");
28     CKB_PRESET_PARAM("stop", "0");
29     CKB_PRESET_PARAM("kpstop", "0");
30     CKB_PRESET_END;
31
32     CKB_PRESET_START("Rainbow");
33     CKB_PRESET_PARAM("color", "0:ffff0000 17:ffffff00 33:ff00ff00 50:ff00ffff 67:ff0000ff
       83:ffff00ff 100:ffff0000");
```

```
    CKB_PRESET_PARAM("duration", "2.0");
    CKB_PRESET_END;

    CKB_PRESET_START("Type lighting");
    CKB_PRESET_PARAM("duration", "1.0");
    CKB_PRESET_PARAM("trigger", "0");
    CKB_PRESET_PARAM("kptrigger", "1");
    CKB_PRESET_END;
}
```

Here is the caller graph for this function:

13.65.3.6 void ckb_init (ckb_runctx * *context*)

Definition at line 57 of file main.c.

References ckb_runctx::height, kbsize, ckb_runctx::keycount, ckb_runctx::keys, NONE, pas, ckb_runctx::width, keyanim::x, ckb_key::x, keyanim::y, and ckb_key::y.

Referenced by main().

```
                                {
    // Initialize all keys to 100% (animation over)

    srand((unsigned)time(NULL));
    unsigned count = context->keycount;
    anim =  malloc(count * sizeof *anim);
    for(unsigned i = 0; i < count; i++) {
        anim[i].target = NONE;
    }
}
```

Here is the caller graph for this function:

13.65.3.7 void ckb_keypress (ckb_runctx *, ckb_key *, int, int, int)

Definition at line 75 of file main.c.

References ckb_gradient::a, anim_add(), anim_remove(), ckb_gradient::b, ckb_grad_color(), drop_add(), ckb_gradient::g, keyAnim::gradient, ckb_runctx::height, HOLD, ckb_runctx::keys, kphold, kprelease, NONE, ckb_gradient::ptcount, ckb_gradient::pts, ckb_gradient::r, randomize, keyAnim::target, and ckb_runctx::width.

Referenced by main().

```
                                                                    {
    // Start or stop animation on key
    int i = key - context->keys;
    if(state){
        if (randomize) {
            float a, r, g, b;
            float colorChoice = (float)rand()/(float)(RAND_MAX);
            ckb_grad_color(&a, &r, &g, &b, &animcolor, colorChoice * 100.);
            ckb_gradient newGradient = { 0 };
            newGradient.ptcount = 2;
            newGradient.pts[0] = 0;
            newGradient.pts[1] = 100;
            newGradient.a[0] = 255;
            newGradient.b[0] = b;
            newGradient.g[0] = g;
            newGradient.r[0] = r;
            newGradient.a[1] = 0;
            newGradient.b[1] = b;
            newGradient.g[1] = g;
            newGradient.r[1] = r;

            anim[i].gradient = newGradient;
        }

        if(kphold) {
            anim[i].target = HOLD;
        } else {
            anim[i].target = 0.f;
        }
    } else {
        if(kprelease) {
            anim[i].target = NONE;
        }
        else if(kphold) {
            anim[i].target = 0.f;
        }
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.65.3.8 void ckb_parameter (ckb_runctx * , const char * , const char *)

Definition at line 68 of file main.c.

References aa, ab, ag, angle, animlength, ar, CKB_PARSE_AGRADIENT, CKB_PARSE_ANGLE, CKB_PARSE_BOOL, CKB_PARSE_DOUBLE, CKB_PARSE_LONG, CKB_PARSE_RGB, CKB_REAL_ANGLE, counter_clock, fadein, ffade, ckb_runctx::height, kphold, kprelease, left, M_PI, maxsize, period, power, pressestofull, randomBright, randomize, spawn, speed, symmetric, top, useopacity, width, ckb_runctx::width, x, x_offset, y, and y_offset.

Referenced by ckb_read_params().

```
68                                                                          {
69     CKB_PARSE_AGRADIENT("color", &animcolor){}
70     CKB_PARSE_BOOL("kphold", &kphold){}
71     CKB_PARSE_BOOL("kprelease", &kprelease){}
72     CKB_PARSE_BOOL("randomize", &randomize){}
73 }
```

Here is the caller graph for this function:

13.65.3.9 void ckb_read_params (ckb_runctx * *ctx*)

Definition at line 349 of file ckb-anim.h.

References ckb_getline(), CKB_MAX_WORD, and ckb_parameter().

Referenced by main().

```
349                                     {
350     char cmd[CKB_MAX_WORD], param[CKB_MAX_WORD], value[
      CKB_MAX_WORD];
351     do {
352         ckb_getline(cmd, param, value);
353         if(!*cmd){
354             printf("Error [ckb-main]: Reached EOF reading parameters");
355             return;
356         }
357         if(!strcmp(cmd, "end") && !strcmp(param, "params"))
358             break;
359         if(strcmp(cmd, "param"))
```

```
            continue;
        ckb_parameter(ctx, param, value);
    } while(1);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.65.3.10 int ckb_scan_grad (const char * *string*, ckb_gradient * *gradient*, int *alpha*)

Definition at line 298 of file ckb-anim.h.

References ckb_gradient::a, ckb_gradient::b, ckb_gradient::g, ckb_gradient::ptcount, ckb_gradient::pts, and ckb_-gradient::r.

```
298                                                                 {
299     char pos = -1;
300     unsigned char a = 255, r, g, b;
301     int count = 0;
302     while(1){
303         int scanned = 0;
304         char newpos;
305         if(sscanf(string, "%hhd:%2hhx%2hhx%2hhx%2hhx%n", &newpos, &a, &r, &g, &b, &scanned) != 5)
306             break;
307         string += scanned;
308         // Don't allow stops out-of-order or past 100
309         if(newpos <= pos || newpos > 100)
310             return 0;
311         pos = newpos;
312         if(!alpha)
313             a = 255;
314         gradient->pts[count] = pos;
315         gradient->a[count] = a;
316         gradient->r[count] = r;
317         gradient->g[count] = g;
318         gradient->b[count] = b;
319         count++;
320     }
321     if(count == 0){
322         // If nothing was read, try a single ARGB constant.
323         if(sscanf(string, "%2hhx%2hhx%2hhx%2hhx", &a, &r, &g, &b) != 4)
324             return 0;
325         count = 2;
```

```
        gradient->pts[0] = 0;
        gradient->pts[1] = 100;
        gradient->a[0] = a;
        gradient->a[1] = 0;
        gradient->r[0] = gradient->r[1] = r;
        gradient->g[0] = gradient->g[1] = g;
        gradient->b[0] = gradient->b[1] = b;
    }
    if(count < 2)
        return 0;
    gradient->ptcount = count;
    return 1;
}
```

13.65.3.11 void ckb_start (ckb_runctx *, int)

Definition at line 114 of file main.c.

References rgb::a, ckb_key::a, anim_add(), anim_remove(), rgb::b, ckb_key::b, fadein, frame, rgb::g, ckb_key::g, ckb_runctx::height, ckb_runctx::keycount, ckb_runctx::keys, kprelease, left, newtarget(), NONE, phase, rgb::r, ckb_key::r, keyAnim::target, tick, top, ckb_runctx::width, x, x_offset, y, and y_offset.

Referenced by main().

```
114                                                 {
115     // Start/stop all keys
116     unsigned count = context->keycount;
117     if(state) {
118         memset(anim, 0, count * sizeof *anim);
119     } else {
120         for(unsigned i = 0; i < count; i++) {
121             anim[i].target = NONE;
122         }
123     }
124 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.65.3.12 void ckb_time (ckb_runctx *, double)

Definition at line 126 of file main.c.

References anim, ANIM_MAX, animlength, current, drop, drop_add(), DROP_MAX, frame, ckb_runctx::height, kbsize, ckb_runctx::keycount, maxsize, newtarget(), period, phase, spawn, speed, target, keyAnim::target, tick, keyanim::timing, keyanim::usages, width, and ckb_runctx::width.

Referenced by main().

```
126                                                 {
127     // Advance animation on each key
128     unsigned count = context->keycount;
129     for(unsigned i = 0; i < count; i++){
130         float phase = anim[i].target;
131         if(phase > 1.f || phase < 0.f)
132             continue;
133         anim[i].target = phase + delta;
134     }
135 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.65.3.13 int main (int *argc*, char * *argv[]*)

Definition at line 365 of file ckb-anim.h.

References ckb_key::a, ckb_key::b, ckb_frame(), ckb_getline(), ckb_info(), ckb_init(), CKB_KEYNAME_MAX, ckb_-keypress(), CKB_MAX_WORD, ckb_read_params(), ckb_start(), ckb_time(), ckb_key::g, ckb_runctx::height, ckb_-runctx::keycount, ckb_runctx::keys, ckb_key::name, ckb_key::r, ckb_runctx::width, x, ckb_key::x, y, and ckb_key::y.

```
365                                 {
366     if(argc == 2){
367         if(!strcmp(argv[1], "--ckb-info")){
368             ckb_info();
369             fflush(stdout);
```

```
            return 0;
        } else if(!strcmp(argv[1], "--ckb-run")){
            ckb_runctx ctx;
            // Read the keymap lines
            char cmd[CKB_MAX_WORD], param[CKB_MAX_WORD], value[CKB_MAX_WORD];
            // Skip anything up until "begin keymap"
            do {
                ckb_getline(cmd, param, value);
                if(!*cmd){
                    // If end-of-file is reached, abort
                    printf("Error [ckb-main]: Reached EOF looking for \"begin keymap\"");
                    return -2;
                }
            } while(strcmp(cmd, "begin") || strcmp(param, "keymap"));
            ckb_getline(cmd, param, value);
            unsigned keycount;
            if(strcmp(cmd, "keycount") || sscanf(param, "%u", &keycount) != 1 || keycount == 0){
                // If keycount isn't the next line, something is wrong
                printf("Error [ckb-main]: \"begin keymap\" not followed with \"keycount\"");
                return -3;
            }
            ctx.keys = (ckb_key*)calloc(keycount, sizeof(ckb_key));
            ctx.keycount = keycount;
            unsigned max_x = 0, max_y = 0;
            unsigned i = 0;
            for(; i < ctx.keycount; i++){
                ckb_getline(cmd, param, value);
                unsigned x, y;
                if(strcmp(cmd, "key") || !*param || !sscanf(value, "%u,%u", &x, &y)){
                    i--;
                    continue;
                }
                ckb_key* key = ctx.keys + i;
                strncpy(key->name, param, CKB_KEYNAME_MAX);
                key->x = x;
                key->y = y;
                if(x > max_x)
                    max_x = x;
                if(y > max_y)
                    max_y = y;
            }
            ctx.width = max_x + 1;
            ctx.height = max_y + 1;
            // Skip anything else until "end keymap"
            do {
                ckb_getline(cmd, param, value);
                if(!*cmd){
                    printf("Error [ckb-main]: Reached EOF looking for \"end keymap\"");
                    return -2;
                }
            } while(strcmp(cmd, "end") || strcmp(param, "keymap"));
            // Run init function
            ckb_init(&ctx);
            // Skip anything else until "begin params"
            do {
                ckb_getline(cmd, param, value);
                if(!*cmd){
                    printf("Error [ckb-main]: Reached EOF looking for \"begin params\"");
                    return -2;
                }
            } while(strcmp(cmd, "begin") || strcmp(param, "params"));
            // Parse parameters
            ckb_read_params(&ctx);
            // Skip anything else until "begin run"
            do {
                ckb_getline(cmd, param, value);
                if(!*cmd){
                    printf("Error [ckb-main]: Reached EOF looking for \"begin run\"");
                    return -2;
                }
            } while(strcmp(cmd, "begin") || strcmp(param, "run"));
            // Run the main loop
            printf("begin run\n");
            fflush(stdout);
            while(1){
                ckb_getline(cmd, param, value);
                if(!*cmd || (!strcmp(cmd, "end") && !strcmp(param, "run")))
                    break;
                // Parse input
                if(!strcmp(cmd, "start"))
                    ckb_start(&ctx, 1);
                else if(!strcmp(cmd, "stop"))
                    ckb_start(&ctx, 0);
                else if(!strcmp(cmd, "begin") && !strcmp(param, "params"))
                    ckb_read_params(&ctx);
                else if(!strcmp(cmd, "key")){
```

```
                    int x, y;
                    if(sscanf(param, "%d,%d", &x, &y) == 2){
                        // Find a key with this position
                        ckb_key* key = 0;
                        for(i = 0; i < keycount; i++){
                            if(ctx.keys[i].x == x && ctx.keys[i].y == y){
                                key = ctx.keys + i;
                                break;
                            }
                        }
                        if(key)
                            ckb_keypress(&ctx, key, key->x, key->y, !strcmp(value, "down"));
                        else
                            ckb_keypress(&ctx, 0, x, y, !strcmp(value, "down"));
                    } else {
                        // Find a key with this name
                        ckb_key* key = 0;
                        for(i = 0; i < keycount; i++){
                            if(!strcmp(ctx.keys[i].name, param)){
                                key = ctx.keys + i;
                                break;
                            }
                        }
                        if(key)
                            ckb_keypress(&ctx, key, key->x, key->y, !strcmp(value, "down"));
                    }
                } else if(!strcmp(cmd, "frame")){
                    int end = ckb_frame(&ctx);
                    // Output the frame
                    printf("begin frame\n");
                    for(i = 0; i < ctx.keycount; i++){
                        ckb_key* key = ctx.keys + i;
                        printf("argb %s %02hhx%02hhx%02hhx%02hhx\n", key->name, key->
    a, key->r, key->g, key->b);
                    }
                    printf("end frame\n");
                    if(end)
                        break;
                    fflush(stdout);
                } else {
                    double delta = 0.;
                    if(!strcmp(cmd, "time") && sscanf(param, "%lf", &delta) == 1)
                        ckb_time(&ctx, delta);
                }
            }
            printf("end run\n");
            fflush(stdout);
            free(ctx.keys);
            return 0;
        }
    }
    printf("This program must be run from within ckb\n");
    return -1;
}
```

Here is the call graph for this function:

13.65.3.14 void printurl (const char * *src*)

Definition at line 178 of file ckb-anim.h.

```
178                                 {
179     char out[strlen(src) * 3 + 1];
180     char* dst = out;
181     char s;
182     while((s = *src++)){
183         if(s <= ',' || s == '/' ||
184                 (s >= ':' && s <= '@') ||
185                 s == '[' || s == ']' ||
186                 s >= 0x7F){
187             char a = s >> 4, b = s & 0xF;
188             if(a >= 10)
189                 a += 'A' - 10;
190             else
191                 a += '0';
192             if(b >= 10)
193                 b += 'A' - 10;
194             else
195                 b += '0';
196             dst[0] = '%';
197             dst[1] = a;
198             dst[2] = b;
199             dst += 3;
200         } else
201             *dst++ = s;
202     }
203     *dst = '\0';
204     printf("%s", out);
205 }
```

13.65.3.15 void urldecode (char * *dst*, const char * *src*)

Definition at line 208 of file ckb-anim.h.

Referenced by ckb_getline().

```
208                                         {
209     char a, b;
210     char s;
211     while((s = *src)){
212         if((s == '%') &&
213                 ((a = src[1]) && (b = src[2])) &&
214                 (isxdigit(a) && isxdigit(b))){
215             if(a >= 'a')
216                 a -= 'a'-'A';
217             if(a >= 'A')
218                 a -= 'A' - 10;
219             else
220                 a -= '0';
221             if(b >= 'a')
222                 b -= 'a'-'A';
223             if(b >= 'A')
224                 b -= 'A' - 10;
225             else
226                 b -= '0';
227             *dst++ = 16*a + b;
228             src += 3;
229         } else {
230             *dst++ = s;
231             src++;
232         }
233     }
234     *dst = '\0';
235 }
```

Here is the caller graph for this function:

13.66 src/ckb/ckbsettings.cpp File Reference

```
#include "ckbsettings.h"
#include "ckbsettingswriter.h"
#include <QThread>
#include <QMutex>
#include <QDebug>
```

Include dependency graph for ckbsettings.cpp:

Macros

- #define lockMutex QMutexLocker locker(backing == _globalSettings ? &settingsMutex : 0)
- #define lockMutexStatic QMutexLocker locker(&settingsMutex)
- #define lockMutexStatic2 QMutexLocker locker2(&settingsMutex)
- #define lockMutexCache QMutexLocker locker(&settingsCacheMutex)

Functions

- QAtomicInt cacheWritesInProgress (0)
- QMutex settingsMutex (QMutex::Recursive)
- QMutex settingsCacheMutex (QMutex::Recursive)
- static QSettings * globalSettings ()

Variables

- static QSettings * _globalSettings = 0
- static QThread * globalThread = 0
- static QMap< QString, QVariant > globalCache

13.66.1 Macro Definition Documentation

13.66.1.1 #define lockMutex QMutexLocker locker(backing == _globalSettings ? &settingsMutex : 0)

Definition at line 15 of file ckbsettings.cpp.

Referenced by CkbSettings::childGroups(), CkbSettings::childKeys(), CkbSettings::contains(), and CkbSettings::value().

13.66.1.2 #define lockMutexCache QMutexLocker locker(&settingsCacheMutex)

Definition at line 18 of file ckbsettings.cpp.

Referenced by CkbSettings::get(), CkbSettings::set(), and CkbSettings::setValue().

13.66.1.3 #define lockMutexStatic QMutexLocker locker(&settingsMutex)

Definition at line 16 of file ckbsettings.cpp.

Referenced by globalSettings(), and CkbSettings::set().

13.66.1.4 #define lockMutexStatic2 QMutexLocker locker2(&settingsMutex)

Definition at line 17 of file ckbsettings.cpp.

Referenced by CkbSettings::get().

13.66.2 Function Documentation

13.66.2.1 QAtomicInt cacheWritesInProgress (0)

Referenced by CkbSettings::cleanUp(), and CkbSettings::isBusy().

Here is the caller graph for this function:

13.66.2.2 static QSettings* globalSettings ( ) [static]

Definition at line 27 of file ckbsettings.cpp.

References _globalSettings, and lockMutexStatic.

Referenced by CkbSettings::get(), and CkbSettings::set().

```
27                                  {
28     if(!_globalSettings){
29         lockMutexStatic;
30         if(!(volatile QSettings*)_globalSettings){   // Check again after locking mutex in
       case another thread created the object
31             // Put the settings object in a separate thread so that it won't lock up the GUI when it syncs
32             globalThread = new QThread;
33             globalThread->start();
```

```
            _globalSettings = new QSettings;
            qInfo() << "Path  to settings is" << _globalSettings->fileName();
            _globalSettings->moveToThread(globalThread);
        }
    }
    return _globalSettings;
}
```

Here is the caller graph for this function:

13.66.2.3 QMutex settingsCacheMutex (QMutex::Recursive)

13.66.2.4 QMutex settingsMutex (QMutex::Recursive)

13.66.3 Variable Documentation

13.66.3.1 QSettings* _globalSettings = 0 [static]

Definition at line 8 of file ckbsettings.cpp.

Referenced by CkbSettings::cleanUp(), and globalSettings().

13.66.3.2 QMap<QString, QVariant> globalCache [static]

Definition at line 12 of file ckbsettings.cpp.

Referenced by CkbSettings::get(), CkbSettings::set(), and CkbSettings::setValue().

13.66.3.3 QThread* globalThread = 0 [static]

Definition at line 9 of file ckbsettings.cpp.

Referenced by CkbSettings::cleanUp().

13.67 src/ckb/ckbsettings.h File Reference

```
#include <QSettings>
#include <QStringList>
#include <QMap>
#include <QVariant>
```

Include dependency graph for ckbsettings.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class CkbSettings
- class SGroup

13.68 src/ckb/ckbsettingswriter.cpp File Reference

```
#include "ckbsettingswriter.h"
#include <QMutex>
```

Include dependency graph for ckbsettingswriter.cpp:

Macros

- #define lockMutex QMutexLocker locker(backing == _globalSettings ? &mutex : 0)
- #define lockMutexStatic QMutexLocker locker(&settingsMutex)
- #define lockMutexStatic2 QMutexLocker locker2(&settingsMutex)
- #define lockMutexCache QMutexLocker locker(&settingsCacheMutex)

Variables

- QAtomicInt cacheWritesInProgress
- QMutex settingsMutex
- QMutex settingsCacheMutex

13.68.1 Macro Definition Documentation

13.68.1.1 #define lockMutex QMutexLocker locker(backing == _globalSettings ? &mutex : 0)

Definition at line 7 of file ckbsettingswriter.cpp.

13.68.1.2 #define lockMutexCache QMutexLocker locker(&settingsCacheMutex)

Definition at line 10 of file ckbsettingswriter.cpp.

13.68.1.3 #define lockMutexStatic QMutexLocker locker(&settingsMutex)

Definition at line 8 of file ckbsettingswriter.cpp.

Referenced by CkbSettingsWriter::run().

13.68.1.4 #define lockMutexStatic2 QMutexLocker locker2(&settingsMutex)

Definition at line 9 of file ckbsettingswriter.cpp.

13.68.2 Variable Documentation

13.68.2.1 QAtomicInt cacheWritesInProgress

Referenced by CkbSettingsWriter::CkbSettingsWriter(), and CkbSettingsWriter::~CkbSettingsWriter().

13.68.2.2 QMutex settingsCacheMutex

13.68.2.3 QMutex settingsMutex

13.69 src/ckb/ckbsettingswriter.h File Reference

```
#include <QObject>
#include <QMap>
#include <QSettings>
#include <QStringList>
```

Include dependency graph for ckbsettingswriter.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class CkbSettingsWriter

13.70 src/ckb/colorbutton.cpp File Reference

```
#include "colorbutton.h"
```

```
#include <QColorDialog>
#include <QPainter>
```

Include dependency graph for colorbutton.cpp:

13.71 src/ckb/colorbutton.h File Reference

```
#include <QPushButton>
```

Include dependency graph for colorbutton.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class ColorButton

13.72 src/ckb/colormap.cpp File Reference

`#include "colormap.h"`
Include dependency graph for colormap.cpp:

Functions

- static int qs_strcmp (const void ∗lhs, const void ∗rhs)

13.72.1 Function Documentation

13.72.1.1 static int qs_strcmp (const void ∗ *lhs*, const void ∗ *rhs*) [static]

Definition at line 49 of file colormap.cpp.

Referenced by ColorMap::colorForName(), and ColorMap::init().

```
49                                                  {
50     return strcmp(*(const char**)lhs, *(const char**)rhs);
51 }
```

Here is the caller graph for this function:

13.73 src/ckb/colormap.h File Reference

```
#include <QHash>
#include <QRgb>
#include "keymap.h"
```

Include dependency graph for colormap.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class ColorMap

Typedefs

- typedef QHash< QString, QRgb > QColorMap
- typedef QHashIterator< QString, QRgb > QColorMapIterator
- typedef QMutableHashIterator < QString, QRgb > QMutableColorMapIterator

13.73.1 Typedef Documentation

13.73.1.1 typedef QHash<QString, QRgb> QColorMap

Definition at line 9 of file colormap.h.

13.73.1.2 typedef QHashIterator<QString, QRgb> QColorMapIterator

Definition at line 10 of file colormap.h.

13.73.1.3 typedef QMutableHashIterator<QString, QRgb> QMutableColorMapIterator

Definition at line 11 of file colormap.h.

13.74 src/ckb/extrasettingswidget.cpp File Reference

```
#include "extrasettingswidget.h"
#include "ui_extrasettingswidget.h"
#include "kb.h"
#include "mainwindow.h"
#include "ckbsettings.h"
```

Include dependency graph for extrasettingswidget.cpp:

Variables

- static int lastSharedDimming = -2

13.74.1 Variable Documentation

13.74.1.1 int lastSharedDimming = -2 [static]

Definition at line 8 of file extrasettingswidget.cpp.

Referenced by ExtraSettingsWidget::ExtraSettingsWidget(), and ExtraSettingsWidget::pollUpdates().

13.75 src/ckb/extrasettingswidget.h File Reference

```
#include <QDialog>
```

Include dependency graph for extrasettingswidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class ExtraSettingsWidget

Namespaces

- Ui

13.76 src/ckb/fwupgradedialog.cpp File Reference

```
#include <QDir>
```

```
#include <QMessageBox>
#include "fwupgradedialog.h"
#include "kbfirmware.h"
#include "ui_fwupgradedialog.h"
```

Include dependency graph for fwupgradedialog.cpp:

Data Structures

- struct Kbld

Functions

- static const int DIALOG_HEIGHT_MAX (240)
- static float verifyFw (const QByteArray &blob, const QString &features)

Variables

- static Kbld ids []
- static const int DIALOG_WIDTH = 420
- static const int DIALOG_HEIGHT_MIN = 200

13.76.1 Data Structure Documentation

13.76.1.1 struct Kbld

Definition at line 8 of file fwupgradedialog.cpp.

Collaboration diagram for KbId:

Data Fields

const char *	feature	
short	product	
short	vendor	

13.76.2 Function Documentation

13.76.2.1 static const int DIALOG_HEIGHT_MAX (240) [static]

Referenced by FwUpgradeDialog::exec().

Here is the caller graph for this function:

13.76.2.2 static float verifyFw (const QByteArray & *blob*, const QString & *features*) [static]

Definition at line 85 of file fwupgradedialog.cpp.

References ids.

Referenced by FwUpgradeDialog::exec().

```
85                                                                  {
86     if(blob.length() < 0x0108)
87         return 0.f;
88     const char* bData = blob.data();
89     // Make sure it matches this device based on the vendor and product IDs embedded in the blob
90     bool match = false;
```

```
    for(uint i = 0; i < sizeof(ids)/sizeof(KbId); i++){
        if(!memcmp(&ids[i].vendor, bData + 0x102, 2) && !memcmp(&ids[i].product, bData + 0x104, 2)
                && features.startsWith(ids[i].feature, Qt::CaseInsensitive)){
            match = true;
            break;
        }
    }
    if(!match)
        return 0.f;
    // Copy the version from the blob
    short version;
    memcpy(&version, bData + 0x106, 2);
    // Un-hexify it
    return QString::number(version, 16).toFloat() / 100.f;
}
```

Here is the caller graph for this function:

13.76.3 Variable Documentation

13.76.3.1 const int DIALOG_HEIGHT_MIN = 200 [static]

Definition at line 29 of file fwupgradedialog.cpp.

Referenced by FwUpgradeDialog::FwUpgradeDialog(), and FwUpgradeDialog::on_actionButton_clicked().

13.76.3.2 const int DIALOG_WIDTH = 420 [static]

Definition at line 28 of file fwupgradedialog.cpp.

Referenced by FwUpgradeDialog::exec(), FwUpgradeDialog::FwUpgradeDialog(), and FwUpgradeDialog::on_actionButton_clicked().

13.76.3.3 KbId ids[] [static]

Initial value:

```
= {

    { 0x1b1c, 0x1b17, "corsair k65 rgb" },
    { 0x1b1c, 0x1b13, "corsair k70 rgb" },
    { 0x1b1c, 0x1b11, "corsair k95 rgb" },
    { 0x1b1c, 0x1b15, "corsair strafe monochrome" },
    { 0x1b1c, 0x1b20, "corsair strafe rgb" },

    { 0x1b1c, 0x1b12, "corsair m65 rgb" },
    { 0x1b1c, 0x1b1e, "corsair scimitar rgb" },

    { 0x1b1c, 0x1b32, "corsair sabre optical rgb" }
}
```

Definition at line 14 of file fwupgradedialog.cpp.

Referenced by verifyFw().

13.77 src/ckb/fwupgradedialog.h File Reference

```
#include <QCloseEvent>
```

```
#include <QDialog>
#include <QEventLoop>
#include "kb.h"
```

Include dependency graph for fwupgradedialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class FwUpgradeDialog

Namespaces

- Ui

13.78 src/ckb/gradientbutton.cpp File Reference

```
#include <cmath>
#include <cstdio>
#include <QPainter>
#include "gradientbutton.h"
#include "gradientdialog.h"
```

Include dependency graph for gradientbutton.cpp:

13.79 src/ckb/gradientbutton.h File Reference

```
#include <QPushButton>
```

Include dependency graph for gradientbutton.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class GradientButton

13.80 src/ckb/gradientdialog.cpp File Reference

```
#include <cmath>
#include <QMessageBox>
#include <QPainter>
#include <QSettings>
#include "ckbsettings.h"
#include "gradientdialog.h"
#include "ui_gradientdialog.h"
```

Include dependency graph for gradientdialog.cpp:

Variables

- static const QString prefsPath = "Stored Gradients"

13.80.1 Variable Documentation

13.80.1.1 const QString prefsPath = "Stored Gradients" [static]

Definition at line 9 of file gradientdialog.cpp.

Referenced by GradientDialog::GradientDialog(), and GradientDialog::~GradientDialog().

13.81 src/ckb/gradientdialog.h File Reference

```
#include <QDialog>
#include <QListWidgetItem>
#include <QMap>
```

Include dependency graph for gradientdialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class GradientDialog
- struct GradientDialog::Preset

Namespaces

- Ui

13.82 src/ckb/gradientdialogwidget.cpp File Reference

```
#include <cmath>
#include <QPainter>
#include <QPropertyAnimation>
#include "gradientdialogwidget.h"
```

Include dependency graph for gradientdialogwidget.cpp:

13.83 src/ckb/gradientdialogwidget.h File Reference

```
#include <QWidget>
#include <QMouseEvent>
#include <QPaintEvent>
```

Include dependency graph for gradientdialogwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class GradientDialogWidget

13.84 src/ckb/kb.cpp File Reference

```
#include <fcntl.h>
#include <QSet>
#include <QUrl>
#include <QMutex>
#include <QDateTime>
#include "kb.h"
#include "kbmanager.h"
```

Include dependency graph for kb.cpp:

Variables

- static QSet< Kb * > activeDevices
- static QSet< QString > notifyPaths
- static QMutex notifyPathMutex

13.84.1 Variable Documentation

13.84.1.1 QSet<Kb*> activeDevices [static]

Definition at line 10 of file kb.cpp.

Referenced by Kb::dither(), Kb::frameRate(), Kb::Kb(), Kb::layout(), Kb::macroDelay(), Kb::mouseAccel(), Kb::scrollSpeed(), and Kb::~Kb().

13.84.1.2 QMutex notifyPathMutex [static]

Definition at line 13 of file kb.cpp.

Referenced by Kb::Kb(), and Kb::run().

13.84.1.3 QSet<QString> notifyPaths [static]

Definition at line 12 of file kb.cpp.

Referenced by Kb::Kb(), Kb::run(), and Kb::~Kb().

13.85 src/ckb/kb.h File Reference

```
#include <QObject>
#include <QFile>
#include <QThread>
#include "kbprofile.h"
```

Include dependency graph for kb.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Kb

13.86 src/ckb/kbanim.cpp File Reference

```
#include <cmath>
#include <QDateTime>
#include <QMetaEnum>
#include <QDebug>
#include "ckbsettings.h"
#include "kbanim.h"
```

Include dependency graph for kbanim.cpp:

Typedefs

- typedef float(∗ blendFunc)(float, float)

Functions

- static float blendNormal (float bg, float fg)
- static float blendAdd (float bg, float fg)
- static float blendSubtract (float bg, float fg)
- static float blendMultiply (float bg, float fg)
- static float blendDivide (float bg, float fg)

Variables

- static blendFunc functions [5] = { blendNormal, blendAdd, blendSubtract, blendMultiply, blendDivide }

13.86.1 Typedef Documentation

13.86.1.1 typedef float(∗ blendFunc)(float, float)

Definition at line 362 of file kbanim.cpp.

13.86.2 Function Documentation

13.86.2.1 static float blendAdd (float *bg*, float *fg*) [static]

Definition at line 337 of file kbanim.cpp.

```
337                                         {
338     float res = bg + fg;
339     if(res > 1.f)
340         res = 1.f;
341     return res;
342 }
```

13.86.2.2 static float blendDivide (float *bg*, float *fg*) [static]

Definition at line 355 of file kbanim.cpp.

```
355                                         {
356     float res = bg / fg;
357     if(res > 1.f)
358         res = 1.f;
359     return res;
360 }
```

13.86.2.3 static float blendMultiply (float *bg*, float *fg*) [static]

Definition at line 351 of file kbanim.cpp.

```
351                                         {
352     return bg * fg;
353 }
```

13.86.2.4 static float blendNormal (float *bg*, float *fg*) [static]

Definition at line 333 of file kbanim.cpp.

```
333                                                 {
334     return fg;
335 }
```

13.86.2.5 static float blendSubtract (float *bg*, float *fg*) [static]

Definition at line 344 of file kbanim.cpp.

```
344                                                 {
345     float res = bg - fg;
346     if(res < 0.f)
347         res = 0.f;
348     return res;
349 }
```

13.86.3 Variable Documentation

13.86.3.1 blendFunc functions[5] = { blendNormal, blendAdd, blendSubtract, blendMultiply, blendDivide } [static]

Definition at line 363 of file kbanim.cpp.

Referenced by KbAnim::blend().

13.87 src/ckb/kbanim.h File Reference

```
#include <QObject>
#include "ckbsettings.h"
#include "animscript.h"
#include "keymap.h"
```

Include dependency graph for kbanim.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbAnim

13.88 src/ckb/kbanimwidget.cpp File Reference

```
#include <QDateTime>
#include <QMenu>
#include "animsettingdialog.h"
#include "kbanimwidget.h"
#include "ui_kbanimwidget.h"
```

Include dependency graph for kbanimwidget.cpp:

13.89 src/ckb/kbanimwidget.h File Reference

```
#include <QListWidgetItem>
#include <QTimer>
#include <QWidget>
#include "animscript.h"
#include "kbanim.h"
#include "kblight.h"
```

Include dependency graph for kbanimwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbAnimWidget

Namespaces

- Ui

13.90 src/ckb/kbbind.cpp File Reference

```
#include <QDateTime>
#include <QUrl>
#include "ckbsettings.h"
#include "kbbind.h"
#include "kbmode.h"
#include "kb.h"
#include "qdebug.h"
```

Include dependency graph for kbbind.cpp:

13.91 src/ckb/kbbind.h File Reference

```
#include <QFile>
#include <QHash>
#include <QObject>
#include <QProcess>
#include "ckbsettings.h"
#include "keymap.h"
#include "keyaction.h"
```

Include dependency graph for kbbind.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbBind

13.92 src/ckb/kbbindwidget.cpp File Reference

```
#include <QMessageBox>
#include "kbbindwidget.h"
#include "modeselectdialog.h"
#include "rebindwidget.h"
#include "ui_kbbindwidget.h"
```

Include dependency graph for kbbindwidget.cpp:

13.93 src/ckb/kbbindwidget.h File Reference

```
#include <QWidget>
#include "kbbind.h"
#include "kbprofile.h"
```

Include dependency graph for kbbindwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbBindWidget

Namespaces

- Ui

13.94 src/ckb/kbfirmware.cpp File Reference

```
#include "kbfirmware.h"
#include "kbmanager.h"
#include "quazip/quazip.h"
#include "quazip/quazipfile.h"
#include <QDateTime>
#include <QDebug>
```

Include dependency graph for kbfirmware.cpp:

Functions

- static QString tableName (const QString &features)

Variables

- static const quint64 AUTO_CHECK_TIME = 60 ∗ 60 ∗ 1000

13.94.1 Function Documentation

13.94.1.1 static QString tableName (const QString & *features*) [static]

Definition at line 153 of file kbfirmware.cpp.

Referenced by KbFirmware::_fileForBoard(), and KbFirmware::_latestForBoard().

```
153                                                 {
154     QStringList components = features.split(" ");
155     if(components.length() < 2)
156         return "";
157     // First two components are vendor and model
158     QString vendorModel = components[0].toUpper() + "-" + components[1].toUpper();
159     // Add "RGB" on RGB boards
160     if(features.contains("rgb") && !features.contains("monochrome"))
161         vendorModel += "RGB";
162     return vendorModel;
163 }
```

Here is the caller graph for this function:

13.94.2 Variable Documentation

13.94.2.1 const quint64 AUTO_CHECK_TIME = 60 ∗ 60 ∗ 1000 [static]

Definition at line 9 of file kbfirmware.cpp.

Referenced by KbFirmware::_checkUpdates().

13.95 src/ckb/kbfirmware.h File Reference

```
#include "kb.h"
#include <QObject>
#include <QtNetwork/QtNetwork>
```

Include dependency graph for kbfirmware.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbFirmware
- struct KbFirmware::FW

13.96 src/ckb/kblight.cpp File Reference

```
#include <cmath>
#include <QDateTime>
#include <QSet>
#include "kblight.h"
#include "kbmode.h"
```

Include dependency graph for kblight.cpp:

Functions

- static float sToL (float srgb)
- static float lToS (float linear)
- QRgb monoRgb (float r, float g, float b)

Variables

- static int _shareDimming = -1
- static QSet< KbLight * > activeLights

13.96.1 Function Documentation

13.96.1.1 static float lToS (float *linear*) [static]

Definition at line 277 of file kblight.cpp.

Referenced by KbLight::frameUpdate(), and monoRgb().

```
277                                 {
278     if(linear <= 0.0031308f)
279         return 12.92f * linear * 255.f;
280     return (1.055f * pow(linear, 1.f / 2.4f) - 0.055f) * 255.f;
281 }
```

Here is the caller graph for this function:

13.96.1.2 QRgb monoRgb (float *r*, float *g*, float *b*)

Definition at line 284 of file kblight.cpp.

References lToS(), and sToL().

Referenced by KbLight::base(), KbLight::frameUpdate(), and KeyWidget::paintEvent().

```
284                                         {
285     // It's important to use a linear colorspace for this, otherwise the colors will appear inconsistent
286     // Note that although we could use linear space for alpha blending or the animation blending functions,
        we don't.
287     // The reason for this is that photo manipulation programs don't do it either, so even though the
        result would technically be more correct,
288     // it would look wrong to most people.
289     r = sToL(r);
290     g = sToL(g);
291     b = sToL(b);
292     int value = round(lToS((r + g + b) / 3.f));
293     return qRgb(value, value, value);
294 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.96.1.3 static float sToL (float *srgb*) [static]

Definition at line 270 of file kblight.cpp.

Referenced by KbLight::frameUpdate(), and monoRgb().

```
270                                 {
271     srgb /= 255.f;
272     if(srgb <= 0.04045f)
273         return srgb / 12.92f;
274     return pow((srgb + 0.055f) / 1.055f, 2.4f);
275 }
```

Here is the caller graph for this function:

13.96.2 Variable Documentation

13.96.2.1 int _shareDimming = -1 [static]

Definition at line 7 of file kblight.cpp.

Referenced by KbLight::dimming(), KbLight::open(), and KbLight::shareDimming().

13.96.2.2 QSet<KbLight*> activeLights [static]

Definition at line 8 of file kblight.cpp.

Referenced by KbLight::close(), KbLight::open(), KbLight::shareDimming(), and KbLight::~KbLight().

13.97 src/ckb/kblight.h File Reference

```
#include <QFile>
#include <QObject>
#include <QSet>
#include <QSettings>
#include "animscript.h"
#include "kbanim.h"
#include "keymap.h"
#include "colormap.h"
```

Include dependency graph for kblight.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbLight

13.98 src/ckb/kblightwidget.cpp File Reference

```
#include "animadddialog.h"
#include "ckbsettings.h"
#include "kblightwidget.h"
#include "ui_kblightwidget.h"
```

Include dependency graph for kblightwidget.cpp:

13.99 src/ckb/kblightwidget.h File Reference

```
#include <QWidget>
#include <QColor>
#include <QFile>
#include <QResizeEvent>
#include "kblight.h"
#include "keywidget.h"
```

Include dependency graph for kblightwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbLightWidget

Namespaces

- Ui

13.100 src/ckb/kbmanager.cpp File Reference

`#include "kbmanager.h"`
Include dependency graph for kbmanager.cpp:

Variables

- QString devpath = "/dev/input/ckb%1"

13.100.1 Variable Documentation

13.100.1.1 QString devpath = "/dev/input/ckb%1"

Definition at line 4 of file kbmanager.cpp.

Referenced by _setupusb(), closeusb(), main(), os_inputmain(), os_setupusb(), and KbManager::scanKeyboards().

13.101 src/ckb/kbmanager.h File Reference

```
#include <QObject>
#include <QTimer>
#include <cmath>
#include <QSet>
#include "kb.h"
```

Include dependency graph for kbmanager.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbManager

Macros

- #define DAEMON_UNAVAILABLE_STR "<unavailable>"

13.101.1 Macro Definition Documentation

13.101.1.1 #define DAEMON_UNAVAILABLE_STR "<unavailable>"

Definition at line 12 of file kbmanager.h.

Referenced by KbManager::ckbDaemonVersionF(), KbManager::scanKeyboards(), and MainWindow::updateVersion().

13.102 src/ckb/kbmode.cpp File Reference

```
#include "kbmode.h"
#include "kb.h"
```

Include dependency graph for kbmode.cpp:

13.103 src/ckb/kbmode.h File Reference

```
#include <QObject>
#include "kblight.h"
#include "kbbind.h"
#include "kbperf.h"
```

Include dependency graph for kbmode.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct UsbId
- class KbMode

13.104 src/ckb/kbperf.cpp File Reference

```
#include "kbperf.h"
#include "kbmode.h"
#include "kb.h"
#include "media.h"
#include <cmath>
```

Include dependency graph for kbperf.cpp:

Macros

- #define map_last(map) ((map).last())

13.104.1 Macro Definition Documentation

13.104.1.1 #define map_last(*map*) ((map).last())

Definition at line 8 of file kbperf.cpp.

Referenced by KbPerf::popDpi().

13.105 src/ckb/kbperf.h File Reference

```
#include <QFile>
```

```
#include <QMap>
#include <QPoint>
#include "ckbsettings.h"
#include "keymap.h"
```

Include dependency graph for kbperf.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbPerf

13.106 src/ckb/kbprofile.cpp File Reference

```
#include "kbprofile.h"
#include "kb.h"
```

Include dependency graph for kbprofile.cpp:

13.107 src/ckb/kbprofile.h File Reference

```
#include <QList>
#include <QObject>
#include <QSettings>
#include <QString>
#include <QUuid>
#include "kbmode.h"
```

Include dependency graph for kbprofile.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbProfile

13.108 src/ckb/kbprofiledialog.cpp File Reference

```
#include <QMenu>
#include "kbprofiledialog.h"
#include "ui_kbprofiledialog.h"
```

Include dependency graph for kbprofiledialog.cpp:

13.109 src/ckb/kbprofiledialog.h File Reference

```
#include <QDialog>
#include "kbwidget.h"
```

Include dependency graph for kbprofiledialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbProfileDialog

Namespaces

- Ui

13.110 src/ckb/kbwidget.cpp File Reference

```
#include <cmath>
#include <QFileDialog>
#include <QMenu>
#include <QMessageBox>
#include <QUrl>
#include "ckbsettings.h"
#include "fwupgradedialog.h"
#include "kbfirmware.h"
#include "kbwidget.h"
#include "kblightwidget.h"
#include "kbprofiledialog.h"
#include "ui_kbwidget.h"
#include "ui_kblightwidget.h"
```

Include dependency graph for kbwidget.cpp:

13.111 src/ckb/kbwidget.h File Reference

```
#include <QFile>
#include <QListWidgetItem>
#include <QWidget>
#include "kb.h"
```

Include dependency graph for kbwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KbWidget

Namespaces

- Ui

13.112 src/ckb/keyaction.cpp File Reference

```
#include <qdebug.h>
#include "keyaction.h"
#include "kb.h"
#include "kbanim.h"
#include "kbprofile.h"
#include <QDateTime>
#include <QUrl>
#include <cstring>
#include <cstdio>
```

Include dependency graph for keyaction.cpp:

Variables

- static const int ANIM_ONCE = 0x1
- static const int ANIM_KRSTOP = 0x2

13.112.1 Variable Documentation

13.112.1.1 const int ANIM_KRSTOP = 0x2 [static]

Definition at line 173 of file keyaction.cpp.

Referenced by KeyAction::animAction(), and KeyAction::animInfo().

13.112.1.2 const int ANIM_ONCE = 0x1 [static]

Definition at line 173 of file keyaction.cpp.

Referenced by KeyAction::animAction(), and KeyAction::animInfo().

13.113 src/ckb/keyaction.h File Reference

```
#include <QObject>
#include <QProcess>
#include "keymap.h"
```

Include dependency graph for keyaction.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KeyAction

13.114 src/ckb/keymap.cpp File Reference

```
#include <clocale>
#include <QMap>
#include "keymap.h"
```

Include dependency graph for keymap.cpp:

Data Structures

- struct KeyPatch

Macros

- #define NS 12, 12
- #define KEYCOUNT_K95 (sizeof(K95Keys) / sizeof(Key))
- #define ANSI_ENTER_X 199
- #define ANSI_ENTER_Y 51
- #define ANSI_ENTER_W 26
- #define ANSI_ENTER_H 12
- #define ANSI_LSHIFT_X 45
- #define ANSI_LSHIFT_W 26
- #define PATCH_COUNT(patch) (sizeof(patch) / sizeof(KeyPatch))
- #define patch(map, patches) _patch(map, patches, PATCH_COUNT(patches))
- #define K95_WIDTH 298
- #define K95_HEIGHT 76
- #define K70_X_START 38
- #define K70_WIDTH (K95_WIDTH - K70_X_START)
- #define K70_HEIGHT K95_HEIGHT
- #define K65_WIDTH 209
- #define K65_HEIGHT K70_HEIGHT
- #define K65_TOP_COUNT (sizeof(K65TopRow) / sizeof(Key))
- #define KSTRAFE_X_START 12
- #define KSTRAFE_WIDTH (K70_WIDTH + (KSTRAFE_X_START * 2))
- #define KSTRAFE_HEIGHT K95_HEIGHT
- #define KEYCOUNT_M65 (sizeof(M65Keys) / sizeof(Key))

- #define M65_WIDTH 52
- #define M65_HEIGHT 67
- #define KEYCOUNT_SABRE (sizeof(SabreKeys) / sizeof(Key))
- #define SABRE_WIDTH M65_WIDTH
- #define SABRE_HEIGHT M65_HEIGHT
- #define KEYCOUNT_SCIM (sizeof(ScimKeys) / sizeof(Key))
- #define SCIM_WIDTH M65_WIDTH
- #define SCIM_HEIGHT M65_HEIGHT
- #define N_MODELS KeyMap::_MODEL_MAX
- #define N_LAYOUTS KeyMap::_LAYOUT_MAX

Functions

- static void _patch (QHash< QString, Key > &map, const KeyPatch *patches, int patchCount)
- static void patchISO (QHash< QString, Key > &map)
- static void patchANSI (QHash< QString, Key > &map)
- static QHash< QString, Key > getMap (KeyMap::Model model, KeyMap::Layout layout)

Variables

- static const Key K95Keys []
- static const KeyPatch patchDK []
- static const KeyPatch patchEU []
- static const KeyPatch patchFR []
- static const KeyPatch patchDE []
- static const KeyPatch patchIT []
- static const KeyPatch patchNO []
- static const KeyPatch patchMX []
- static const KeyPatch patchES []
- static const KeyPatch patchSE []
- static const KeyPatch patchDvorak []
- static const Key K65TopRow []
- static const Key KStrafeKeys []
- static const Key M65Keys []
- static const Key SabreKeys []
- static const Key ScimKeys []
- static QHash< QString, Key > K95BaseMap
- static QHash< QString, Key > standardMaps [KeyMap::_MODEL_MAX][KeyMap::_LAYOUT_MAX]

13.114.1 Data Structure Documentation

13.114.1.1 struct KeyPatch

Definition at line 30 of file keymap.cpp.

Collaboration diagram for KeyPatch:

Data Fields

const char *	_friendlyName	
const char *	_storageName	
const char *	name	

13.114.2 Macro Definition Documentation

13.114.2.1 #define ANSI_ENTER_H 12

Definition at line 25 of file keymap.cpp.

Referenced by patchANSI().

13.114.2.2 #define ANSI_ENTER_W 26

Definition at line 24 of file keymap.cpp.

Referenced by patchANSI().

13.114.2.3 #define ANSI_ENTER_X 199

Definition at line 22 of file keymap.cpp.

Referenced by patchANSI().

13.114.2.4 #define ANSI_ENTER_Y 51

Definition at line 23 of file keymap.cpp.

Referenced by patchANSI().

13.114.2.5 #define ANSI_LSHIFT_W 26

Definition at line 27 of file keymap.cpp.

Referenced by patchANSI().

13.114.2.6 #define ANSI_LSHIFT_X 45

Definition at line 26 of file keymap.cpp.

Referenced by patchANSI().

13.114.2.7 #define K65_HEIGHT K70_HEIGHT

Definition at line 143 of file keymap.cpp.

13.114.2.8 #define K65_TOP_COUNT (sizeof(K65TopRow) / sizeof(Key))

Definition at line 148 of file keymap.cpp.

Referenced by getMap().

13.114.2.9 #define K65_WIDTH 209

Definition at line 142 of file keymap.cpp.

Referenced by getMap(), and KeyMap::modelWidth().

13.114.2.10 #define K70_HEIGHT K95_HEIGHT

Definition at line 139 of file keymap.cpp.

13.114.2.11 #define K70_WIDTH (K95_WIDTH - K70_X_START)

Definition at line 138 of file keymap.cpp.

Referenced by KeyMap::modelWidth().

13.114.2.12 #define K70_X_START 38

Definition at line 137 of file keymap.cpp.

Referenced by getMap().

13.114.2.13 #define K95_HEIGHT 76

Definition at line 134 of file keymap.cpp.

Referenced by KeyMap::modelHeight().

13.114.2.14 #define K95_WIDTH 298

Definition at line 133 of file keymap.cpp.

Referenced by KeyMap::modelWidth().

13.114.2.15 #define KEYCOUNT_K95 (sizeof(K95Keys) / sizeof(Key))

Definition at line 19 of file keymap.cpp.

Referenced by getMap().

13.114.2.16 #define KEYCOUNT_M65 (sizeof(M65Keys) / sizeof(Key))

Definition at line 170 of file keymap.cpp.

Referenced by getMap().

13.114.2.17 #define KEYCOUNT_SABRE (sizeof(SabreKeys) / sizeof(Key))

Definition at line 183 of file keymap.cpp.

Referenced by getMap().

13.114.2.18 #define KEYCOUNT_SCIM (sizeof(ScimKeys) / sizeof(Key))

Definition at line 200 of file keymap.cpp.

Referenced by getMap().

13.114.2.19 #define KSTRAFE_HEIGHT K95_HEIGHT

Definition at line 153 of file keymap.cpp.

13.114.2.20 #define KSTRAFE_WIDTH (K70_WIDTH + (KSTRAFE_X_START * 2))

Definition at line 152 of file keymap.cpp.

Referenced by KeyMap::modelWidth().

13.114.2.21 #define KSTRAFE_X_START 12

Definition at line 151 of file keymap.cpp.

Referenced by getMap().

13.114.2.22 #define M65_HEIGHT 67

Definition at line 173 of file keymap.cpp.

Referenced by KeyMap::modelHeight().

13.114.2.23 #define M65_WIDTH 52

Definition at line 172 of file keymap.cpp.

Referenced by KeyMap::modelWidth().

13.114.2.24 #define N_LAYOUTS KeyMap::_LAYOUT_MAX

Definition at line 207 of file keymap.cpp.

Referenced by getMap().

13.114.2.25 #define N_MODELS KeyMap::_MODEL_MAX

Definition at line 206 of file keymap.cpp.

Referenced by getMap().

13.114.2.26 #define NS 12, 12

Definition at line 6 of file keymap.cpp.

13.114.2.27 #define patch(*map, patches*) _patch(map, patches, PATCH_COUNT(patches))

Definition at line 106 of file keymap.cpp.

Referenced by getMap().

13.114.2.28 #define PATCH_COUNT(patch) (sizeof(patch) / sizeof(KeyPatch))

Definition at line 105 of file keymap.cpp.

13.114.2.29 #define SABRE_HEIGHT M65_HEIGHT

Definition at line 186 of file keymap.cpp.

13.114.2.30 #define SABRE_WIDTH M65_WIDTH

Definition at line 185 of file keymap.cpp.

13.114.2.31 #define SCIM_HEIGHT M65_HEIGHT

Definition at line 203 of file keymap.cpp.

13.114.2.32 #define SCIM_WIDTH M65_WIDTH

Definition at line 202 of file keymap.cpp.

13.114.3 Function Documentation

13.114.3.1 static void _patch (QHash< QString, Key > & *map,* const KeyPatch * *patches,* int *patchCount*) [static]

Definition at line 107 of file keymap.cpp.

References Key::_friendlyName, and Key::_storageName.

```
107                                                                                                {
108     for(const KeyPatch* p = patches; p < patches + patchCount; p++){
109         Key& key = map[p->name];
110         key._storageName = p->_storageName;
```

```
        key._friendlyName = p->_friendlyName;
    }
}
```

13.114.3.2 static QHash<QString, Key> getMap (KeyMap::Model *model*, KeyMap::Layout *layout*) [static]

Definition at line 210 of file keymap.cpp.

References KeyMap::DE, KeyMap::DK, KeyMap::ES, KeyMap::EU, KeyMap::EU_DVORAK, KeyMap::FR, KeyMap::GB_DVORAK, Key::height, KeyMap::isISO(), KeyMap::IT, KeyMap::K65, K65_TOP_COUNT, K65_WIDTH, KeyMap::K70, K70_X_START, KeyMap::K95, K95BaseMap, KEYCOUNT_K95, KEYCOUNT_M65, KEYCOUNT_SABRE, KEYCOUNT_SCIM, KSTRAFE_X_START, KeyMap::M65, KeyMap::MX, N_LAYOUTS, N_MODELS, key::name, KeyMap::NO, patch, patchANSI(), patchISO(), KeyMap::SABRE, KeyMap::SCIMITAR, KeyMap::SE, standardMaps, KeyMap::STRAFE, KeyMap::US_DVORAK, Key::width, Key::x, and Key::y.

```
210                                                                 {
211     if(model < 0 || layout < 0 || model >= N_MODELS || layout >=
    N_LAYOUTS)
212         return QHash<QString, Key>();
213     // Return the map if it's already filled out
214     QHash<QString, Key>& map = standardMaps[model][layout];
215     if(!map.empty())
216         return map;
217     // Otherwise, create it
218     switch(model){
219     case KeyMap::K95:{
220         // The K95 maps serve as bases for all the other keyboards
221         // Fetch the master map, or create it if not yet done
222         if(K95BaseMap.empty()){
223             for(const Key* key = K95Keys; key < K95Keys +
    KEYCOUNT_K95; key++)
224                 K95BaseMap[key->name] = *key;
225         }
226         map = K95BaseMap;
227         // Patch the map for the layout
228         switch(layout){
229         case KeyMap::DK:
230             patch(map, patchDK);
231             break;
232         case KeyMap::EU_DVORAK:
233             patch(map, patchDvorak);    // fall through
234         case KeyMap::EU:
235             patch(map, patchEU);
236             break;
237         case KeyMap::GB_DVORAK:
238         case KeyMap::US_DVORAK:
239             patch(map, patchDvorak);
240             break;
241         case KeyMap::FR:
242             patch(map, patchFR);
243             break;
244         case KeyMap::DE:
245             patch(map, patchDE);
246             break;
247         case KeyMap::IT:
248             patch(map, patchIT);
249             break;
250         case KeyMap::NO:
251             patch(map, patchNO);
252             break;
253         case KeyMap::MX:
254             patch(map, patchMX);
255             break;
256         case KeyMap::ES:
257             patch(map, patchES);
258             break;
259         case KeyMap::SE:
260             patch(map, patchSE);
261             break;
262         default:;
263             // English QWERTY - no patch needed
264         }
265         if(KeyMap::isISO(layout))
266             patchISO(map);
267         else
268             patchANSI(map);
269         // Done! return the map
270         break;
271     }
```

```
    case KeyMap::K70:{
        // The K70 maps are based on the K95 maps. However all the keys are shifted left and the G keys are removed
        map = getMap(KeyMap::K95, layout);
        QMutableHashIterator<QString, Key> i(map);
        while(i.hasNext()){
            i.next();
            // Move key to left. Remove it if it fell off the edge
            if((i.value().x -= K70_X_START) < 0)
                i.remove();
        }
        // Remove the M buttons as well
        map.remove("mr");
        map.remove("m1");
        map.remove("m2");
        map.remove("m3");
        // Done!
        break;
    }
    case KeyMap::K65:{
        // The K65 maps additionally remove the numpad and have a modified top row
        map = getMap(KeyMap::K70, layout);
        QMutableHashIterator<QString, Key> i(map);
        while(i.hasNext()){
            i.next();
            if(i.value().x >= K65_WIDTH)
                i.remove();
        }
        for(const Key* key = K65TopRow; key < K65TopRow + K65_TOP_COUNT; key++)
            map[key->name] = *key;
        // Done!
        break;
    }
    case KeyMap::STRAFE:{
        // The Strafe RGB maps are based on the K70 map minus the media keys
        map = getMap(KeyMap::K70, layout);
        //move light and lock right
        map["light"].x=285 - K70_X_START;
        //map["light"].hasLed=false;
        map["lock"].x=297 - K70_X_START;
        //map["lock"].hasLed=false;
        // move everything right to make the space for the left sidelight
        QMutableHashIterator<QString, Key> i(map);
        while(i.hasNext()){
            i.next();
            i.value().x += KSTRAFE_X_START;
        }
        // Add Strafe lights and keys
        map["lsidel"] = KStrafeKeys[0];
        map["rsidel"] = KStrafeKeys[1];
        map["logo"] = KStrafeKeys[2];
        map["fn"] = KStrafeKeys[3];
        map.remove("rwin");
        // remove media controls
        map.remove("mute");
        map.remove("volup");
        map.remove("voldn");
        map.remove("stop");
        map.remove("prev");
        map.remove("play");
        map.remove("next");
        // Done!
        break;
    }
    case KeyMap::M65:{
        // M65 isn't a keyboard; all mouse maps are unique.
        for(const Key* key = M65Keys; key < M65Keys + KEYCOUNT_M65; key++){
            // Keyboard keys are written from the center because that's where the LEDs are, but the mouse buttons are odd shapes so they're
            // written from the upper left
            Key translatedKey = *key;
            translatedKey.x += translatedKey.width / 2;
            translatedKey.y += translatedKey.height / 2;
            map[key->name] = translatedKey;
        }
        // Mice also have no layout patches - no other changes necessary
        break;
    }
    case KeyMap::SABRE:{
        // Scimitar mouse
        for(const Key* key = SabreKeys; key < SabreKeys + KEYCOUNT_SABRE; key++){
            // Like the M65, the keys are upper-left justified
            Key translatedKey = *key;
            translatedKey.x += translatedKey.width / 2;
```

```
            translatedKey.y += translatedKey.height / 2;
            map[key->name] = translatedKey;
        }
        break;
    }
    case KeyMap::SCIMITAR:{
        // Scimitar mouse
        for(const Key* key = ScimKeys; key < ScimKeys +
    KEYCOUNT_SCIM; key++){
            Key translatedKey = *key;
            translatedKey.x += translatedKey.width / 2;
            translatedKey.y += translatedKey.height / 2;
            map[key->name] = translatedKey;
        }
        break;
    }
    default:;    // <- stop GCC from complaining
    }
    // Map is finished, return result
    return map;
}
```

Here is the call graph for this function:

13.114.3.3 static void patchANSI (QHash< QString, Key > & *map*) [static]

Definition at line 119 of file keymap.cpp.

References ANSI_ENTER_H, ANSI_ENTER_W, ANSI_ENTER_X, ANSI_ENTER_Y, ANSI_LSHIFT_W, ANSI_LSHIFT_X, Key::height, Key::width, Key::x, and Key::y.

Referenced by getMap().

```
{
    map.remove("bslash_iso");
    map.remove("hash");
    Key& enter = map["enter"];
    enter.x = ANSI_ENTER_X;
    enter.y = ANSI_ENTER_Y;
    enter.width = ANSI_ENTER_W;
    enter.height = ANSI_ENTER_H;
    Key& lshift = map["lshift"];
    lshift.x = ANSI_LSHIFT_X;
    lshift.width = ANSI_LSHIFT_W;
}
```

Here is the caller graph for this function:

13.114.3.4 static void patchISO (QHash< QString, Key > & *map*) [static]

Definition at line 116 of file keymap.cpp.

Referenced by getMap().

```
116                                                 {
117     map.remove("bslash");
118 }
```

Here is the caller graph for this function:

13.114.4 Variable Documentation

13.114.4.1 const Key K65TopRow[] [static]

Initial value:

```
= {
    {0, "Brightness", "light", 164 -  38 , 0, 12, 12, true, true}, {0, "Mute", "mute", 176 -  38 , 0, 12,
      12, true, true}, {0, "Volume Down", "voldn", 192 -  38 , 0, 14, 8, true, true}, {0, "Volume Up", "volup", 205
       -  38 , 0, 14, 8, true, true}, {0, "Windows Lock", "lock", 222 -  38 , 0, 12, 12, true, true}
}
```

Definition at line 145 of file keymap.cpp.

13.114.4.2 QHash<QString, Key> K95BaseMap [static]

Definition at line 208 of file keymap.cpp.

Referenced by getMap().

13.114.4.3 const Key K95Keys[] [static]

Initial value:

```
= {
    {0, 0, "mr", 38, 0,  12, 12 , true, true}, {0, 0, "m1", 50, 0,  12, 12 , true, true}, {0, 0, "m2", 62,
      0,  12, 12 , true, true}, {0, 0, "m3", 74, 0,  12, 12 , true, true}, {0, "Brightness", "light", 222, 0,  12,
       12 , true, true}, {0, "Windows Lock", "lock", 234, 0,  12, 12 , true, true}, {0, "Mute", "mute", 273, 0, 13
      , 8, true, true}, {0, "Volume Up", "volup", 290, -2, 18, 6, false, true}, {0, "Volume down", "voldn", 290, 2
      , 18, 6, false, true},
    {0, 0, "g1", 0, 14,  12, 12 , true, true}, {0, 0, "g2", 11, 14,  12, 12 , true, true}, {0, 0, "g3", 22,
       14,  12, 12 , true, true}, {0, "Esc", "esc", 38, 14,  12, 12 , true, true}, {0, 0, "f1", 58, 14,  12, 12 ,
      true, true}, {0, 0, "f2", 70, 14,  12, 12 , true, true}, {0, 0, "f3", 82, 14,  12, 12 , true, true}, {0, 0,
      "f4", 94, 14,  12, 12 , true, true}, {0, 0, "f5", 114, 14,  12, 12 , true, true}, {0, 0, "f6", 126, 14,  12,
       12 , true, true}, {0, 0, "f7", 138, 14,  12, 12 , true, true}, {0, 0, "f8", 150, 14,  12, 12 , true, true},
       {0, 0, "f9", 170, 14,  12, 12 , true, true}, {0, 0, "f10", 182, 14,  12, 12 , true, true}, {0, 0, "f11",
      194, 14,  12, 12 , true, true}, {0, 0, "f12", 206, 14,  12, 12 , true, true}, {0, "Print Screen\nSysRq", "
      prtscn", 222, 14,  12, 12 , true, true}, {0, "Scroll Lock", "scroll", 234, 14,  12, 12 , true, true}, {0, "Pause
      \nBreak", "pause", 246, 14,  12, 12 , true, true}, {0, "Stop", "stop", 262, 14, 12, 8, true, true}, {0, "
      Previous", "prev", 273, 14, 13, 8, true, true}, {0, "Play/Pause", "play", 285, 14, 13, 8, true, true}, {0, "
      Next", "next", 296, 14, 12, 8, true, true},
    {0, 0, "g4", 0, 25,  12, 12 , true, true}, {0, 0, "g5", 11, 25,  12, 12 , true, true}, {0, 0, "g6", 22,
       25,  12, 12 , true, true}, {0, "`", "grave", 38, 27,  12, 12 , true, true}, {0, 0, "1", 50, 27,  12, 12 ,
      true, true}, {0, 0, "2", 62, 27,  12, 12 , true, true}, {0, 0, "3", 74, 27,  12, 12 , true, true}, {0, 0, "4"
      , 86, 27,  12, 12 , true, true}, {0, 0, "5", 98, 27,  12, 12 , true, true}, {0, 0, "6", 110, 27,  12, 12 ,
      true, true}, {0, 0, "7", 122, 27,  12, 12 , true, true}, {0, 0, "8", 134, 27,  12, 12 , true, true}, {0, 0, "
      9", 146, 27,  12, 12 , true, true}, {0, 0, "0", 158, 27,  12, 12 , true, true}, {0, "-", "minus", 170, 27,
      12, 12 , true, true}, {0, "=", "equal", 182, 27,  12, 12 , true, true}, {0, "Backspace", "bspace", 200, 27,
      24, 12, true, true}, {0, "Insert", "ins", 222, 27,  12, 12 , true, true}, {0, "Home", "home", 234, 27,  12,
      12 , true, true}, {0, "Page Up", "pgup", 246, 27,  12, 12 , true, true}, {0, "Num Lock", "numlock", 261, 27,
        12, 12 , true, true}, {0, "NumPad /", "numslash", 273, 27,  12, 12 , true, true}, {0, "NumPad *", "numstar
      ", 285, 27,  12, 12 , true, true}, {0, "NumPad -", "numminus", 297, 27,  12, 12 , true, true},
    {0, 0, "g7", 0, 39,  12, 12 , true, true}, {0, 0, "g8", 11, 39,  12, 12 , true, true}, {0, 0, "g9", 22,
       39,  12, 12 , true, true}, {0, "Tab", "tab", 41, 39, 18, 12, true, true}, {0, 0, "q", 56, 39,  12, 12 ,
      true, true}, {0, 0, "w", 68, 39,  12, 12 , true, true}, {0, 0, "e", 80, 39,  12, 12 , true, true}, {0, 0, "r",
      92, 39,  12, 12 , true, true}, {0, 0, "t", 104, 39,  12, 12 , true, true}, {0, 0, "y", 116, 39,  12, 12 ,
      true, true}, {0, 0, "u", 128, 39,  12, 12 , true, true}, {0, 0, "i", 140, 39,  12, 12 , true, true}, {0, 0, "o
      ", 152, 39,  12, 12 , true, true}, {0, 0, "p", 164, 39,  12, 12 , true, true}, {0, "[", "lbrace", 176, 39,
      12, 12 , true, true}, {0, "]", "rbrace", 188, 39,  12, 12 , true, true}, {0, "\\", "bslash", 203, 39, 18, 12
      , true, true}, {0, "Enter", "enter", 203, 39, 18, 24, true, true}, {0, "Delete", "del", 222, 39,  12, 12 ,
      true, true}, {0, "End", "end", 234, 39,  12, 12 , true, true}, {0, "Page Down", "pgdn", 246, 39,  12, 12 ,
      true, true}, {0, "NumPad 7", "num7", 261, 39,  12, 12 , true, true}, {0, "NumPad 8", "num8", 273, 39,  12, 12
      , true, true}, {0, "NumPad 9", "num9", 285, 39,  12, 12 , true, true}, {0, "NumPad +", "numplus", 297, 45,
      12, 24, true, true},
    {0, 0, "g10", 0, 50,  12, 12 , true, true}, {0, 0, "g11", 11, 50,  12, 12 , true, true}, {0, 0, "g12",
      22, 50,  12, 12 , true, true}, {0, "Caps Lock", "caps", 42, 51, 20, 12, true, true}, {0, 0, "a", 59, 51,  12
      , 12 , true, true}, {0, 0, "s", 71, 51,  12, 12 , true, true}, {0, 0, "d", 83, 51,  12, 12 , true, true}, {0
      , 0, "f", 95, 51,  12, 12 , true, true}, {0, 0, "g", 107, 51,  12, 12 , true, true}, {0, 0, "h", 119, 51,
      12, 12 , true, true}, {0, 0, "j", 131, 51,  12, 12 , true, true}, {0, 0, "k", 143, 51,  12, 12 , true, true},
       {0, 0, "l", 155, 51,  12, 12 , true, true}, {0, ";", "colon", 167, 51,  12, 12 , true, true}, {0, "'", "
      quote", 179, 51,  12, 12 , true, true}, {0, "#", "hash", 191, 51,  12, 12 , true, true}, {0, "NumPad 4", "num4"
      , 261, 51,  12, 12 , true, true}, {0, "NumPad 5", "num5", 273, 51,  12, 12 , true, true}, {0, "NumPad 6", "
      num6", 285, 51,  12, 12 , true, true},
    {0, 0, "g13", 0, 64,  12, 12 , true, true}, {0, 0, "g14", 11, 64,  12, 12 , true, true}, {0, 0, "g15",
      22, 64,  12, 12 , true, true}, {0, "Left Shift", "lshift", 39, 63, 14, 12, true, true}, {"bslash", "\\", "
      bslash_iso", 53, 63,  12, 12 , true, true}, {0, 0, "z", 65, 63,  12, 12 , true, true}, {0, 0, "x", 77, 63,  12
      , 12 , true, true}, {0, 0, "c", 89, 63,  12, 12 , true, true}, {0, 0, "v", 101, 63,  12, 12 , true, true}, {
      0, 0, "b", 113, 63,  12, 12 , true, true}, {0, 0, "n", 125, 63,  12, 12 , true, true}, {0, 0, "m", 137, 63,
       12, 12 , true, true}, {0, ",", "comma", 149, 63,  12, 12 , true, true}, {0, ".", "dot", 161, 63,  12, 12 ,
      true, true}, {0, "/", "slash", 173, 63,  12, 12 , true, true}, {0, "Right Shift", "rshift", 196, 63, 32, 12,
       true, true}, {0, "Up", "up", 234, 63,  12, 12 , true, true}, {0, "NumPad 1", "num1", 261, 63,  12, 12 ,
      true, true}, {0, "NumPad 2", "num2", 273, 63,  12, 12 , true, true}, {0, "NumPad 3", "num3", 285, 63,  12, 12 ,
       true, true}, {0, "NumPad Enter", "numenter", 297, 69, 12, 24, true, true},
    {0, 0, "g16", 0, 75,  12, 12 , true, true}, {0, 0, "g17", 11, 75,  12, 12 , true, true}, {0, 0, "g18",
      22, 75,  12, 12 , true, true}, {0, "Left Ctrl", "lctrl", 40, 75, 16, 12, true, true}, {0, "Left Windows", "
      lwin", 54, 75,  12, 12 , true, true}, {0, "Left Alt", "lalt", 67, 75, 14, 12, true, true}, {0, "Space", "
      space", 116, 75, 84, 12, true, true}, {0, "Right Alt", "ralt", 165, 75, 14, 12, true, true}, {0, "Right Windows"
      , "rwin", 178, 75,  12, 12 , true, true}, {0, "Menu", "rmenu", 190, 75,  12, 12 , true, true}, {0, "Right
       Ctrl", "rctrl", 204, 75, 16, 12, true, true}, {0, "Left", "left", 222, 75,  12, 12 , true, true}, {0, "Down",
      "down", 234, 75,  12, 12 , true, true}, {0, "Right", "right", 246, 75,  12, 12 , true, true}, {0, "NumPad 0"
      , "num0", 267, 75, 24, 12, true, true}, {0, "NumPad .", "numdot", 285, 75,  12, 12 , true, true}
}
```

Definition at line 10 of file keymap.cpp.

13.114.4.4 const Key KStrafeKeys[] [static]

Initial value:

```
= {
```

```
    {0, "Sidelight", "lsidel", 0,   76  /2,  12 ,   76  , true, false},
    {0, "Sidelight", "rsidel",  ( ( 298  -  38 )  + ( 12  * 2)) ,   76  /2,  12 ,   76  , true, false},
    {0, "Logo", "logo",  12 , 0,  12, 12 , true, false},
    {0, "Function", "fn", 152, 75,  12, 12 , true, true}
}
```

Definition at line 155 of file keymap.cpp.

13.114.4.5 const Key M65Keys[] [static]

Initial value:

```
= {
    {0, "Left Mouse", "mouse1", 8, 0, 14, 32, false, true}, {0, "Right Mouse", "mouse2", 30, 0, 14, 32,
      false, true}, {0, "Middle Mouse", "mouse3", 22, 8, 8, 7, false, true},
    {0, "Wheel Up", "wheelup", 22, 4, 8, 5, false, true}, {0, "Wheel Down", "wheeldn", 22, 14, 8, 5, false,
       true}, {0, "Wheel Light", "front", 22, 15, 8, 8, true, false},
    {0, "DPI Up", "dpiup", 22, 19, 8, 6, false, true}, {0, "DPI Light", "dpi", 22, 24, 8, 8, true, false},
      {0, "DPI Down", "dpidn", 22, 31, 8, 6, false, true},
    {0, "Forward", "mouse5", 5, 24, 5, 9, false, true}, {0, "Back", "mouse4", 5, 33, 5, 10, false, true}, {
      0, "Sniper", "sniper", 0, 25, 5, 15, false, true},
    {0, "Logo", "back", 14, 55, 24, 12, true, false}
}
```

Definition at line 163 of file keymap.cpp.

13.114.4.6 const KeyPatch patchDE[] [static]

Initial value:

```
= {
    {"caret", "^", "grave"}, {"ss", "ß", "minus"}, {"grave", "´", "equal"},
    {"z", "Z", "y"}, {"ue", "Ü", "lbrace"}, {"plus", "+", "rbrace"},
    {"oe", "Ö", "colon"}, {"ae", "Ä", "quote"},
    {"angle", "<", "bslash_iso"}, {"y", "Y", "z"}, {"minus", "-", "slash"}
}
```

Definition at line 55 of file keymap.cpp.

13.114.4.7 const KeyPatch patchDK[] [static]

Initial value:

```
= {
    {0, "§", "grave"}, {0, "+", "minus"}, {0, "´", "equal"},
    {0, "Å", "lbrace"}, {0, "¨", "rbrace"},
    {0, "Æ", "colon"}, {0, "Ø", "quote"}, {0, "’", "hash"},
    {0, "<", "bslash_iso"}, {0, "-", "slash"},
}
```

Definition at line 36 of file keymap.cpp.

13.114.4.8 const KeyPatch patchDvorak[] [static]

Initial value:

```
= {
    {0, "[", "minus"}, {0, "]", "equal"},
    {0, "′", "q"}, {0, ",", "w"}, {0, ".", "e"}, {0, "P", "r"}, {0, "Y", "t"}, {0, "F", "y"}, {0, "G", "u"}
      , {0, "C", "i"}, {0, "R", "o"}, {0, "L", "p"}, {0, "/", "lbrace"}, {0, "=", "rbrace"},
    {0, "O", "s"}, {0, "E", "d"}, {0, "U", "f"}, {0, "I", "g"}, {0, "D", "h"}, {0, "H", "j"}, {0, "T", "k"}
      , {0, "N", "l"}, {0, "S", "colon"}, {0, "-", "quote"},
    {0, ";", "z"}, {0, "Q", "x"}, {0, "J", "c"}, {0, "K", "v"}, {0, "X", "b"}, {0, "B", "n"}, {0, "W", "
      comma"}, {0, "V", "dot"}, {0, "Z", "slash"},
}
```

Definition at line 97 of file keymap.cpp.

13.114.4.9 const KeyPatch patchES[] [static]

Initial value:

```
= {
    {"oa", "°", "grave"}, {"quote", "´", "minus"}, {"lexclam", "¡", "equal"},
    {"grave", "`", "lbrace"}, {"plus", "+", "rbrace"},
    {"nn", "Ñ", "colon"}, {"accent", "´", "quote"}, {"cc", "Ç", "hash"},
    {"angle", "<", "bslash_iso"}, {"minus", "-", "slash"},
}
```

Definition at line 83 of file keymap.cpp.

13.114.4.10 const KeyPatch patchEU[] [static]

Initial value:

```
= {
    {0, "\\ (R)", "hash"},
    {0, "\\ (L)", "bslash_iso"}
}
```

Definition at line 43 of file keymap.cpp.

13.114.4.11 const KeyPatch patchFR[] [static]

Initial value:

```
= {
    {"sup2", "²", "grave"}, {0, "&", "1"}, {0, "É", "2"}, {0, "\"", "3"}, {0, "´", "4"}, {0, "(", "5"}, {0,
      "-", "6"}, {0, "È", "7"}, {0, "_", "8"}, {0, "Ç", "9"}, {0, "À", "0"}, {"rparen", ")", "minus"},
    {"a", "A", "q"}, {"z", "Z", "w"}, {"caret", "^", "lbrace"}, {"dollar", "$", "rbrace"},
    {"q", "Q", "a"}, {"m", "M", "colon"}, {"percent", "Ù", "quote"}, {"star", "*", "hash"},
    {"angle", "<", "bslash_iso"}, {"w", "W", "z"}, {"comma", ",", "m"}, {"semicolon", ";", "comma"}, {"
      colon", ":", "dot"}, {"exclam", "!", "slash"},
}
```

Definition at line 48 of file keymap.cpp.

13.114.4.12 const KeyPatch patchIT[] [static]

Initial value:

```
= {
    {0, "\\", "grave"}, {0, "´", "minus"}, {0, "Ì", "equal"},
    {0, "È", "lbrace"}, {0, "+", "rbrace"},
    {0, "Ò", "colon"}, {0, "À", "quote"}, {0, "Ù", "hash"},
    {0, "<", "bslash_iso"}, {0, "-", "slash"},
}
```

Definition at line 62 of file keymap.cpp.

13.114.4.13 const KeyPatch patchMX[] [static]

Initial value:

```
= {
    {0, "|", "grave"}, {0, "´", "minus"}, {0, "¿", "equal"},
    {0, "´", "lbrace"}, {0, "+", "rbrace"},
    {0, "Ñ", "colon"}, {0, "{", "quote"}, {0, "}", "hash"},
    {0, "<", "bslash_iso"}, {0, "-", "slash"},
}
```

Definition at line 76 of file keymap.cpp.

13.114.4.14 const KeyPatch patchNO[] [static]

Initial value:

```
= {
    {0, "§", "grave"}, {0, "+", "minus"}, {0, "´", "equal"},
    {0, "Å", "lbrace"}, {0, "¨", "rbrace"},
    {0, "Ø", "colon"}, {0, "Æ", "quote"}, {0, "’", "hash"},
    {0, "<", "bslash_iso"}, {0, "-", "slash"},
}
```

Definition at line 69 of file keymap.cpp.

13.114.4.15 const KeyPatch patchSE[] [static]

Initial value:

```
= {
    {"section", "§", "grave"}, {"plus", "+", "minus"}, {"grave", "´", "equal"},
    {"aa", "Å", "lbrace"}, {"umlaut", "¨", "rbrace"},
    {"oe", "Ö", "colon"}, {"ae", "Ä", "quote"}, {"quote", "’", "hash"},
    {"angle", "<", "bslash_iso"}, {"minus", "-", "slash"},
}
```

Definition at line 90 of file keymap.cpp.

13.114.4.16 const Key SabreKeys[] [static]

Initial value:

```
= {
    {0, "Left Mouse", "mouse1", 8, 0, 14, 32, false, true}, {0, "Right Mouse", "mouse2", 30, 0, 14, 32,
      false, true}, {0, "Middle Mouse", "mouse3", 22, 9, 8, 7, false, true}, {0, "Front light", "front", 8, -2, 14, 8
      , true, false },
    {0, "Wheel Up", "wheelup", 22, 5, 8, 5, false, true}, {0, "Wheel Down", "wheeldn", 22, 15, 8, 5, false,
       true}, {0, "Wheel Light", "wheel", 22, 5, 8, 15, true, false}, {0, "Extra button", "thumb1", 22, 20, 8, 18,
       false, true},
    {0, "DPI Up", "dpiup", 5, 3, 5, 7, false, true}, {0, "DPI Down", "dpidn", 5, 10, 5, 7, false, true}, {0
      , "DPI Light", "dpi", 5, 4, 5, 12, true, false},
    {0, "Forward", "mouse5", 5, 24, 5, 9, false, true}, {0, "Back", "mouse4", 5, 33, 5, 10, false, true},
    {0, "Logo", "back", 14, 50, 24, 12, true, false}
}
```

Definition at line 176 of file keymap.cpp.

13.114.4.17 const Key ScimKeys[] [static]

Initial value:

```
= {
    {0, "Left Mouse", "mouse1", 8, 0, 14, 32, false, true}, {0, "Right Mouse", "mouse2", 30, 0, 12, 32,
      false, true}, {0, "Middle Mouse", "mouse3", 22, 9, 8, 6, false, true}, {0, "Front light", "front", 30, 0, 12, 8
      , true, false },
    {0, "Wheel Up", "wheelup", 22, 3, 8, 6, false, true}, {0, "Wheel Down", "wheeldn", 22, 14, 8, 6, false,
       true}, {0, "Wheel Light", "wheel", 22, 3, 8, 17, true, false},
    {0, "DPI Up", "dpiup", 22, 19, 8, 9, false, true}, {0, "DPI Light", "dpi", 1, 12, 8, 4, true, false}, {
      0, "DPI Down", "dpidn", 22, 28, 8, 9, false, true},
    {0, "Thumb light", "thumb", 0, 21, 10, 24, true, false},
    {0, "1", "thumb1", -13, 18, 7, 7, false, true}, {0, "2", "thumb2", -6, 18, 7, 7, false, true}, {0, "3",
       "thumb3", 1, 18, 7, 7, false, true},
    {0, "4", "thumb4", -13, 25, 7, 7, false, true}, {0, "5", "thumb5", -6, 25, 7, 7, false, true}, {0, "6",
       "thumb6", 1, 25, 7, 7, false, true},
    {0, "7", "thumb7", -13, 32, 7, 7, false, true}, {0, "8", "thumb8", -6, 32, 7, 7, false, true}, {0, "9",
       "thumb9", 1, 32, 7, 7, false, true},
    {0, "10", "thumb10", -13, 39, 7, 7, false, true}, {0, "11", "thumb11", -6, 39, 7, 7, false, true}, {0,
      "12", "thumb12", 1, 39, 7, 7, false, true},
    {0, "Logo", "back", 14, 50, 24, 16, true, false}
}
```

Definition at line 189 of file keymap.cpp.

13.114.4.18 QHash<QString, Key> standardMaps[KeyMap::_MODEL_MAX][KeyMap::_LAYOUT_MAX] [static]

Definition at line 209 of file keymap.cpp.

Referenced by getMap().

13.115 src/ckb/keymap.h File Reference

```
#include <QColor>
#include <QHash>
```

Include dependency graph for keymap.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct Key
- class KeyMap

13.116 src/ckb-daemon/keymap.h File Reference

```
#include "keymap_mac.h"
```

Include dependency graph for keymap.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct key

Macros

- #define KEY_NONE -1
- #define KEY_CORSAIR -2
- #define KEY_UNBOUND -3
- #define BTN_WHEELUP 0x1f01
- #define BTN_WHEELDOWN 0x1f02
- #define KEY_BACKSLASH_ISO KEY_BACKSLASH
- #define N_KEYS_HW 152
- #define N_KEYBYTES_HW ((N_KEYS_HW + 7) / 8)
- #define N_KEY_ZONES 3
- #define N_KEYS_EXTRA 12
- #define N_BUTTONS_HW 20
- #define N_BUTTONS_EXTENDED 25
- #define MOUSE_BUTTON_FIRST (N_KEYS_HW + N_KEY_ZONES + N_KEYS_EXTRA)
- #define MOUSE_EXTRA_FIRST (MOUSE_BUTTON_FIRST + N_BUTTONS_HW)
- #define N_KEYS_INPUT (MOUSE_BUTTON_FIRST + N_BUTTONS_EXTENDED)
- #define N_KEYBYTES_INPUT ((N_KEYS_INPUT + 7) / 8)
- #define LED_MOUSE N_KEYS_HW
- #define N_MOUSE_ZONES 5
- #define N_MOUSE_ZONES_EXTENDED 11

- #define LED_DPI (LED_MOUSE + 2)
- #define N_KEYS_EXTENDED (N_KEYS_INPUT + N_MOUSE_ZONES_EXTENDED)
- #define N_KEYBYTES_EXTENDED ((N_KEYS_EXTENDED + 7) / 8)
- #define SCAN_SILENT 0x8000
- #define SCAN_KBD 0
- #define SCAN_MOUSE 0x1000

Functions

- void hid_kb_translate (unsigned char ∗kbinput, int endpoint, int length, const unsigned char ∗urbinput)
- void hid_mouse_translate (unsigned char ∗kbinput, short ∗xaxis, short ∗yaxis, int endpoint, int length, const unsigned char ∗urbinput)
- void corsair_kbcopy (unsigned char ∗kbinput, int endpoint, const unsigned char ∗urbinput)
- void corsair_mousecopy (unsigned char ∗kbinput, int endpoint, const unsigned char ∗urbinput)

Variables

- const key keymap [(((152+3+12)+25)+11)]

13.116.1 Data Structure Documentation

13.116.1.1 struct key

Definition at line 49 of file keymap.h.

Collaboration diagram for key:

Data Fields

short	led	
const char *	name	
short	scan	

13.116.2 Macro Definition Documentation

13.116.2.1 #define BTN_WHEELDOWN 0x1f02

Definition at line 13 of file keymap.h.

Referenced by os_keypress().

13.116.2.2 #define BTN_WHEELUP 0x1f01

Definition at line 12 of file keymap.h.

Referenced by os_keypress().

13.116.2.3 #define KEY_BACKSLASH_ISO KEY_BACKSLASH

Definition at line 20 of file keymap.h.

13.116.2.4 #define KEY_CORSAIR -2

Definition at line 8 of file keymap.h.

13.116.2.5 #define KEY_NONE -1

Definition at line 7 of file keymap.h.

13.116.2.6 #define KEY_UNBOUND -3

Definition at line 9 of file keymap.h.

Referenced by cmd_unbind().

13.116.2.7 #define LED_DPI (LED_MOUSE + 2)

Definition at line 43 of file keymap.h.

Referenced by loadrgb_mouse(), and savergb_mouse().

13.116.2.8 #define LED_MOUSE N_KEYS_HW

Definition at line 39 of file keymap.h.

Referenced by isblack(), loaddpi(), loadrgb_mouse(), rgbcmp(), savedpi(), savergb_mouse(), and updatergb_mouse().

13.116.2.9 #define MOUSE_BUTTON_FIRST (N_KEYS_HW + N_KEY_ZONES + N_KEYS_EXTRA)

Definition at line 33 of file keymap.h.

Referenced by corsair_mousecopy(), and hid_mouse_translate().

13.116.2.10 #define MOUSE_EXTRA_FIRST (MOUSE_BUTTON_FIRST + N_BUTTONS_HW)

Definition at line 34 of file keymap.h.

Referenced by hid_mouse_translate().

13.116.2.11 #define N_BUTTONS_EXTENDED 25

Definition at line 32 of file keymap.h.

13.116.2.12 #define N_BUTTONS_HW 20

Definition at line 31 of file keymap.h.

Referenced by corsair_mousecopy().

13.116.2.13 #define N_KEY_ZONES 3

Definition at line 27 of file keymap.h.

13.116.2.14 #define N_KEYBYTES_EXTENDED ((N_KEYS_EXTENDED + 7) / 8)

Definition at line 46 of file keymap.h.

13.116.2.15 #define N_KEYBYTES_HW ((N_KEYS_HW + 7) / 8)

Definition at line 25 of file keymap.h.

Referenced by corsair_kbcopy().

13.116.2.16 #define N_KEYBYTES_INPUT ((N_KEYS_INPUT + 7) / 8)

Definition at line 37 of file keymap.h.

Referenced by _cmd_macro(), inputupdate_keys(), and macromask().

13.116.2.17 #define N_KEYS_EXTENDED (N_KEYS_INPUT + N_MOUSE_ZONES_EXTENDED)

Definition at line 45 of file keymap.h.

Referenced by printrgb(), and readcmd().

13.116.2.18 #define N_KEYS_EXTRA 12

Definition at line 29 of file keymap.h.

13.116.2.19 #define N_KEYS_HW 152

Definition at line 24 of file keymap.h.

Referenced by loadrgb_kb(), makergb_512(), rgbcmp(), and setactive_kb().

13.116.2.20 #define N_KEYS_INPUT (MOUSE_BUTTON_FIRST + N_BUTTONS_EXTENDED)

Definition at line 36 of file keymap.h.

Referenced by _cmd_get(), _cmd_macro(), cmd_bind(), cmd_notify(), cmd_rebind(), cmd_unbind(), initbind(), and inputupdate_keys().

13.116.2.21 #define N_MOUSE_ZONES 5

Definition at line 40 of file keymap.h.

Referenced by isblack(), loaddpi(), rgbcmp(), savedpi(), and updatergb_mouse().

13.116.2.22 #define N_MOUSE_ZONES_EXTENDED 11

Definition at line 41 of file keymap.h.

13.116.2.23 #define SCAN_KBD 0

Definition at line 57 of file keymap.h.

13.116.2.24 #define SCAN_MOUSE 0x1000

Definition at line 58 of file keymap.h.

Referenced by os_keypress().

13.116.2.25 #define SCAN_SILENT 0x8000

Definition at line 56 of file keymap.h.

Referenced by inputupdate_keys().

13.116.3 Function Documentation

13.116.3.1 void corsair_kbcopy (unsigned char * *kbinput*, int *endpoint*, const unsigned char * *urbinput*)

Definition at line 394 of file keymap.c.

References N_KEYBYTES_HW.

Referenced by os_inputmain().

```
394                                                                                                 {
395     if(endpoint == 2 || endpoint == -2){
396         if(urbinput[0] != 3)
397             return;
398         urbinput++;
399     }
400     memcpy(kbinput, urbinput, N_KEYBYTES_HW);
401 }
```

Here is the caller graph for this function:

13.116.3.2 void corsair_mousecopy (unsigned char * *kbinput*, int *endpoint*, const unsigned char * *urbinput*)

Definition at line 403 of file keymap.c.

References BUTTON_HID_COUNT, CLEAR_KEYBIT, MOUSE_BUTTON_FIRST, N_BUTTONS_HW, and SET_KEYBIT.

Referenced by os_inputmain().

```
403                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
404     if(endpoint == 2 || endpoint == -2){
405         if(urbinput[0] != 3)
406             return;
407         urbinput++;
408     }
409     for(int bit = BUTTON_HID_COUNT; bit < N_BUTTONS_HW; bit++){
410         int byte = bit / 8;
411         uchar test = 1 << (bit % 8);
412         if(urbinput[byte] & test)
413             SET_KEYBIT(kbinput, MOUSE_BUTTON_FIRST + bit);
414         else
415             CLEAR_KEYBIT(kbinput, MOUSE_BUTTON_FIRST + bit);
416     }
417 }
```

Here is the caller graph for this function:

13.116.3.3 void hid_kb_translate (unsigned char * *kbinput*, int *endpoint*, int *length*, const unsigned char * *urbinput*)

Definition at line 223 of file keymap.c.

References ckb_warn, CLEAR_KEYBIT, and SET_KEYBIT.

Referenced by os_inputmain().

```
223                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
224     if(length < 1)
225         return;
226     // LUT for HID -> Corsair scancodes (-1 for no scan code, -2 for currently unsupported)
227     // Modified from Linux drivers/hid/usbhid/usbkbd.c, key codes replaced with array indices and K95 keys added
228     static const short hid_codes[256] = {
229         -1,  -1,  -1,  -1,  37,  54,  52,  39,  27,  40,  41,  42,  32,  43,  44,  45,
230         56,  55,  33,  34,  25,  28,  38,  29,  31,  53,  26,  51,  30,  50,  13,  14,
231         15,  16,  17,  18,  19,  20,  21,  22,  82,   0,  86,  24,  64,  23,  84,  35,
232         79,  80,  81,  46,  47,  12,  57,  58,  59,  36,   1,   2,   3,   4,   5,   6,
233          7,   8,   9,  10,  11,  72,  73,  74,  75,  76,  77,  78,  87,  88,  89,  95,
234         93,  94,  92, 102, 103, 104, 105, 106, 107, 115, 116, 117, 112, 113, 114, 108,
235        109, 110, 118, 119,  49,  69,  -2,  -2,  -2,  -2,  -2,  -2,  -2,  -2,  -2,  -2,
236         -2,  -2,  -2,  -2,  -2,  -2,  -2,  -2,  98,  -2,  -2,  -2,  -2,  -2,  -2,  97,
237        130, 131,  -1,  -1,  -1,  -2,  -1,  -2,  -2,  -2,  -2,  -2,  -2,  -1,  -1,  -1,
238         -2,  -2,  -2,  -2,  -2,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,
239         -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,
240         -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,
241         -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -1,  -3,  -1,  -1,  -1,  // <- -3 = non-RGB program key
```

```
        120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 136, 137, 138, 139, 140, 141,
         60,  48,  62,  61,  91,  90,  67,  68, 142, 143,  99, 101,  -2, 130, 131,  97,
         -2, 133, 134, 135,  -2,  96,  -2, 132,  -2,  -2,  71,  71,  71,  71,  -1,  -1,
    };
    switch(endpoint){
    case 1:
    case -1:
        // EP 1: 6KRO input (RGB and non-RGB)
        // Clear previous input
        for(int i = 0; i < 256; i++){
            if(hid_codes[i] >= 0)
                CLEAR_KEYBIT(kbinput, hid_codes[i]);
        }
        // Set new input
        for(int i = 0; i < 8; i++){
            if((urbinput[0] >> i) & 1)
                SET_KEYBIT(kbinput, hid_codes[i + 224]);
        }
        for(int i = 2; i < length; i++){
            if(urbinput[i] > 3){
                int scan = hid_codes[urbinput[i]];
                if(scan >= 0)
                    SET_KEYBIT(kbinput, scan);
                else
                    ckb_warn("Got unknown key press %d on EP 1\n", urbinput[i]);
            }
        }
        break;
    case -2:
        // EP 2 RGB: NKRO input
        if(urbinput[0] == 1){
            // Type 1: standard key
            if(length != 21)
                return;
            for(int bit = 0; bit < 8; bit++){
                if((urbinput[1] >> bit) & 1)
                    SET_KEYBIT(kbinput, hid_codes[bit + 224]);
                else
                    CLEAR_KEYBIT(kbinput, hid_codes[bit + 224]);
            }
            for(int byte = 0; byte < 19; byte++){
                char input = urbinput[byte + 2];
                for(int bit = 0; bit < 8; bit++){
                    int keybit = byte * 8 + bit;
                    int scan = hid_codes[keybit];
                    if((input >> bit) & 1){
                        if(scan >= 0)
                            SET_KEYBIT(kbinput, hid_codes[keybit]);
                        else
                            ckb_warn("Got unknown key press %d on EP 2\n", keybit);
                    } else if(scan >= 0)
                        CLEAR_KEYBIT(kbinput, hid_codes[keybit]);
                }
            }
            break;
        } else if(urbinput[0] == 2)
            ;       // Type 2: media key (fall through)
        else
            break;  // No other known types
    case 2:
        // EP 2 Non-RGB: media keys
        CLEAR_KEYBIT(kbinput, 97);          // mute
        CLEAR_KEYBIT(kbinput, 98);          // stop
        CLEAR_KEYBIT(kbinput, 99);          // prev
        CLEAR_KEYBIT(kbinput, 100);         // play
        CLEAR_KEYBIT(kbinput, 101);         // next
        CLEAR_KEYBIT(kbinput, 130);         // volup
        CLEAR_KEYBIT(kbinput, 131);         // voldn
        for(int i = 0; i < length; i++){
            switch(urbinput[i]){
            case 181:
                SET_KEYBIT(kbinput, 101);   // next
                break;
            case 182:
                SET_KEYBIT(kbinput, 99);    // prev
                break;
            case 183:
                SET_KEYBIT(kbinput, 98);    // stop
                break;
            case 205:
                SET_KEYBIT(kbinput, 100);   // play
                break;
            case 226:
                SET_KEYBIT(kbinput, 97);    // mute
                break;
            case 233:
                SET_KEYBIT(kbinput, 130);   // volup
```

```
                break;
            case 234:
                SET_KEYBIT(kbinput, 131);   // voldn
                break;
            }
        }
        break;
    case 3:
        // EP 3 non-RGB: NKRO input
        if(length != 15)
            return;
        for(int bit = 0; bit < 8; bit++){
            if((urbinput[0] >> bit) & 1)
                SET_KEYBIT(kbinput, hid_codes[bit + 224]);
            else
                CLEAR_KEYBIT(kbinput, hid_codes[bit + 224]);
        }
        for(int byte = 0; byte < 14; byte++){
            char input = urbinput[byte + 1];
            for(int bit = 0; bit < 8; bit++){
                int keybit = byte * 8 + bit;
                int scan = hid_codes[keybit];
                if((input >> bit) & 1){
                    if(scan >= 0)
                        SET_KEYBIT(kbinput, hid_codes[keybit]);
                    else
                        ckb_warn("Got unknown key press %d on EP 3\n", keybit);
                } else if(scan >= 0)
                    CLEAR_KEYBIT(kbinput, hid_codes[keybit]);
            }
        }
        break;
    }
}
```

Here is the caller graph for this function:

13.116.3.4 void hid_mouse_translate (unsigned char * *kbinput*, short * *xaxis*, short * *yaxis*, int *endpoint*, int *length*, const unsigned char * *urbinput*)

Definition at line 366 of file keymap.c.

References BUTTON_HID_COUNT, CLEAR_KEYBIT, MOUSE_BUTTON_FIRST, MOUSE_EXTRA_FIRST, and SET_KEYBIT.

Referenced by os_inputmain().

```
366                                 {
367     if((endpoint != 2 && endpoint != -2) || length < 10)
368         return;
369     // EP 2: mouse input
370     if(urbinput[0] != 1)
371         return;
372     // Byte 1 = mouse buttons (bitfield)
373     for(int bit = 0; bit < BUTTON_HID_COUNT; bit++){
374         if(urbinput[1] & (1 << bit))
375             SET_KEYBIT(kbinput, MOUSE_BUTTON_FIRST + bit);
376         else
377             CLEAR_KEYBIT(kbinput, MOUSE_BUTTON_FIRST + bit);
378     }
379     // Bytes 5 - 8: movement
380     *xaxis += *(short*)(urbinput + 5);
381     *yaxis += *(short*)(urbinput + 7);
382     // Byte 9: wheel
383     char wheel = urbinput[9];
384     if(wheel > 0)
385         SET_KEYBIT(kbinput, MOUSE_EXTRA_FIRST);         // wheelup
386     else
387         CLEAR_KEYBIT(kbinput, MOUSE_EXTRA_FIRST);
388     if(wheel < 0)
```

```
        SET_KEYBIT(kbinput, MOUSE_EXTRA_FIRST + 1);     // wheeldn
    else
        CLEAR_KEYBIT(kbinput, MOUSE_EXTRA_FIRST + 1);
}
```

Here is the caller graph for this function:

13.116.4 Variable Documentation

13.116.4.1 const key keymap[(((152+3+12)+25)+11)]

Definition at line 5 of file keymap.c.

Referenced by _cmd_get(), _cmd_macro(), cmd_bind(), cmd_rebind(), cmd_rgb(), initbind(), inputupdate_keys(), nprintkey(), printrgb(), readcmd(), and setactive_kb().

13.117 src/ckb/keywidget.cpp File Reference

```
#include <cmath>
#include <QGraphicsDropShadowEffect>
#include <QGraphicsPixmapItem>
#include <QGraphicsScene>
#include <QPainter>
#include "keywidget.h"
#include "keyaction.h"
#include "kbbind.h"
```

Include dependency graph for keywidget.cpp:

Functions

- QRgb monoRgb (float r, float g, float b)

Variables

- static const int KEY_SIZE = 12
- static QImage * m65Overlay = 0
- static QImage * sabOverlay = 0
- static QImage * scimOverlay = 0

13.117.1 Function Documentation

13.117.1.1 QRgb monoRgb (float *r*, float *g*, float *b*)

Definition at line 284 of file kblight.cpp.

References lToS(), and sToL().

Referenced by KbLight::base(), KbLight::frameUpdate(), and KeyWidget::paintEvent().

```
284                                         {
285     // It's important to use a linear colorspace for this, otherwise the colors will appear inconsistent
286     // Note that although we could use linear space for alpha blending or the animation blending functions,
        we don't.
287     // The reason for this is that photo manipulation programs don't do it either, so even though the
        result would technically be more correct,
288     // it would look wrong to most people.
289     r = sToL(r);
290     g = sToL(g);
291     b = sToL(b);
292     int value = round(lToS((r + g + b) / 3.f));
293     return qRgb(value, value, value);
294 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.117.2 Variable Documentation

13.117.2.1 const int KEY_SIZE = 12 [static]

Definition at line 10 of file keywidget.cpp.

Referenced by KeyWidget::drawInfo(), and KeyWidget::map().

13.117.2.2 QImage* m65Overlay = 0 [static]

Definition at line 12 of file keywidget.cpp.

Referenced by KeyWidget::paintEvent().

13.117.2.3 QImage * sabOverlay = 0 [static]

Definition at line 12 of file keywidget.cpp.

Referenced by KeyWidget::paintEvent().

13.117.2.4 QImage * scimOverlay = 0 [static]

Definition at line 12 of file keywidget.cpp.

Referenced by KeyWidget::paintEvent().

13.118 src/ckb/keywidget.h File Reference

```
#include <QBitArray>
#include <QMouseEvent>
#include <QPaintEvent>
#include <QWidget>
#include "keymap.h"
#include "colormap.h"
```

Include dependency graph for keywidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KeyWidget

13.119 src/ckb/kperfwidget.cpp File Reference

```
#include "kperfwidget.h"
#include "ui_kperfwidget.h"
#include "modeselectdialog.h"
#include <cmath>
```

Include dependency graph for kperfwidget.cpp:

13.120 src/ckb/kperfwidget.h File Reference

```
#include <QWidget>
#include <QCheckBox>
#include <QComboBox>
#include <QSignalMapper>
#include "kbperf.h"
#include "kbprofile.h"
#include "colorbutton.h"
```

Include dependency graph for kperfwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class KPerfWidget
- struct KPerfWidget::IndicatorUi

Namespaces

- Ui

13.120.1 Data Structure Documentation

13.120.1.1 struct KPerfWidget::IndicatorUi

Definition at line 48 of file kperfwidget.h.

Collaboration diagram for KPerfWidget::IndicatorUi:

Data Fields

ColorButton *	color1	
ColorButton *	color2	
ColorButton *	color3	
QCheckBox *	enable	
QComboBox *	hwEnable	

13.121 src/ckb/layoutdialog.cpp File Reference

```
#include "layoutdialog.h"
```

```
#include "kb.h"
#include "ui_layoutdialog.h"
```

Include dependency graph for layoutdialog.cpp:

13.122 src/ckb/layoutdialog.h File Reference

```
#include <QDialog>
#include "keymap.h"
```

Include dependency graph for layoutdialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class LayoutDialog

Namespaces

- Ui

13.123 src/ckb/macroreader.cpp File Reference

```
#include <qdebug.h>
#include "macroreader.h"
```

Include dependency graph for macroreader.cpp:

13.124 src/ckb/macroreader.h File Reference

```
#include <QObject>
#include <QFile>
#include <QThread>
#include <QPlainTextEdit>
```

Include dependency graph for macroreader.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class MacroReaderThread

  The MacroReaderThread class is responsible for reading Macro Key Values. It is created as a separate thread (worker thread) for reading macro commands from an fresh opened notify channel. Standard notify channel for macro definitions is number 2.

- class MacroReader

  The MacroReader class creates a worker thread object. It does a connect do delayed deletion of thread local variables in the case the worker thread terminates.

13.125 src/ckb/main.cpp File Reference

```
#include "mainwindow.h"
#include <QApplication>
#include <QDateTime>
#include <QSharedMemory>
#include <QCommandLineParser>
#include <cstring>
#include <unistd.h>
#include <signal.h>
#include <errno.h>
```

Include dependency graph for main.cpp:

Macros

- #define SHMEM_SIZE 128 ∗ 1024
- #define SHMEM_SIZE_V015 16

Enumerations

- enum CommandLineParseResults { CommandLineOK, CommandLineError, CommandLineVersionRequested, CommandLineHelpRequested, CommandLineClose, CommandLineBackground }

Functions

- QSharedMemory appShare ("ckb")
- CommandLineParseResults parseCommandLine (QCommandLineParser &parser, QString ∗errorMessage)

  parseCommandLine - Setup options and parse command line arguments.
- static bool pidActive (const QStringList &lines)
- static bool isRunning (const char ∗command)
- int main (int argc, char ∗argv[])

13.125.1 Macro Definition Documentation

13.125.1.1 #define SHMEM_SIZE 128 ∗ 1024

Definition at line 20 of file main.cpp.

Referenced by isRunning().

13.125.1.2 #define SHMEM_SIZE_V015 16

Definition at line 21 of file main.cpp.

Referenced by isRunning().

13.125.2 Enumeration Type Documentation

13.125.2.1 enum CommandLineParseResults

Enumerator

CommandLineOK

CommandLineError

CommandLineVersionRequested

CommandLineHelpRequested

CommandLineClose

CommandLineBackground

Definition at line 24 of file main.cpp.

```
24                                {
25     CommandLineOK,
26     CommandLineError,
27     CommandLineVersionRequested,
28     CommandLineHelpRequested,
29     CommandLineClose,
30     CommandLineBackground
31 };
```

13.125.3 Function Documentation

13.125.3.1 QSharedMemory appShare ("ckb")

Referenced by isRunning().

Here is the caller graph for this function:

13.125.3.2 static bool isRunning (const char * *command*) [static]

Definition at line 109 of file main.cpp.

References appShare(), pidActive(), SHMEM_SIZE, and SHMEM_SIZE_V015.

Referenced by main().

```
109                                         {
110     // Try to create shared memory (if successful, application was not already running)
111     if(!appShare.create(SHMEM_SIZE) || !appShare.lock()){
112         // Lock existing shared memory
113         if(!appShare.attach() || !appShare.lock())
114             return true;
115         bool running = false;
116         if(appShare.size() == SHMEM_SIZE_V015){
117             // Old shmem - no PID listed so assume the process is running, and print the command directly
        to the buffer
118             if(command){
119                 void* data = appShare.data();
120                 snprintf((char*)data, SHMEM_SIZE_V015, "%s", command);
121             }
122             running = true;
123         } else {
124             // New shmem. Scan the contents of the shared memory for a PID
125             QStringList lines = QString((const char*)appShare.constData()).split("\n");
126             if(pidActive(lines)){
127                 running = true;
128                 // Append the command
129                 if(command){
130                     lines.append(QString("Option ") + command);
131                     QByteArray newMem = lines.join("\n").left(SHMEM_SIZE).toLatin1();
132                     // Copy the NUL byte as well as the string
133                     memcpy(appShare.data(), newMem.constData(), newMem.length() + 1);
134                 }
135             }
136         }
137         if(running){
138             appShare.unlock();
139             return true;
140         }
141     }
142     // Not already running. Initialize the shared memory with our PID
143     snprintf((char*)appShare.data(), appShare.size(), "PID %ld", (long)getpid());
144     appShare.unlock();
145     return false;
146 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.125.3.3 int main (int *argc*, char * *argv[]*)

Definition at line 148 of file main.cpp.

References CommandLineBackground, CommandLineClose, CommandLineError, CommandLineHelpRequested, CommandLineOK, CommandLineVersionRequested, disableAppNap(), isRunning(), and parseCommandLine().

```
148                                 {
149     // Setup main application
150     QApplication a(argc, argv);
151
152     // Setup names and versions
153     QCoreApplication::setOrganizationName("ckb");
154     QCoreApplication::setApplicationVersion(CKB_VERSION_STR);
155     QCoreApplication::setApplicationName("ckb");
156
157     // Setup argument parser
158     QCommandLineParser parser;
159     QString errorMessage;
160     parser.setApplicationDescription("Open Source Corsair Input Device Driver for Linux and OSX.");
161     bool background = 0;
162
163     // Although the daemon runs as root, the GUI needn't and shouldn't be, as it has the potential to
        corrupt settings data.
164     if(getuid() == 0){
165         printf("The ckb GUI should not be run as root.\n");
166         return 0;
167     }
168
169     // Seed the RNG for UsbIds
170     qsrand(QDateTime::currentMSecsSinceEpoch());
171 #ifdef Q_OS_MACX
172     disableAppNap();
173 #endif
174 #if QT_VERSION >= QT_VERSION_CHECK(5, 3, 0)
175     // Enable HiDPI support
176     qApp->setAttribute(Qt::AA_UseHighDpiPixmaps);
177 #endif
178
```

```
    // Parse arguments
    switch (parseCommandLine(parser, &errorMessage)) {
    case CommandLineOK:
        // If launched with no argument
        break;
    case CommandLineError:
        fputs(qPrintable(errorMessage), stderr);
        fputs("\n\n", stderr);
        fputs(qPrintable(parser.helpText()), stderr);
        return 1;
    case CommandLineVersionRequested:
        // If launched with --version, print version info and then quit
        printf("%s %s\n", qPrintable(QCoreApplication::applicationName()),
               qPrintable(QCoreApplication::applicationVersion()));
        return 0;
    case CommandLineHelpRequested:
        // If launched with --help, print help and then quit
        parser.showHelp();
        return 0;
    case CommandLineClose:
        // If launched with --close, kill existing app
        if (isRunning("Close"))
            printf("Asking existing instance to close.\n");
        else
            printf("ckb is not running.\n");
        return 0;
    case CommandLineBackground:
        // If launched with --background, launch in background
        background = 1;
        break;
    }

    // Launch in background if requested, or if re-launching a previous session
    if(qApp->isSessionRestored())
            background = 1;
    if(isRunning(background ? 0 : "Open")){
        printf("ckb is already running. Exiting.\n");
        return 0;
    }
    MainWindow w;
    if(!background)
        w.show();

    return a.exec();
}
```

Here is the call graph for this function:

13.125.3.4 CommandLineParseResults parseCommandLine (QCommandLineParser & *parser*, QString * *errorMessage*)

Parameters

parser	parser instance to use for parse the arguments
errorMessage	argument parse error message

Returns

integer, representing the requested argument

Definition at line 41 of file main.cpp.

References CommandLineBackground, CommandLineClose, CommandLineError, CommandLineHelpRequested, CommandLineOK, and CommandLineVersionRequested.

Referenced by main().

```
41                                                                                                                  {
42     // setup parser to interpret -abc as -a -b -c
43     parser.setSingleDashWordOptionMode(QCommandLineParser::ParseAsCompactedShortOptions);
44
45     /* add command line options */
46     // add -v, --version
47     const QCommandLineOption versionOption = parser.addVersionOption();
48     // add -h, --help (/? on windows)
49     const QCommandLineOption helpOption = parser.addHelpOption();
50     // add -b, --background
51     const QCommandLineOption backgroundOption(QStringList() << "b" << "background",
52                                               "Starts in background, without displaying the main window.");
53     parser.addOption(backgroundOption);
54     // add -c, --close
55     const QCommandLineOption closeOption(QStringList() << "c" << "close",
56                                          "Causes already running instance (if any) to exit.");
57     parser.addOption(closeOption);
58
59     /* parse arguments */
60     if (!parser.parse(QCoreApplication::arguments())) {
61         // set error, if there already are some
62         *errorMessage = parser.errorText();
63         return CommandLineError;
64     }
65
66     /* return requested operation/setup */
67     if (parser.isSet(versionOption)) {
68         // print version and exit
69         return CommandLineVersionRequested;
70     }
71
72     if (parser.isSet(helpOption)) {
73         // print help and exit
74         return CommandLineHelpRequested;
75     }
76
77     if (parser.isSet(backgroundOption)) {
78         // open application in background
79         return CommandLineBackground;
80     }
81
82     if (parser.isSet(closeOption)) {
83         // close already running application instances, if any
84         return CommandLineClose;
85     }
86
87     /* no explicit argument was passed */
88     return CommandLineOK;
89 };
```

Here is the caller graph for this function:

13.125.3.5 static bool pidActive (const QStringList & *lines*) [static]

Definition at line 92 of file main.cpp.

Referenced by isRunning().

```
92                                                  {
93     foreach(const QString& line, lines){
94         if(line.startsWith("PID ")){
95             bool ok;
96             pid_t pid;
97             // Valid PID found?
98             if((pid = line.split(" ")[1].toLong(&ok)) > 0 && ok){
99                 // kill -0 does nothing to the application, but checks if it's running
100                 return (kill(pid, 0) == 0 || errno != ESRCH);
101             }
102         }
103     }
104     // If the PID wasn't listed in the shmem, assume it is running
105     return true;
106 }
```

Here is the caller graph for this function:

13.126 src/ckb/mainwindow.cpp File Reference

```
#include "ckbsettings.h"
#include "kbmanager.h"
#include "kbfirmware.h"
#include "mainwindow.h"
#include "ui_mainwindow.h"
#include <cstdlib>
#include <QSharedMemory>
#include <QShortcut>
#include <QMessageBox>
#include <QMenuBar>
#include <unistd.h>
```

Include dependency graph for mainwindow.cpp:

Variables

- QSharedMemory appShare
- static const QString configLabel = "Settings"

13.126.1 Variable Documentation

13.126.1.1 QSharedMemory appShare

Referenced by MainWindow::timerTick().

13.126.1.2 const QString configLabel = "Settings" [static]

Definition at line 15 of file mainwindow.cpp.

Referenced by MainWindow::MainWindow().

13.127 src/ckb/mainwindow.h File Reference

```
#include <QCloseEvent>
#include <QMainWindow>
#include <QMenu>
#include <QSystemTrayIcon>
#include <QTimer>
#include "kbwidget.h"
#include "settingswidget.h"
```

Include dependency graph for mainwindow.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class MainWindow

Namespaces

- Ui

13.128 src/ckb/media.h File Reference

This graph shows which files directly or indirectly include this file:

Macros

- #define EXTERN_C extern
- #define ENUM_C(name) typedef enum
- #define ENUM_END_C(name) name

Enumerations

- enum muteState { UNKNOWN = -1, UNMUTED, MUTED }

Functions

- muteState getMuteState ()

13.128.1 Macro Definition Documentation

13.128.1.1 #define ENUM_C(*name*) typedef enum

Definition at line 13 of file media.h.

13.128.1.2 #define ENUM_END_C(*name*) name

Definition at line 14 of file media.h.

13.128.1.3 #define EXTERN_C extern

Definition at line 12 of file media.h.

13.128.2 Enumeration Type Documentation

13.128.2.1 enum muteState

Enumerator

UNKNOWN

UNMUTED

MUTED

Definition at line 19 of file media.h.

```
19                  {
20     UNKNOWN = -1,
21     UNMUTED,
22     MUTED
23 } ENUM_END_C(muteState);
```

13.128.3 Function Documentation

13.128.3.1 muteState getMuteState ( )

Definition at line 9 of file media_linux.cpp.

References MUTED, muteProcess, UNKNOWN, and UNMUTED.

Referenced by KbPerf::applyIndicators().

```
9                       {
10     // Get default sink mute state from pulseaudio
11     static muteState lastKnown = UNKNOWN;
12     static quint64 lastTime = 0;
13     // Instead of running a command to check the state and waiting for it to finish, run the command now
       but wait to check it until the next frame
14     // (locking up the GUI thread is bad)
15     if(lastTime > 0 && muteProcess.state() == QProcess::NotRunning){
16         if(muteProcess.exitCode() != 0)
17             lastKnown = UNKNOWN;
18         QString output = muteProcess.readLine().trimmed();
19         if(output == "yes")
20             lastKnown = MUTED;
21         else if(output == "no")
22             lastKnown = UNMUTED;
23     }
24     quint64 time = QDateTime::currentMSecsSinceEpoch();
25     if(time - lastTime < 33)
26         // Don't run it than 30 times per second
27         return lastKnown;
28     lastTime = time;
29     if(muteProcess.state() == QProcess::NotRunning)
```

```
        // Shamelessly taken from pulseaudio-ctl
        muteProcess.start("sh", QStringList() << "-c" << "pacmd list-sinks|grep -A 15 '*
    index'|awk '/muted:/{ print $2 }'");
    return lastKnown;
}
```

Here is the caller graph for this function:

13.129 src/ckb/media_linux.cpp File Reference

```
#include <QDateTime>
#include <QProcess>
#include "media.h"
```

Include dependency graph for media_linux.cpp:

Functions

- muteState getMuteState ()

Variables

- static QProcess muteProcess

13.129.1 Function Documentation

13.129.1.1 muteState getMuteState ( )

Definition at line 9 of file media_linux.cpp.

References MUTED, muteProcess, UNKNOWN, and UNMUTED.

```
9                       {
10      // Get default sink mute state from pulseaudio
11      static muteState lastKnown = UNKNOWN;
12      static quint64 lastTime = 0;
13      // Instead of running a command to check the state and waiting for it to finish, run the command now
        but wait to check it until the next frame
14      // (locking up the GUI thread is bad)
15      if(lastTime > 0 && muteProcess.state() == QProcess::NotRunning){
16          if(muteProcess.exitCode() != 0)
17              lastKnown = UNKNOWN;
18          QString output = muteProcess.readLine().trimmed();
19          if(output == "yes")
20              lastKnown = MUTED;
21          else if(output == "no")
22              lastKnown = UNMUTED;
23      }
24      quint64 time = QDateTime::currentMSecsSinceEpoch();
25      if(time - lastTime < 33)
26          // Don't run it than 30 times per second
27          return lastKnown;
28      lastTime = time;
29      if(muteProcess.state() == QProcess::NotRunning)
30          // Shamelessly taken from pulseaudio-ctl
31          muteProcess.start("sh", QStringList() << "-c" << "pacmd list-sinks|grep -A 15 '*
        index'|awk '/muted:/{ print $2 }'");
32      return lastKnown;
33  }
```

13.129.2 Variable Documentation

13.129.2.1 QProcess muteProcess [static]

Definition at line 7 of file media_linux.cpp.

Referenced by getMuteState().

13.130 src/ckb/media_mac.m File Reference

```
#import <AudioToolbox/AudioServices.h>
#import <Foundation/Foundation.h>
#include "media.h"
```

Include dependency graph for media_mac.m:

Functions

- muteState getMuteState ()
- void disableAppNap ()

13.130.1 Function Documentation

13.130.1.1 void disableAppNap ( )

Definition at line 34 of file media_mac.m.

Referenced by main().

```
34                    {
35     [[NSProcessInfo processInfo] beginActivityWithOptions:NSActivityUserInitiatedAllowingIdleSystemSleep
       reason:@"Keyboard animation"];
36 }
```

Here is the caller graph for this function:

13.130.1.2 muteState getMuteState ( )

Definition at line 5 of file media_mac.m.

References MUTED, UNKNOWN, and UNMUTED.

Referenced by KbPerf::applyIndicators().

```
5                         {
6     // Get the system's default audio device
7     AudioObjectPropertyAddress propertyAddress = {
8         kAudioHardwarePropertyDefaultOutputDevice,
9         kAudioObjectPropertyScopeGlobal,
10         kAudioObjectPropertyElementMaster
11     };
12     AudioDeviceID deviceID = 0;
13     UInt32 dataSize = sizeof(deviceID);
14     if(AudioHardwareServiceGetPropertyData(kAudioObjectSystemObject, &propertyAddress, 0, NULL, &dataSize,
       &deviceID)
15             != kAudioHardwareNoError){
16         return UNKNOWN;
17     }
18     // Grab the mute property
19     AudioObjectPropertyAddress propertyAddress2 = {
20         kAudioDevicePropertyMute,
21         kAudioDevicePropertyScopeOutput,
22         kAudioObjectPropertyElementMaster
23     };
24     if(!AudioHardwareServiceHasProperty(deviceID, &propertyAddress2))
25         return UNKNOWN;
26     bool state = 0;
27     dataSize = sizeof(state);
28     if(AudioHardwareServiceGetPropertyData(deviceID, &propertyAddress2, 0, NULL, &dataSize, &state)
29             != kAudioHardwareNoError)
30         return UNKNOWN;
31     return state ? MUTED : UNMUTED;
32 }
```

Here is the caller graph for this function:

13.131 src/ckb/modeselectdialog.cpp File Reference

```
#include "modeselectdialog.h"
#include "ui_modeselectdialog.h"
```

Include dependency graph for modeselectdialog.cpp:

13.132 src/ckb/modeselectdialog.h File Reference

```
#include <QDialog>
#include "kbmode.h"
```

Include dependency graph for modeselectdialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class ModeSelectDialog

Namespaces

- Ui

13.133 src/ckb/mperfwidget.cpp File Reference

```
#include "mperfwidget.h"
#include "ui_mperfwidget.h"
#include "modeselectdialog.h"
#include <cmath>
```

Include dependency graph for mperfwidget.cpp:

Macros

- #define SET_START if(isSetting) return; isSetting = true
- #define SET_END isSetting = false

Functions

- int dpiExp (int value, int min, int max)
- int dpiLog (int value, int min, int max)
- int dpiRound (int value)

Variables

- static const QString xyLinkPath = "UI/DPI/UnlinkXY"
- static const double DPI_BASE = (double)KbPerf::DPI_MAX / (double)KbPerf::DPI_MIN

13.133.1 Macro Definition Documentation

13.133.1.1 #define SET_END isSetting = false

Definition at line 126 of file mperfwidget.cpp.

Referenced by MPerfWidget::boxXChanged(), MPerfWidget::boxYChanged(), MPerfWidget::sliderXMoved(), and MPerfWidget::sliderYMoved().

13.133.1.2 #define SET_START if(isSetting) return; isSetting = true

Definition at line 125 of file mperfwidget.cpp.

Referenced by MPerfWidget::boxXChanged(), MPerfWidget::boxYChanged(), MPerfWidget::sliderXMoved(), and MPerfWidget::sliderYMoved().

13.133.2 Function Documentation

13.133.2.1 int dpiExp (int *value*, int *min*, int *max*) [inline]

Definition at line 105 of file mperfwidget.cpp.

References DPI_BASE, KbPerf::DPI_MIN, and min().

Referenced by MPerfWidget::sliderXMoved(), and MPerfWidget::sliderYMoved().

```
105                                                 {
106     double val = (value - min) / (double)(max - min);
107     val = pow(DPI_BASE, val);
108     return round(KbPerf::DPI_MIN * val);
109 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.133.2.2 int dpiLog (int *value*, int *min*, int *max*) [inline]

Definition at line 111 of file mperfwidget.cpp.

References DPI_BASE, and KbPerf::DPI_MIN.

Referenced by MPerfWidget::boxXChanged(), and MPerfWidget::boxYChanged().

```
111                                                 {
112     double val = value / (double)KbPerf::DPI_MIN;
113     val = log(val) / log(DPI_BASE);
114     return round(val * (max - min) + min);
115 }
```

Here is the caller graph for this function:

13.133.2.3 int dpiRound (int *value*) [inline]

Definition at line 117 of file mperfwidget.cpp.

Referenced by MPerfWidget::sliderXMoved(), and MPerfWidget::sliderYMoved().

```
117                                 {
118     if(value > 1000)
119         return round(value / 100.) * 100;
120     else
121         return round(value / 50.) * 50;
122 }
```

Here is the caller graph for this function:

13.133.3 Variable Documentation

13.133.3.1 const double DPI_BASE = (double)KbPerf::DPI_MAX / (double)KbPerf::DPI_MIN [static]

Definition at line 103 of file mperfwidget.cpp.

Referenced by dpiExp(), and dpiLog().

13.133.3.2 const QString xyLinkPath = "UI/DPI/UnlinkXY" [static]

Definition at line 6 of file mperfwidget.cpp.

Referenced by MPerfWidget::on_xyBox_clicked().

13.134 src/ckb/mperfwidget.h File Reference

```
#include <QWidget>
#include <QSlider>
#include <QSpinBox>
#include <QCheckBox>
#include <QRadioButton>
#include <QSignalMapper>
#include "kbperf.h"
#include "kbprofile.h"
#include "colorbutton.h"
```

Include dependency graph for mperfwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class MPerfWidget
- struct MPerfWidget::DpiUi

Namespaces

- Ui

13.134.1 Data Structure Documentation

13.134.1.1 struct MPerfWidget::DpiUi

Definition at line 37 of file mperfwidget.h.

Collaboration diagram for MPerfWidget::DpiUi:

Data Fields

QCheckBox *	enableCheck	
ColorButton *	indicator	
QSpinBox *	xBox	

QSlider *	xSlider	
QSpinBox *	yBox	
QSlider *	ySlider	

13.135 src/ckb/quazip/crypt.h File Reference

`#include "quazip_global.h"`
Include dependency graph for crypt.h:

This graph shows which files directly or indirectly include this file:

Macros

- #define CRC32(c, b) ((*(pcrc_32_tab+(((int)(c) ^ (b)) & 0xff))) ^ ((c) >> 8))
- #define zdecode(pkeys, pcrc_32_tab, c) (update_keys(pkeys,pcrc_32_tab,c ^= decrypt_byte(pkeys,pcrc_32_tab)))
- #define zencode(pkeys, pcrc_32_tab, c, t) (t=decrypt_byte(pkeys,pcrc_32_tab), update_keys(pkeys,pcrc_32_tab,c), t^(c))

Functions

- static int decrypt_byte (unsigned long ∗pkeys, const z_crc_t FAR ∗pcrc_32_tab)
- static int update_keys (unsigned long ∗pkeys, const z_crc_t FAR ∗pcrc_32_tab, int c)
- static void init_keys (const char ∗passwd, unsigned long ∗pkeys, const z_crc_t FAR ∗pcrc_32_tab)

13.135.1 Macro Definition Documentation

13.135.1.1 #define CRC32(c, b) ((∗(pcrc_32_tab+(((int)(c) ^ (b)) & 0xff))) ^ ((c) >> 8))

Definition at line 32 of file crypt.h.

Referenced by update_keys().

13.135.1.2 #define zdecode(pkeys, pcrc_32_tab, c) (update_keys(pkeys,pcrc_32_tab,c ^= decrypt_byte(pkeys,pcrc_32_tab)))

Definition at line 79 of file crypt.h.

Referenced by unzOpenCurrentFile3(), and unzReadCurrentFile().

13.135.1.3 #define zencode(pkeys, pcrc_32_tab, c, t) (t=decrypt_byte(pkeys,pcrc_32_tab), update_keys(pkeys,pcrc_32_tab,c), t^(c))

Definition at line 82 of file crypt.h.

Referenced by zip64FlushWriteBuffer().

13.135.2 Function Documentation

13.135.2.1 static int decrypt_byte (unsigned long ∗ pkeys, const z_crc_t FAR ∗ pcrc_32_tab) [static]

Definition at line 37 of file crypt.h.

```
{
    //(void) pcrc_32_tab; /* avoid "unused parameter" warning */
    unsigned temp;  /* POTENTIAL BUG:  temp*(temp^1) may overflow in an
                     * unpredictable manner on 16-bit systems; not a problem
                     * with any known compiler so far, though */

    temp = ((unsigned)(*(pkeys+2)) & 0xffff) | 2;
    return (int)(((temp * (temp ^ 1)) >> 8) & 0xff);
}
```

13.135.2.2 static void init_keys (const char ∗ passwd, unsigned long ∗ pkeys, const z_crc_t FAR ∗ pcrc_32_tab) [static]

Definition at line 68 of file crypt.h.

References update_keys().

Referenced by unzOpenCurrentFile3().

```
{
    *(pkeys+0) = 305419896L;
    *(pkeys+1) = 591751049L;
    *(pkeys+2) = 878082192L;
    while (*passwd != '\0') {
        update_keys(pkeys,pcrc_32_tab,(int)*passwd);
        passwd++;
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.135.2.3 static int update_keys (unsigned long * *pkeys*, const z_crc_t FAR * *pcrc_32_tab*, int *c*) [static]

Definition at line 51 of file crypt.h.

References CRC32.

Referenced by init_keys().

```
{
    (*(pkeys+0)) = CRC32((*(pkeys+0)), c);
    (*(pkeys+1)) += (*(pkeys+0)) & 0xff;
    (*(pkeys+1)) = (*(pkeys+1)) * 134775813L + 1;
    {
      register int keyshift = (int)((*(pkeys+1)) >> 24);
      (*(pkeys+2)) = CRC32((*(pkeys+2)), keyshift);
    }
    return c;
}
```

Here is the caller graph for this function:

13.136 src/ckb/quazip/ioapi.h File Reference

```
#include <stdio.h>
#include <stdlib.h>
#include "zlib.h"
```

Include dependency graph for ioapi.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct zlib_filefunc_def_s
- struct zlib_filefunc64_def_s
- struct zlib_filefunc64_32_def_s

Macros

- #define __USE_FILE_OFFSET64
- #define __USE_LARGEFILE64
- #define _LARGEFILE64_SOURCE
- #define _FILE_OFFSET_BIT 64
- #define OF _Z_OF
- #define ZLIB_FILEFUNC_SEEK_CUR (1)
- #define ZLIB_FILEFUNC_SEEK_END (2)
- #define ZLIB_FILEFUNC_SEEK_SET (0)
- #define ZLIB_FILEFUNC_MODE_READ (1)
- #define ZLIB_FILEFUNC_MODE_WRITE (2)
- #define ZLIB_FILEFUNC_MODE_READWRITEFILTER (3)
- #define ZLIB_FILEFUNC_MODE_EXISTING (4)
- #define ZLIB_FILEFUNC_MODE_CREATE (8)
- #define ZCALLBACK
- #define ZREAD64(filefunc, filestream, buf, size) ((∗((filefunc).zfile_func64.zread_file)) ((filefunc).zfile_func64.opaque,filestream,buf,size))
- #define ZWRITE64(filefunc, filestream, buf, size) ((∗((filefunc).zfile_func64.zwrite_file)) ((filefunc).zfile_func64.opaque,filestream,buf,size))
- #define ZCLOSE64(filefunc, filestream) ((∗((filefunc).zfile_func64.zclose_file)) ((filefunc).zfile_func64.opaque,filestream))
- #define ZFAKECLOSE64(filefunc, filestream) ((∗((filefunc).zfile_func64.zfakeclose_file)) ((filefunc).zfile_func64.opaque,filestream))
- #define ZERROR64(filefunc, filestream) ((∗((filefunc).zfile_func64.zerror_file)) ((filefunc).zfile_func64.opaque,filestream))
- #define ZOPEN64(filefunc, filename, mode) (call_zopen64((&(filefunc)),(filename),(mode)))
- #define ZTELL64(filefunc, filestream) (call_ztell64((&(filefunc)),(filestream)))
- #define ZSEEK64(filefunc, filestream, pos, mode) (call_zseek64((&(filefunc)),(filestream),(pos),(mode)))

Typedefs

- typedef unsigned long long int ZPOS64_T
- typedef voidpf open_file_func _Z_OF ((voidpf opaque, voidpf file, int mode))

  Addition for GDAL : START.
- typedef struct zlib_filefunc_def_s zlib_filefunc_def
- typedef struct zlib_filefunc64_def_s zlib_filefunc64_def
- typedef struct zlib_filefunc64_32_def_s zlib_filefunc64_32_def

Functions

- void fill_qiodevice64_filefunc _Z_OF ((zlib_filefunc64_def ∗pzlib_filefunc_def))
- void fill_qiodevice_filefunc _Z_OF ((zlib_filefunc_def ∗pzlib_filefunc_def))
- voidpf call_zopen64 _Z_OF ((const zlib_filefunc64_32_def ∗pfilefunc, voidpf file, int mode))
- int call_zseek64 _Z_OF ((const zlib_filefunc64_32_def ∗pfilefunc, voidpf filestream, ZPOS64_T offset, int origin))

- ZPOS64_T call_ztell64 _Z_OF ((const zlib_filefunc64_32_def ∗pfilefunc, voidpf filestream))
- void fill_zlib_filefunc64_32_def_from_filefunc32 (zlib_filefunc64_32_def ∗p_filefunc64_32, const zlib_filefunc_def ∗p_filefunc32)

13.136.1 Data Structure Documentation

13.136.1.1 struct zlib_filefunc_def_s

Definition at line 143 of file ioapi.h.

Collaboration diagram for zlib_filefunc_def_s:

Data Fields

voidpf	opaque	
close_file_func	zclose_file	
testerror_file_-func	zerror_file	
open_file_func	zopen_file	
read_file_func	zread_file	
seek_file_func	zseek_file	
tell_file_func	ztell_file	
write_file_func	zwrite_file	

13.136.1.2 struct zlib_filefunc64_def_s

Definition at line 159 of file ioapi.h.

Collaboration diagram for zlib_filefunc64_def_s:

Data Fields

voidpf	opaque	
close_file_func	zclose_file	
testerror_file_-func	zerror_file	
close_file_func	zfakeclose_file	
open64_file_-func	zopen64_file	
read_file_func	zread_file	
seek64_file_func	zseek64_file	
tell64_file_func	ztell64_file	
write_file_func	zwrite_file	

13.136.1.3 struct zlib_filefunc64_32_def_s

Definition at line 176 of file ioapi.h.

Collaboration diagram for zlib_filefunc64_32_def_s:

Data Fields

zlib_filefunc64_-def	zfile_func64	
open_file_func	zopen32_file	
seek_file_func	zseek32_file	
tell_file_func	ztell32_file	

13.136.2 Macro Definition Documentation

13.136.2.1 #define __USE_FILE_OFFSET64

Definition at line 32 of file ioapi.h.

13.136.2.2 #define __USE_LARGEFILE64

Definition at line 35 of file ioapi.h.

13.136.2.3 #define _FILE_OFFSET_BIT 64

Definition at line 41 of file ioapi.h.

13.136.2.4 #define _LARGEFILE64_SOURCE

Definition at line 38 of file ioapi.h.

13.136.2.5 #define OF _Z_OF

Definition at line 106 of file ioapi.h.

13.136.2.6 #define ZCALLBACK

Definition at line 125 of file ioapi.h.

13.136.2.7 #define ZCLOSE64(*filefunc, filestream*) ((∗((filefunc).zfile_func64.zclose_file)) ((filefunc).zfile_func64.opaque,filestream))

Definition at line 189 of file ioapi.h.

Referenced by LoadCentralDirectoryRecord(), unzClose(), unzOpenInternal(), zipClose(), and zipOpen3().

13.136.2.8 #define ZERROR64(*filefunc, filestream*) ((∗((filefunc).zfile_func64.zerror_file)) ((filefunc).zfile_func64.opaque,filestream))

Definition at line 191 of file ioapi.h.

Referenced by unz64local_getByte(), and zip64local_getByte().

13.136.2.9 #define ZFAKECLOSE64(*filefunc, filestream*) ((∗((filefunc).zfile_func64.zfakeclose_file)) ((filefunc).zfile_func64.opaque,filestream))

Definition at line 190 of file ioapi.h.

Referenced by LoadCentralDirectoryRecord(), unzClose(), unzOpenInternal(), zipClose(), and zipOpen3().

13.136.2.10 #define ZLIB_FILEFUNC_MODE_CREATE (8)

Definition at line 118 of file ioapi.h.

Referenced by qiodevice_open_file_func(), and zipOpen3().

13.136.2.11 #define ZLIB_FILEFUNC_MODE_EXISTING (4)

Definition at line 117 of file ioapi.h.

Referenced by qiodevice_open_file_func(), unzOpenInternal(), and zipOpen3().

13.136.2.12 #define ZLIB_FILEFUNC_MODE_READ (1)

Definition at line 113 of file ioapi.h.

Referenced by qiodevice_open_file_func(), unzOpenInternal(), and zipOpen3().

13.136.2.13 #define ZLIB_FILEFUNC_MODE_READWRITEFILTER (3)

Definition at line 115 of file ioapi.h.

Referenced by qiodevice_open_file_func().

13.136.2.14 #define ZLIB_FILEFUNC_MODE_WRITE (2)

Definition at line 114 of file ioapi.h.

Referenced by zipOpen3().

13.136.2.15 #define ZLIB_FILEFUNC_SEEK_CUR (1)

Definition at line 109 of file ioapi.h.

Referenced by qiodevice64_seek_file_func(), qiodevice_seek_file_func(), and unz64local_GetCurrentFileInfoInternal().

13.136.2.16 #define ZLIB_FILEFUNC_SEEK_END (2)

Definition at line 110 of file ioapi.h.

Referenced by qiodevice64_seek_file_func(), qiodevice_seek_file_func(), unz64local_SearchCentralDir(), unz64local_SearchCentralDir64(), zip64local_SearchCentralDir(), and zip64local_SearchCentralDir64().

13.136.2.17 #define ZLIB_FILEFUNC_SEEK_SET (0)

Definition at line 111 of file ioapi.h.

Referenced by LoadCentralDirectoryRecord(), qiodevice64_seek_file_func(), qiodevice_seek_file_func(), unz64local_CheckCurrentFileCoherencyHeader(), unz64local_GetCurrentFileInfoInternal(), unz64local_SearchCentralDir(), unz64local_SearchCentralDir64(), unzGetGlobalComment(), unzGetLocalExtrafield(), unzOpenInternal(), unzReadCurrentFile(), zip64local_SearchCentralDir(), zip64local_SearchCentralDir64(), and zipCloseFileInZipRaw64().

13.136.2.18 #define ZOPEN64(*filefunc, filename, mode*) (call_zopen64((&(filefunc)),(filename),(mode)))

Definition at line 199 of file ioapi.h.

Referenced by unzOpenInternal(), and zipOpen3().

13.136.2.19 #define ZREAD64(*filefunc, filestream, buf, size*) ((∗((filefunc).zfile_func64.zread_file)) ((filefunc).zfile_func64.opaque,filestream,buf,size))

Definition at line 185 of file ioapi.h.

Referenced by LoadCentralDirectoryRecord(), unz64local_getByte(), unz64local_GetCurrentFileInfoInternal(), unz64local_SearchCentralDir(), unz64local_SearchCentralDir64(), unzGetGlobalComment(), unzGetLocalExtrafield(), unzOpenCurrentFile3(), unzReadCurrentFile(), zip64local_getByte(), zip64local_SearchCentralDir(), and zip64local_SearchCentralDir64().

13.136.2.20 #define ZSEEK64(*filefunc, filestream, pos, mode*) (call_zseek64((&(filefunc)),(filestream),(pos),(mode)))

Definition at line 201 of file ioapi.h.

Referenced by LoadCentralDirectoryRecord(), unz64local_CheckCurrentFileCoherencyHeader(), unz64local_GetCurrentFileInfoInternal(), unz64local_SearchCentralDir(), unz64local_SearchCentralDir64(), unzGetGlobalComment(), unzGetLocalExtrafield(), unzOpenCurrentFile3(), unzOpenInternal(), unzReadCurrentFile(), zip64local_SearchCentralDir(), zip64local_SearchCentralDir64(), zipCloseFileInZipRaw64(), and zipOpen3().

13.136.2.21 #define ZTELL64(*filefunc, filestream*) (call_ztell64((&(filefunc)),(filestream)))

Definition at line 200 of file ioapi.h.

Referenced by unz64local_SearchCentralDir(), unz64local_SearchCentralDir64(), Write_LocalFileHeader(), zip64local_SearchCentralDir(), zip64local_SearchCentralDir64(), zipClose(), zipCloseFileInZipRaw64(), zipOpen3(), and zipOpenNewFileInZip4_64().

13.136.2.22 #define ZWRITE64(*filefunc, filestream, buf, size*) ((∗((filefunc).zfile_func64.zwrite_file)) ((filefunc).zfile_func64.opaque,filestream,buf,size))

Definition at line 186 of file ioapi.h.

Referenced by Write_GlobalComment(), Write_LocalFileHeader(), zip64FlushWriteBuffer(), zip64local_putValue(), zipClose(), and zipOpenNewFileInZip4_64().

13.136.3 Typedef Documentation

13.136.3.1 zipFile ZEXPORT zipOpen64 _Z_OF ((voidpf opaque, voidpf file, int mode))

Addition for GDAL : END.

Definition at line 132 of file ioapi.h.

13.136.3.2 typedef struct zlib_filefunc64_32_def_s zlib_filefunc64_32_def

13.136.3.3 typedef struct zlib_filefunc64_def_s zlib_filefunc64_def

13.136.3.4 typedef struct zlib_filefunc_def_s zlib_filefunc_def

13.136.3.5 typedef unsigned long long int ZPOS64_T

Definition at line 94 of file ioapi.h.

13.136.4 Function Documentation

13.136.4.1 void fill_qiodevice64_filefunc _Z_OF ((zlib_filefunc64_def ∗pzlib_filefunc_def))

13.136.4.2 void fill_qiodevice_filefunc _Z_OF ((zlib_filefunc_def ∗pzlib_filefunc_def))

13.136.4.3 voidpf call_zopen64 _Z_OF ((const zlib_filefunc64_32_def ∗pfilefunc, voidpf file, int mode))

13.136.4.4 int call_zseek64 _Z_OF ((const zlib_filefunc64_32_def ∗pfilefunc, voidpf filestream, ZPOS64_T offset, int origin))

13.136.4.5 ZPOS64_T call_ztell64 _Z_OF ((const zlib_filefunc64_32_def ∗pfilefunc, voidpf filestream))

13.136.4.6 void fill_zlib_filefunc64_32_def_from_filefunc32 (zlib_filefunc64_32_def * *p_filefunc64_32,* const zlib_filefunc_def * *p_filefunc32*)

Definition at line 346 of file qioapi.cpp.

References zlib_filefunc_def_s::opaque, zlib_filefunc64_def_s::opaque, zlib_filefunc_def_s::zclose_file, zlib_filefunc64_def_s::zclose_file, zlib_filefunc_def_s::zerror_file, zlib_filefunc64_def_s::zerror_file, zlib_filefunc64_def_s::zfakeclose_file, zlib_filefunc64_32_def_s::zfile_func64, zlib_filefunc64_32_def_s::zopen32_file, zlib_filefunc64_def_s::zopen64_file, zlib_filefunc_def_s::zopen_file, zlib_filefunc_def_s::zread_file, zlib_filefunc64_def_s::zread_file, zlib_filefunc64_32_def_s::zseek32_file, zlib_filefunc64_def_s::zseek64_file, zlib_filefunc_def_s::zseek_file, zlib_filefunc64_32_def_s::ztell32_file, zlib_filefunc64_def_s::ztell64_file, zlib_filefunc_def_s::ztell_file, zlib_filefunc_def_s::zwrite_file, and zlib_filefunc64_def_s::zwrite_file.

Referenced by unzOpen2(), and zipOpen2().

```
{
    p_filefunc64_32->zfile_func64.zopen64_file = NULL;
    p_filefunc64_32->zopen32_file = p_filefunc32->zopen_file;
    p_filefunc64_32->zfile_func64.zerror_file = p_filefunc32->zerror_file;
    p_filefunc64_32->zfile_func64.zread_file = p_filefunc32->zread_file;
    p_filefunc64_32->zfile_func64.zwrite_file = p_filefunc32->zwrite_file;
    p_filefunc64_32->zfile_func64.ztell64_file = NULL;
    p_filefunc64_32->zfile_func64.zseek64_file = NULL;
    p_filefunc64_32->zfile_func64.zclose_file = p_filefunc32->zclose_file;
    p_filefunc64_32->zfile_func64.zerror_file = p_filefunc32->zerror_file;
    p_filefunc64_32->zfile_func64.opaque = p_filefunc32->opaque;
    p_filefunc64_32->zfile_func64.zfakeclose_file = NULL;
    p_filefunc64_32->zseek32_file = p_filefunc32->zseek_file;
    p_filefunc64_32->ztell32_file = p_filefunc32->ztell_file;
}
```

Here is the caller graph for this function:

13.137 src/ckb/quazip/JlCompress.cpp File Reference

```
#include "JlCompress.h"
#include <QDebug>
```

Include dependency graph for JICompress.cpp:

Functions

- static bool copyData (QIODevice &inFile, QIODevice &outFile)

13.137.1 Function Documentation

13.137.1.1 static bool copyData (QIODevice & *inFile*, QIODevice & *outFile*) [static]

Definition at line 29 of file JICompress.cpp.

Referenced by JICompress::compressFile(), and JICompress::extractFile().

```
{
    while (!inFile.atEnd()) {
        char buf[4096];
        qint64 readLen = inFile.read(buf, 4096);
        if (readLen <= 0)
            return false;
        if (outFile.write(buf, readLen) != readLen)
            return false;
    }
    return true;
}
```

Here is the caller graph for this function:

13.138 src/ckb/quazip/JlCompress.h File Reference

```
#include "quazip.h"
#include "quazipfile.h"
#include "quazipfileinfo.h"
#include <QString>
#include <QDir>
#include <QFileInfo>
#include <QFile>
```

Include dependency graph for JlCompress.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class JlCompress

  Utility class for typical operations.

13.139 src/ckb/quazip/qioapi.cpp File Reference

```
#include <stdio.h>
```

```
#include <stdlib.h>
#include <string.h>
#include "zlib.h"
#include "ioapi.h"
#include "quazip_global.h"
#include <QIODevice>
```

Include dependency graph for qioapi.cpp:

Data Structures

- struct QIODevice_descriptor

Macros

- #define SEEK_CUR 1
- #define SEEK_END 2
- #define SEEK_SET 0

Functions

- voidpf call_zopen64 (const zlib_filefunc64_32_def *pfilefunc, voidpf file, int mode)
- int call_zseek64 (const zlib_filefunc64_32_def *pfilefunc, voidpf filestream, ZPOS64_T offset, int origin)
- ZPOS64_T call_ztell64 (const zlib_filefunc64_32_def *pfilefunc, voidpf filestream)
- voidpf qiodevice_open_file_func (voidpf opaque, voidpf file, int mode)
- uLong qiodevice_read_file_func (voidpf opaque, voidpf stream, void *buf, uLong size)
- uLong qiodevice_write_file_func (voidpf opaque, voidpf stream, const void *buf, uLong size)
- uLong qiodevice_tell_file_func (voidpf opaque, voidpf stream)
- ZPOS64_T qiodevice64_tell_file_func (voidpf opaque, voidpf stream)
- int qiodevice_seek_file_func (voidpf, voidpf stream, uLong offset, int origin)
- int qiodevice64_seek_file_func (voidpf, voidpf stream, ZPOS64_T offset, int origin)
- int qiodevice_close_file_func (voidpf opaque, voidpf stream)
- int qiodevice_fakeclose_file_func (voidpf opaque, voidpf)
- int qiodevice_error_file_func (voidpf, voidpf)
- void fill_qiodevice_filefunc (zlib_filefunc_def *pzlib_filefunc_def)
- void fill_qiodevice64_filefunc (zlib_filefunc64_def *pzlib_filefunc_def)
- void fill_zlib_filefunc64_32_def_from_filefunc32 (zlib_filefunc64_32_def *p_filefunc64_32, const zlib_filefunc_def *p_filefunc32)

13.139.1 Macro Definition Documentation

13.139.1.1 #define SEEK_CUR 1

Definition at line 29 of file qioapi.cpp.

13.139.1.2 #define SEEK_END 2

Definition at line 33 of file qioapi.cpp.

13.139.1.3 #define SEEK_SET 0

Definition at line 37 of file qioapi.cpp.

Referenced by unzOpenCurrentFile3().

13.139.2 Function Documentation

13.139.2.1 voidpf call_zopen64 (const zlib_filefunc64_32_def * *pfilefunc,* voidpf *file,* int *mode*)

Definition at line 40 of file qioapi.cpp.

References zlib_filefunc64_def_s::opaque, zlib_filefunc64_32_def_s::zfile_func64, zlib_filefunc64_32_def_s::zopen32_file, and zlib_filefunc64_def_s::zopen64_file.

```
{
    if (pfilefunc->zfile_func64.zopen64_file != NULL)
        return (*(pfilefunc->zfile_func64.zopen64_file)) (pfilefunc->zfile_func64.opaque,file,mode);
    else
    {
        return (*(pfilefunc->zopen32_file))(pfilefunc->zfile_func64.opaque,file,mode);
    }
}
```

13.139.2.2 int call_zseek64 (const zlib_filefunc64_32_def * *pfilefunc,* voidpf *filestream,* ZPOS64_T *offset,* int *origin*)

Definition at line 50 of file qioapi.cpp.

References zlib_filefunc64_def_s::opaque, zlib_filefunc64_32_def_s::zfile_func64, zlib_filefunc64_32_def_s::zseek32_file, and zlib_filefunc64_def_s::zseek64_file.

```
{
    if (pfilefunc->zfile_func64.zseek64_file != NULL)
        return (*(pfilefunc->zfile_func64.zseek64_file)) (pfilefunc->zfile_func64.opaque,filestream,offset,origin);
    else
    {
        uLong offsetTruncated = (uLong)offset;
        if (offsetTruncated != offset)
            return -1;
        else
            return (*(pfilefunc->zseek32_file))(pfilefunc->zfile_func64.opaque,filestream,offsetTruncated,origin);
    }
}
```

13.139.2.3 ZPOS64_T call_ztell64 (const zlib_filefunc64_32_def * *pfilefunc,* voidpf *filestream*)

Definition at line 64 of file qioapi.cpp.

References zlib_filefunc64_def_s::opaque, zlib_filefunc64_32_def_s::zfile_func64, zlib_filefunc64_def_s::zseek64_file, zlib_filefunc64_32_def_s::ztell32_file, and zlib_filefunc64_def_s::ztell64_file.

```
{
    if (pfilefunc->zfile_func64.zseek64_file != NULL)
        return (*(pfilefunc->zfile_func64.ztell64_file)) (pfilefunc->zfile_func64.opaque,filestream);
    else
    {
        uLong tell_uLong = (*(pfilefunc->ztell32_file))(pfilefunc->zfile_func64.opaque,filestream);
        if ((tell_uLong) == ((uLong)-1))
            return (ZPOS64_T)-1;
        else
            return tell_uLong;
    }
}
```

13.139.2.4 void fill_qiodevice64_filefunc (zlib_filefunc64_def * *pzlib_filefunc_def*)

Definition at line 331 of file qioapi.cpp.

References zlib_filefunc64_def_s::opaque, qiodevice64_seek_file_func(), qiodevice64_tell_file_func(), qiodevice_close_file_func(), qiodevice_error_file_func(), qiodevice_fakeclose_file_func(), qiodevice_open_file_func(), qiodevice_read_file_func(), qiodevice_write_file_func(), zlib_filefunc64_def_s::zclose_file, zlib_filefunc64_def_s::zerror_file, zlib_filefunc64_def_s::zfakeclose_file, zlib_filefunc64_def_s::zopen64_file, zlib_filefunc64_def_s::zread_file, zlib_filefunc64_def_s::zseek64_file, zlib_filefunc64_def_s::ztell64_file, and zlib_filefunc64_def_s::zwrite_file.

Referenced by unzOpenInternal(), and zipOpen3().

```
{
    // Open functions are the same for Qt.
    pzlib_filefunc_def->zopen64_file = qiodevice_open_file_func;
    pzlib_filefunc_def->zread_file = qiodevice_read_file_func;
    pzlib_filefunc_def->zwrite_file = qiodevice_write_file_func;
    pzlib_filefunc_def->ztell64_file = qiodevice64_tell_file_func;
    pzlib_filefunc_def->zseek64_file = qiodevice64_seek_file_func;
    pzlib_filefunc_def->zclose_file = qiodevice_close_file_func;
    pzlib_filefunc_def->zerror_file = qiodevice_error_file_func;
    pzlib_filefunc_def->opaque = new QIODevice_descriptor;
    pzlib_filefunc_def->zfakeclose_file = qiodevice_fakeclose_file_func;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.139.2.5 void fill_qiodevice_filefunc (zlib_filefunc_def * *pzlib_filefunc_def*)

Definition at line 318 of file qioapi.cpp.

References zlib_filefunc_def_s::opaque, qiodevice_close_file_func(), qiodevice_error_file_func(), qiodevice_open_file_func(), qiodevice_read_file_func(), qiodevice_seek_file_func(), qiodevice_tell_file_func(), qiodevice_write_file_func(), zlib_filefunc_def_s::zclose_file, zlib_filefunc_def_s::zerror_file, zlib_filefunc_def_s::zopen_file, zlib_filefunc_def_s::zread_file, zlib_filefunc_def_s::zseek_file, zlib_filefunc_def_s::ztell_file, and zlib_filefunc_def_s::zwrite_file.

```
320 {
```

```
    pzlib_filefunc_def->zopen_file = qiodevice_open_file_func;
    pzlib_filefunc_def->zread_file = qiodevice_read_file_func;
    pzlib_filefunc_def->zwrite_file = qiodevice_write_file_func;
    pzlib_filefunc_def->ztell_file = qiodevice_tell_file_func;
    pzlib_filefunc_def->zseek_file = qiodevice_seek_file_func;
    pzlib_filefunc_def->zclose_file = qiodevice_close_file_func;
    pzlib_filefunc_def->zerror_file = qiodevice_error_file_func;
    pzlib_filefunc_def->opaque = new QIODevice_descriptor;
}
```

Here is the call graph for this function:

13.139.2.6 void fill_zlib_filefunc64_32_def_from_filefunc32 (zlib_filefunc64_32_def * *p_filefunc64_32*, const zlib_filefunc_def * *p_filefunc32*)

Definition at line 346 of file qioapi.cpp.

References zlib_filefunc_def_s::opaque, zlib_filefunc64_def_s::opaque, zlib_filefunc_def_s::zclose_file, zlib_filefunc64_def_s::zclose_file, zlib_filefunc_def_s::zerror_file, zlib_filefunc64_def_s::zerror_file, zlib_filefunc64_def_s::zfakeclose_file, zlib_filefunc64_32_def_s::zfile_func64, zlib_filefunc64_32_def_s::zopen32_file, zlib_filefunc64_def_s::zopen64_file, zlib_filefunc_def_s::zopen_file, zlib_filefunc_def_s::zread_file, zlib_filefunc64_def_s::zread_file, zlib_filefunc64_32_def_s::zseek32_file, zlib_filefunc64_def_s::zseek64_file, zlib_filefunc_def_s::zseek_file, zlib_filefunc64_32_def_s::ztell32_file, zlib_filefunc64_def_s::ztell64_file, zlib_filefunc_def_s::ztell_file, zlib_filefunc_def_s::zwrite_file, and zlib_filefunc64_def_s::zwrite_file.

Referenced by unzOpen2(), and zipOpen2().

```
{
    p_filefunc64_32->zfile_func64.zopen64_file = NULL;
    p_filefunc64_32->zopen32_file = p_filefunc32->zopen_file;
    p_filefunc64_32->zfile_func64.zerror_file = p_filefunc32->
  zerror_file;
    p_filefunc64_32->zfile_func64.zread_file = p_filefunc32->
```

```
zread_file;
  p_filefunc64_32->zfile_func64.zwrite_file = p_filefunc32->zwrite_file;
  p_filefunc64_32->zfile_func64.ztell64_file = NULL;
  p_filefunc64_32->zfile_func64.zseek64_file = NULL;
  p_filefunc64_32->zfile_func64.zclose_file = p_filefunc32->zclose_file;
  p_filefunc64_32->zfile_func64.zerror_file = p_filefunc32->zerror_file;
  p_filefunc64_32->zfile_func64.opaque = p_filefunc32->opaque;
  p_filefunc64_32->zfile_func64.zfakeclose_file = NULL;
  p_filefunc64_32->zseek32_file = p_filefunc32->zseek_file;
  p_filefunc64_32->ztell32_file = p_filefunc32->ztell_file;
}
```

Here is the caller graph for this function:

13.139.2.7 int qiodevice64_seek_file_func (voidpf , voidpf *stream*, ZPOS64_T *offset*, int *origin*)

Definition at line 244 of file qioapi.cpp.

References ZLIB_FILEFUNC_SEEK_CUR, ZLIB_FILEFUNC_SEEK_END, and ZLIB_FILEFUNC_SEEK_SET.

Referenced by fill_qiodevice64_filefunc().

```
{
    QIODevice *iodevice = reinterpret_cast<QIODevice*>(stream);
    if (iodevice->isSequential()) {
        if (origin == ZLIB_FILEFUNC_SEEK_END
                && offset == 0) {
            // sequential devices are always at end (needed in mdAppend)
            return 0;
        } else {
            qWarning("qiodevice_seek_file_func() called for sequential device");
            return -1;
        }
    }
    qint64 qiodevice_seek_result=0;
    int ret;
    switch (origin)
    {
    case ZLIB_FILEFUNC_SEEK_CUR :
        qiodevice_seek_result = ((QIODevice*)stream)->pos() + offset;
        break;
    case ZLIB_FILEFUNC_SEEK_END :
        qiodevice_seek_result = ((QIODevice*)stream)->size() - offset;
        break;
    case ZLIB_FILEFUNC_SEEK_SET :
        qiodevice_seek_result = offset;
        break;
    default:
        return -1;
    }
    ret = !iodevice->seek(qiodevice_seek_result);
    return ret;
}
```

Here is the caller graph for this function:

13.139.2.8 ZPOS64_T qiodevice64_tell_file_func (voidpf *opaque*, voidpf *stream*)

Definition at line 192 of file qioapi.cpp.

References QIODevice_descriptor::pos.

Referenced by fill_qiodevice64_filefunc().

```
195 {
196     QIODevice_descriptor *d = reinterpret_cast<
    QIODevice_descriptor*>(opaque);
197     QIODevice *iodevice = reinterpret_cast<QIODevice*>(stream);
198     qint64 ret;
199     if (iodevice->isSequential()) {
200         ret = d->pos;
201     } else {
202         ret = iodevice->pos();
203     }
204     return static_cast<ZPOS64_T>(ret);
205 }
```

Here is the caller graph for this function:

13.139.2.9 int qiodevice_close_file_func (voidpf *opaque*, voidpf *stream*)

Definition at line 281 of file qioapi.cpp.

Referenced by fill_qiodevice64_filefunc(), and fill_qiodevice_filefunc().

```
284 {
285     QIODevice_descriptor *d = reinterpret_cast<
    QIODevice_descriptor*>(opaque);
286     delete d;
287     QIODevice *device = reinterpret_cast<QIODevice*>(stream);
288 #ifdef QUAZIP_QSAVEFILE_BUG_WORKAROUND
289     // QSaveFile terribly breaks the is-a idiom:
290     // it IS a QIODevice, but it is NOT compatible with it: close() is private
291     QSaveFile *file = qobject_cast<QSaveFile*>(device);
292     if (file != NULL) {
293         // We have to call the ugly commit() instead:
294         return file->commit() ? 0 : -1;
295     }
```

```
#endif
    device->close();
    return 0;
}
```

Here is the caller graph for this function:

13.139.2.10 int qiodevice_error_file_func (voidpf , voidpf)

Definition at line 310 of file qioapi.cpp.

Referenced by fill_qiodevice64_filefunc(), and fill_qiodevice_filefunc().

```
{
    // can't check for error due to the QIODevice API limitation
    return 0;
}
```

Here is the caller graph for this function:

13.139.2.11 int qiodevice_fakeclose_file_func (voidpf *opaque*, voidpf)

Definition at line 301 of file qioapi.cpp.

Referenced by fill_qiodevice64_filefunc().

```
{
    QIODevice_descriptor *d = reinterpret_cast<
  QIODevice_descriptor*>(opaque);
    delete d;
    return 0;
}
```

Here is the caller graph for this function:

13.139.2.12 voidpf qiodevice_open_file_func (voidpf *opaque,* voidpf *file,* int *mode*)

Definition at line 86 of file qioapi.cpp.

References QIODevice_descriptor::pos, ZLIB_FILEFUNC_MODE_CREATE, ZLIB_FILEFUNC_MODE_EXISTING, ZLIB_FILEFUNC_MODE_READ, and ZLIB_FILEFUNC_MODE_READWRITEFILTER.

Referenced by fill_qiodevice64_filefunc(), and fill_qiodevice_filefunc().

```
{
    QIODevice_descriptor *d = reinterpret_cast<QIODevice_descriptor*>(opaque);
    QIODevice *iodevice = reinterpret_cast<QIODevice*>(file);
    QIODevice::OpenMode desiredMode;
    if ((mode & ZLIB_FILEFUNC_MODE_READWRITEFILTER)==ZLIB_FILEFUNC_MODE_READ)
        desiredMode = QIODevice::ReadOnly;
    else if (mode & ZLIB_FILEFUNC_MODE_EXISTING)
        desiredMode = QIODevice::ReadWrite;
    else if (mode & ZLIB_FILEFUNC_MODE_CREATE)
        desiredMode = QIODevice::WriteOnly;
    if (iodevice->isOpen()) {
        if ((iodevice->openMode() & desiredMode) == desiredMode) {
            if (desiredMode != QIODevice::WriteOnly
                    && iodevice->isSequential()) {
                // We can use sequential devices only for writing.
                delete d;
                return NULL;
            } else {
                if ((desiredMode & QIODevice::WriteOnly) != 0) {
                    // open for writing, need to seek existing device
                    if (!iodevice->isSequential()) {
                        iodevice->seek(0);
                    } else {
                        d->pos = iodevice->pos();
                    }
                }
            }
            return iodevice;
        } else {
            delete d;
            return NULL;
        }
    }
    iodevice->open(desiredMode);
    if (iodevice->isOpen()) {
        if (desiredMode != QIODevice::WriteOnly && iodevice->isSequential()) {
            // We can use sequential devices only for writing.
            iodevice->close();
            delete d;
            return NULL;
        } else {
            return iodevice;
        }
    } else {
        delete d;
        return NULL;
    }
}
```

Here is the caller graph for this function:

13.139.2.13 uLong qiodevice_read_file_func (voidpf *opaque,* voidpf *stream,* void ∗ *buf,* uLong *size*)

Definition at line 140 of file qioapi.cpp.

References QIODevice_descriptor::pos.

Referenced by fill_qiodevice64_filefunc(), and fill_qiodevice_filefunc().

```
145 {
146     QIODevice_descriptor *d = reinterpret_cast<
    QIODevice_descriptor*>(opaque);
147     QIODevice *iodevice = reinterpret_cast<QIODevice*>(stream);
148     qint64 ret64 = iodevice->read((char*)buf,size);
149     uLong ret;
150     ret = (uLong) ret64;
151     if (ret64 != -1) {
152         d->pos += ret64;
153     }
154     return ret;
155 }
```

Here is the caller graph for this function:

13.139.2.14 int qiodevice_seek_file_func (voidpf , voidpf *stream,* uLong *offset,* int *origin*)

Definition at line 207 of file qioapi.cpp.

References ZLIB_FILEFUNC_SEEK_CUR, ZLIB_FILEFUNC_SEEK_END, and ZLIB_FILEFUNC_SEEK_SET.

Referenced by fill_qiodevice_filefunc().

```
212 {
213     QIODevice *iodevice = reinterpret_cast<QIODevice*>(stream);
214     if (iodevice->isSequential()) {
215         if (origin == ZLIB_FILEFUNC_SEEK_END
216                 && offset == 0) {
217             // sequential devices are always at end (needed in mdAppend)
218             return 0;
219         } else {
220             qWarning("qiodevice_seek_file_func() called for sequential device");
221             return -1;
```

```
        }
    }
    uLong qiodevice_seek_result=0;
    int ret;
    switch (origin)
    {
    case ZLIB_FILEFUNC_SEEK_CUR :
        qiodevice_seek_result = ((QIODevice*)stream)->pos() + offset;
        break;
    case ZLIB_FILEFUNC_SEEK_END :
        qiodevice_seek_result = ((QIODevice*)stream)->size() - offset;
        break;
    case ZLIB_FILEFUNC_SEEK_SET :
        qiodevice_seek_result = offset;
        break;
    default:
        return -1;
    }
    ret = !iodevice->seek(qiodevice_seek_result);
    return ret;
}
```

Here is the caller graph for this function:

13.139.2.15 uLong qiodevice_tell_file_func (voidpf *opaque*, voidpf *stream*)

Definition at line 175 of file qioapi.cpp.

References QIODevice_descriptor::pos.

Referenced by fill_qiodevice_filefunc().

```
{
    QIODevice_descriptor *d = reinterpret_cast<
  QIODevice_descriptor*>(opaque);
    QIODevice *iodevice = reinterpret_cast<QIODevice*>(stream);
    uLong ret;
    qint64 ret64;
    if (iodevice->isSequential()) {
        ret64 = d->pos;
    } else {
        ret64 = iodevice->pos();
    }
    ret = static_cast<uLong>(ret64);
    return ret;
}
```

Here is the caller graph for this function:

13.139.2.16 uLong qiodevice_write_file_func (voidpf *opaque*, voidpf *stream*, const void ∗ *buf*, uLong *size*)

Definition at line 158 of file qioapi.cpp.

References QIODevice_descriptor::pos.

Referenced by fill_qiodevice64_filefunc(), and fill_qiodevice_filefunc().

```
{
    QIODevice_descriptor *d = reinterpret_cast<QIODevice_descriptor*>(opaque);
    QIODevice *iodevice = reinterpret_cast<QIODevice*>(stream);
    uLong ret;
    qint64 ret64 = iodevice->write((char*)buf,size);
    if (ret64 != -1) {
        d->pos += ret64;
    }
    ret = (uLong) ret64;
    return ret;
}
```

Here is the caller graph for this function:

13.140 src/ckb/quazip/quaadler32.cpp File Reference

```
#include "quaadler32.h"
#include "zlib.h"
```

Include dependency graph for quaadler32.cpp:

13.141 src/ckb/quazip/quaadler32.h File Reference

```
#include <QByteArray>
#include "quachecksum32.h"
```

Include dependency graph for quaadler32.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class QuaAdler32

  Adler32 checksum.

13.142 src/ckb/quazip/quachecksum32.h File Reference

```
#include <QByteArray>
#include "quazip_global.h"
```

Include dependency graph for quachecksum32.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class QuaChecksum32

  Checksum interface.

13.143 src/ckb/quazip/quacrc32.cpp File Reference

```
#include "quacrc32.h"
#include "zlib.h"
```

Include dependency graph for quacrc32.cpp:

13.144 src/ckb/quazip/quacrc32.h File Reference

```
#include "quachecksum32.h"
```

Include dependency graph for quacrc32.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class QuaCrc32

  CRC32 checksum.

13.145 src/ckb/quazip/quagzipfile.cpp File Reference

```
#include <QFile>
#include "quagzipfile.h"
```

Include dependency graph for quagzipfile.cpp:

13.146 src/ckb/quazip/quagzipfile.h File Reference

```
#include <QIODevice>
#include "quazip_global.h"
#include <zlib.h>
```

Include dependency graph for quagzipfile.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class QuaGzipFile

  GZIP file.

13.147 src/ckb/quazip/quaziodevice.cpp File Reference

`#include "quaziodevice.h"`
Include dependency graph for quaziodevice.cpp:

Macros

- #define QUAZIO_INBUFSIZE 4096

- #define QUAZIO_OUTBUFSIZE 4096

13.147.1 Macro Definition Documentation

13.147.1.1 #define QUAZIO_INBUFSIZE 4096

Definition at line 27 of file quaziodevice.cpp.

Referenced by QuaZIODevice::readData().

13.147.1.2 #define QUAZIO_OUTBUFSIZE 4096

Definition at line 28 of file quaziodevice.cpp.

Referenced by QuaZIODevice::flush(), and QuaZIODevice::writeData().

13.148 src/ckb/quazip/quaziodevice.h File Reference

```
#include <QIODevice>
#include "quazip_global.h"
#include <zlib.h>
```

Include dependency graph for quaziodevice.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class QuaZIODevice

  A class to compress/decompress QIODevice.

13.149 src/ckb/quazip/quazip.cpp File Reference

```
#include <QFile>
#include <QFlags>
#include <QHash>
#include "quazip.h"
```

Include dependency graph for quazip.cpp:

Data Structures

- class QuaZipPrivate

  All the internal stuff for the QuaZip class.

Functions

- template<typename TFileInfo >
  TFileInfo QuaZip_getFileInfo (QuaZip *zip, bool *ok)

- template<>
  QuaZipFileInfo QuaZip_getFileInfo (QuaZip *zip, bool *ok)
- template<>
  QuaZipFileInfo64 QuaZip_getFileInfo (QuaZip *zip, bool *ok)
- template<>
  QString QuaZip_getFileInfo (QuaZip *zip, bool *ok)

13.149.1 Function Documentation

13.149.1.1 template<typename TFileInfo > TFileInfo QuaZip_getFileInfo (QuaZip * *zip*, bool * *ok*)

Definition at line 663 of file quazip.cpp.

References QuaZip::getCurrentFileInfo(), and QuaZip::getCurrentFileName().

```
664 {
665     QuaZipFileInfo info;
666     *ok = zip->getCurrentFileInfo(&info);
667     return info;
668 }
```

Here is the call graph for this function:

13.149.1.2 template<> QuaZipFileInfo QuaZip_getFileInfo (QuaZip * *zip*, bool * *ok*)

Definition at line 663 of file quazip.cpp.

References QuaZip::getCurrentFileInfo().

```
664 {
665     QuaZipFileInfo info;
666     *ok = zip->getCurrentFileInfo(&info);
667     return info;
668 }
```

Here is the call graph for this function:

13.149.1.3 template<> QuaZipFileInfo64 QuaZip_getFileInfo (QuaZip * *zip*, bool * *ok*)

Definition at line 671 of file quazip.cpp.

References QuaZip::getCurrentFileInfo().

```
672 {
673     QuaZipFileInfo64 info;
674     *ok = zip->getCurrentFileInfo(&info);
675     return info;
676 }
```

Here is the call graph for this function:

13.149.1.4 template<> QString QuaZip_getFileInfo (QuaZip * *zip*, bool * *ok*)

Definition at line 679 of file quazip.cpp.

References QuaZip::getCurrentFileName().

```
680 {
681     QString name = zip->getCurrentFileName();
682     *ok = !name.isEmpty();
683     return name;
684 }
```

Here is the call graph for this function:

13.150 src/ckb/quazip/quazip.h File Reference

```
#include <QString>
#include <QStringList>
#include <QTextCodec>
#include "zip.h"
#include "unzip.h"
#include "quazip_global.h"
#include "quazipfileinfo.h"
```

Include dependency graph for quazip.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class QuaZip

  ZIP archive.

Macros

- #define UNZ_OPENERROR -1000

13.150.1 Macro Definition Documentation

13.150.1.1 #define UNZ_OPENERROR -1000

Definition at line 41 of file quazip.h.

Referenced by QuaZip::open().

13.151 src/ckb/quazip/quazip_global.h File Reference

```
#include <QtCore/qglobal.h>
```

Include dependency graph for quazip_global.h:

This graph shows which files directly or indirectly include this file:

Macros

- #define QUAZIP_EXPORT Q_DECL_IMPORT

  This is automatically defined when building a static library, but when including QuaZip sources directly into a project, QUAZIP_STATIC should be defined explicitly to avoid possible troubles with unnecessary importing/exporting.
- #define UNUSED
- #define QUAZIP_EXTRA_NTFS_MAGIC 0x000Au
- #define QUAZIP_EXTRA_NTFS_TIME_MAGIC 0x0001u

13.151.1 Macro Definition Documentation

13.151.1.1 #define QUAZIP_EXPORT Q_DECL_IMPORT

When building a DLL with MSVC, QUAZIP_BUILD must be defined. qglobal.h takes care of defining Q_DECL_∗ correctly for msvc/gcc.

Definition at line 46 of file quazip_global.h.

13.151.1.2 #define QUAZIP_EXTRA_NTFS_MAGIC 0x000Au

Definition at line 56 of file quazip_global.h.

Referenced by getNTFSTime(), and setNTFSTime().

13.151.1.3 #define QUAZIP_EXTRA_NTFS_TIME_MAGIC 0x0001u

Definition at line 57 of file quazip_global.h.

Referenced by getNTFSTime(), and setNTFSTime().

13.151.1.4 #define UNUSED

Definition at line 53 of file quazip_global.h.

13.152 src/ckb/quazip/quazipdir.cpp File Reference

```
#include "quazipdir.h"
#include <QSet>
#include <QSharedData>
```

Include dependency graph for quazipdir.cpp:

Functions

- QuaZipFileInfo64 QuaZipDir_getFileInfo (QuaZip *zip, bool *ok, const QString &relativeName, bool isReal)
- static void QuaZipDir_convertInfoList (const QList< QuaZipFileInfo64 > &from, QList< QuaZipFileInfo64 > &to)
- static void QuaZipDir_convertInfoList (const QList< QuaZipFileInfo64 > &from, QStringList &to)
- static void QuaZipDir_convertInfoList (const QList< QuaZipFileInfo64 > &from, QList< QuaZipFileInfo > &to)

13.152.1 Function Documentation

13.152.1.1 static void QuaZipDir_convertInfoList (const QList< QuaZipFileInfo64 > & *from*, QList< QuaZipFileInfo64 > & *to*) [static]

Definition at line 188 of file quazipdir.cpp.

```
{
    to = from;
}
```

13.152.1.2 static void QuaZipDir_convertInfoList (const QList< QuaZipFileInfo64 > & *from*, QStringList & *to*) [static]

Definition at line 194 of file quazipdir.cpp.

```
{
    to.clear();
    for (QList<QuaZipFileInfo64>::const_iterator i = from.constBegin();
            i != from.constEnd();
            ++i) {
        to.append(i->name);
    }
}
```

13.152.1.3 static void QuaZipDir_convertInfoList (const QList< QuaZipFileInfo64 > & *from*, QList< QuaZipFileInfo > & *to*) [static]

Definition at line 205 of file quazipdir.cpp.

```
{
    to.clear();
    for (QList<QuaZipFileInfo64>::const_iterator i = from.constBegin();
            i != from.constEnd();
            ++i) {
        QuaZipFileInfo info32;
        i->toQuaZipFileInfo(info32);
        to.append(info32);
    }
}
```

13.152.1.4 QuaZipFileInfo64 QuaZipDir_getFileInfo (QuaZip * *zip*, bool * *ok*, const QString & *relativeName*, bool *isReal*)

Definition at line 165 of file quazipdir.cpp.

References QuaZipFileInfo64::compressedSize, QuaZipFileInfo64::crc, QuaZipFileInfo64::diskNumberStart, QuaZipFileInfo64::externalAttr, QuaZipFileInfo64::flags, QuaZip::getCurrentFileInfo(), QuaZipFileInfo64::internalAttr, QuaZipFileInfo64::method, QuaZipFileInfo64::name, QuaZipFileInfo64::uncompressedSize, QuaZipFileInfo64::versionCreated, and QuaZipFileInfo64::versionNeeded.

```
{
    QuaZipFileInfo64 info;
    if (isReal) {
        *ok = zip->getCurrentFileInfo(&info);
    } else {
        *ok = true;
        info.compressedSize = 0;
        info.crc = 0;
        info.diskNumberStart = 0;
        info.externalAttr = 0;
        info.flags = 0;
        info.internalAttr = 0;
        info.method = 0;
        info.uncompressedSize = 0;
        info.versionCreated = info.versionNeeded = 0;
    }
    info.name = relativeName;
    return info;
}
```

Here is the call graph for this function:

13.153 src/ckb/quazip/quazipdir.h File Reference

```
#include "quazip.h"
#include "quazipfileinfo.h"
#include <QDir>
#include <QList>
#include <QSharedDataPointer>
```

Include dependency graph for quazipdir.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class QuaZipDir

  Provides ZIP archive navigation.

13.154 src/ckb/quazip/quazipfile.cpp File Reference

```
#include "quazipfile.h"
```

Include dependency graph for quazipfile.cpp:

Data Structures

- class QuaZipFilePrivate

  The implementation class for QuaZip.

13.155 src/ckb/quazip/quazipfile.h File Reference

```
#include <QIODevice>
#include "quazip_global.h"
#include "quazip.h"
#include "quazipnewinfo.h"
```

Include dependency graph for quazipfile.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class QuaZipFile

  A file inside ZIP archive.

13.156 src/ckb/quazip/quazipfileinfo.cpp File Reference

`#include "quazipfileinfo.h"`
Include dependency graph for quazipfileinfo.cpp:

Functions

- static QFile::Permissions permissionsFromExternalAttr (quint32 externalAttr)
- static QDateTime getNTFSTime (const QByteArray &extra, int position, int *fineTicks)

13.156.1 Function Documentation

13.156.1.1 static QDateTime getNTFSTime (const QByteArray & *extra*, int *position*, int * *fineTicks*) [static]

Definition at line 92 of file quazipfileinfo.cpp.

References QUAZIP_EXTRA_NTFS_MAGIC, and QUAZIP_EXTRA_NTFS_TIME_MAGIC.

Referenced by QuaZipFileInfo64::getNTFSaTime(), QuaZipFileInfo64::getNTFScTime(), and QuaZipFileInfo64::getNTFSmTime().

```
{
    QDateTime dateTime;
    for (int i = 0; i <= extra.size() - 4; ) {
        unsigned type = static_cast<unsigned>(static_cast<unsigned char>(
                                                extra.at(i)))
                | (static_cast<unsigned>(static_cast<unsigned char>(
                                                 extra.at(i + 1))) << 8);
        i += 2;
        unsigned length = static_cast<unsigned>(static_cast<unsigned char>(
                                                 extra.at(i)))
                 | (static_cast<unsigned>(static_cast<unsigned char>(
                                                 extra.at(i + 1))) << 8);
        i += 2;
        if (type == QUAZIP_EXTRA_NTFS_MAGIC && length >= 32) {
            i += 4; // reserved
            while (i <= extra.size() - 4) {
                unsigned tag = static_cast<unsigned>(
                            static_cast<unsigned char>(extra.at(i)))
                        | (static_cast<unsigned>(
                                static_cast<unsigned char>(extra.at(i + 1)))
                            << 8);
                i += 2;
                int tagsize = static_cast<unsigned>(
                            static_cast<unsigned char>(extra.at(i)))
                        | (static_cast<unsigned>(
                                static_cast<unsigned char>(extra.at(i + 1)))
                            << 8);
                i += 2;
                if (tag == QUAZIP_EXTRA_NTFS_TIME_MAGIC
                        && tagsize >= position + 8) {
                    i += position;
                    quint64 mtime = static_cast<quint64>(
                                 static_cast<unsigned char>(extra.at(i)))
                        | (static_cast<quint64>(static_cast<unsigned char>(
                                                extra.at(i + 1))) << 8)
                        | (static_cast<quint64>(static_cast<unsigned char>(
                                                extra.at(i + 2))) << 16)
                        | (static_cast<quint64>(static_cast<unsigned char>(
                                                extra.at(i + 3))) << 24)
                        | (static_cast<quint64>(static_cast<unsigned char>(
                                                extra.at(i + 4))) << 32)
                        | (static_cast<quint64>(static_cast<unsigned char>(
                                                extra.at(i + 5))) << 40)
                        | (static_cast<quint64>(static_cast<unsigned char>(
                                                extra.at(i + 6))) << 48)
                        | (static_cast<quint64>(static_cast<unsigned char>(
                                                extra.at(i + 7))) << 56);
                    // the NTFS time is measured from 1601 for whatever reason
                    QDateTime base(QDate(1601, 1, 1), QTime(0, 0), Qt::UTC);
                    dateTime = base.addMSecs(mtime / 10000);
                    if (fineTicks != NULL) {
                        *fineTicks = static_cast<int>(mtime % 10000);
                    }
                    i += tagsize - position;
                } else {
                    i += tagsize;
                }

            }
        } else {
            i += length;
        }
    }
    if (fineTicks != NULL && dateTime.isNull()) {
        *fineTicks = 0;
    }
    return dateTime;
}
```

Here is the caller graph for this function:

13.156.1.2 static QFile::Permissions permissionsFromExternalAttr (quint32 *externalAttr*) [static]

Definition at line 27 of file quazipfileinfo.cpp.

Referenced by QuaZipFileInfo::getPermissions(), and QuaZipFileInfo64::getPermissions().

```
27                                                                          {
28     quint32 uPerm = (externalAttr & 0xFFFF0000u) >> 16;
29     QFile::Permissions perm = 0;
30     if ((uPerm & 0400) != 0)
31         perm |= QFile::ReadOwner;
32     if ((uPerm & 0200) != 0)
33         perm |= QFile::WriteOwner;
34     if ((uPerm & 0100) != 0)
35         perm |= QFile::ExeOwner;
36     if ((uPerm & 0040) != 0)
37         perm |= QFile::ReadGroup;
38     if ((uPerm & 0020) != 0)
39         perm |= QFile::WriteGroup;
40     if ((uPerm & 0010) != 0)
41         perm |= QFile::ExeGroup;
42     if ((uPerm & 0004) != 0)
43         perm |= QFile::ReadOther;
44     if ((uPerm & 0002) != 0)
45         perm |= QFile::WriteOther;
46     if ((uPerm & 0001) != 0)
47         perm |= QFile::ExeOther;
48     return perm;
49
50 }
```

Here is the caller graph for this function:

13.157 src/ckb/quazip/quazipfileinfo.h File Reference

```
#include <QByteArray>
```

```
#include <QDateTime>
#include <QFile>
#include "quazip_global.h"
```

Include dependency graph for quazipfileinfo.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct QuaZipFileInfo

  Information about a file inside archive.

- struct QuaZipFileInfo64

  Information about a file inside archive (with zip64 support).

13.158 src/ckb/quazip/quazipnewinfo.cpp File Reference

```
#include <QFileInfo>
#include "quazipnewinfo.h"
#include <string.h>
```

Include dependency graph for quazipnewinfo.cpp:

Functions

- static void QuaZipNewInfo_setPermissions (QuaZipNewInfo *info, QFile::Permissions perm, bool isDir)
- template<typename FileInfo >
  void QuaZipNewInfo_init (QuaZipNewInfo &self, const FileInfo &existing)
- static void setNTFSTime (QByteArray &extra, const QDateTime &time, int position, int fineTicks)

13.158.1 Function Documentation

13.158.1.1 template<typename FileInfo > void QuaZipNewInfo_init (QuaZipNewInfo & *self*, const FileInfo & *existing*)

Definition at line 57 of file quazipnewinfo.cpp.

Referenced by QuaZipNewInfo::QuaZipNewInfo().

```
{
    self.name = existing.name;
    self.dateTime = existing.dateTime;
    self.internalAttr = existing.internalAttr;
    self.externalAttr = existing.externalAttr;
    self.comment = existing.comment;
    self.extraLocal = existing.extra;
    self.extraGlobal = existing.extra;
    self.uncompressedSize = existing.uncompressedSize;
}
```

Here is the caller graph for this function:

13.158.1.2 static void QuaZipNewInfo_setPermissions (QuaZipNewInfo * *info*, QFile::Permissions *perm*, bool *isDir*) [static]

Definition at line 31 of file quazipnewinfo.cpp.

References QuaZipNewInfo::externalAttr.

Referenced by QuaZipNewInfo::QuaZipNewInfo(), QuaZipNewInfo::setFilePermissions(), and QuaZipNewInfo::setPermissions().

```
{
    quint32 uPerm = isDir ? 0040000 : 0100000;
    if ((perm & QFile::ReadOwner) != 0)
        uPerm |= 0400;
    if ((perm & QFile::WriteOwner) != 0)
        uPerm |= 0200;
    if ((perm & QFile::ExeOwner) != 0)
        uPerm |= 0100;
    if ((perm & QFile::ReadGroup) != 0)
        uPerm |= 0040;
    if ((perm & QFile::WriteGroup) != 0)
        uPerm |= 0020;
    if ((perm & QFile::ExeGroup) != 0)
        uPerm |= 0010;
    if ((perm & QFile::ReadOther) != 0)
        uPerm |= 0004;
    if ((perm & QFile::WriteOther) != 0)
        uPerm |= 0002;
    if ((perm & QFile::ExeOther) != 0)
        uPerm |= 0001;
    info->externalAttr = (info->externalAttr & ~0xFFFF0000u) | (uPerm << 16);
}
```

Here is the caller graph for this function:

13.158.1.3 static void setNTFSTime (QByteArray & *extra*, const QDateTime & *time*, int *position*, int *fineTicks*) [static]

Definition at line 131 of file quazipnewinfo.cpp.

References QUAZIP_EXTRA_NTFS_MAGIC, and QUAZIP_EXTRA_NTFS_TIME_MAGIC.

Referenced by QuaZipNewInfo::setFileNTFSaTime(), QuaZipNewInfo::setFileNTFScTime(), and QuaZipNewInfo::setFileNTFSmTime().

```
                                        {
    int ntfsPos = -1, timesPos = -1;
    unsigned ntfsLength = 0, ntfsTimesLength = 0;
    for (int i = 0; i <= extra.size() - 4; ) {
        unsigned type = static_cast<unsigned>(static_cast<unsigned char>(
                                                extra.at(i)))
                | (static_cast<unsigned>(static_cast<unsigned char>(
                                                extra.at(i + 1))) << 8);
        i += 2;
        unsigned length = static_cast<unsigned>(static_cast<unsigned char>(
                                                extra.at(i)))
                | (static_cast<unsigned>(static_cast<unsigned char>(
                                                extra.at(i + 1))) << 8);
        i += 2;
        if (type == QUAZIP_EXTRA_NTFS_MAGIC) {
            ntfsPos = i - 4; // the beginning of the NTFS record
            ntfsLength = length;
            if (length <= 4) {
                break; // no times in the NTFS record
            }
            i += 4; // reserved
            while (i <= extra.size() - 4) {
                unsigned tag = static_cast<unsigned>(
                            static_cast<unsigned char>(extra.at(i)))
                        | (static_cast<unsigned>(
                                static_cast<unsigned char>(extra.at(i + 1)))
                            << 8);
                i += 2;
                unsigned tagsize = static_cast<unsigned>(
                            static_cast<unsigned char>(extra.at(i)))
                        | (static_cast<unsigned>(
                                static_cast<unsigned char>(extra.at(i + 1)))
                            << 8);
                i += 2;
                if (tag == QUAZIP_EXTRA_NTFS_TIME_MAGIC) {
                    timesPos = i - 4; // the beginning of the NTFS times tag
                    ntfsTimesLength = tagsize;
                    break;
                } else {
                    i += tagsize;
                }
            }
            break; // I ain't going to search for yet another NTFS record!
        } else {
            i += length;
        }
    }
    if (ntfsPos == -1) {
        // No NTFS record, need to create one.
        ntfsPos = extra.size();
        ntfsLength = 32;
        extra.resize(extra.size() + 4 + ntfsLength);
        // the NTFS record header
        extra[ntfsPos] = static_cast<char>(QUAZIP_EXTRA_NTFS_MAGIC);
        extra[ntfsPos + 1] = static_cast<char>(QUAZIP_EXTRA_NTFS_MAGIC >> 8);
        extra[ntfsPos + 2] = 32; // the 2-byte size in LittleEndian
        extra[ntfsPos + 3] = 0;
        // zero the record
        memset(extra.data() + ntfsPos + 4, 0, 32);
        timesPos = ntfsPos + 8;
        // now set the tag data
        extra[timesPos] = static_cast<char>(QUAZIP_EXTRA_NTFS_TIME_MAGIC);
        extra[timesPos + 1] = static_cast<char>(QUAZIP_EXTRA_NTFS_TIME_MAGIC
                                                >> 8);
        // the size:
        extra[timesPos + 2] = 24;
        extra[timesPos + 3] = 0;
        ntfsTimesLength = 24;
    }
    if (timesPos == -1) {
        // No time tag in the NTFS record, need to add one.
        timesPos = ntfsPos + 4 + ntfsLength;
        extra.resize(extra.size() + 28);
        // Now we need to move the rest of the field
        // (possibly zero bytes, but memmove() is OK with that).
        // 0 ......... ntfsPos .. ntfsPos + 4   ... timesPos
        // <some data> <header>   <NTFS record>     <need-to-move data>    <end>
        memmove(extra.data() + timesPos + 28, extra.data() + timesPos,
                extra.size() - 28 - timesPos);
        ntfsLength += 28;
        // now set the tag data
```

```
        extra[timesPos] = static_cast<char>(QUAZIP_EXTRA_NTFS_TIME_MAGIC);
        extra[timesPos + 1] = static_cast<char>(QUAZIP_EXTRA_NTFS_TIME_MAGIC
                                                >> 8);
        // the size:
        extra[timesPos + 2] = 24;
        extra[timesPos + 3] = 0;
        // zero the record
        memset(extra.data() + timesPos + 4, 0, 24);
        ntfsTimesLength = 24;
    }
    if (ntfsTimesLength < 24) {
        // Broken times field. OK, this is really unlikely, but just in case...
        size_t timesEnd = timesPos + 4 + ntfsTimesLength;
        extra.resize(extra.size() + (24 - ntfsTimesLength));
        // Move it!
        // 0 ......... timesPos .... timesPos + 4 .. timesEnd
        // <some data> <time header> <broken times> <need-to-move data> <end>
        memmove(extra.data() + timesEnd + (24 - ntfsTimesLength),
                extra.data() + timesEnd,
                extra.size() - (24 - ntfsTimesLength) - timesEnd);
        // Now we have to increase the NTFS record and time tag lengths.
        ntfsLength += (24 - ntfsTimesLength);
        ntfsTimesLength = 24;
        extra[ntfsPos + 2] = static_cast<char>(ntfsLength);
        extra[ntfsPos + 3] = static_cast<char>(ntfsLength >> 8);
        extra[timesPos + 2] = static_cast<char>(ntfsTimesLength);
        extra[timesPos + 3] = static_cast<char>(ntfsTimesLength >> 8);
    }
    QDateTime base(QDate(1601, 1, 1), QTime(0, 0), Qt::UTC);
#if (QT_VERSION >= 0x040700)
    quint64 ticks = base.msecsTo(time) * 10000 + fineTicks;
#else
    QDateTime utc = time.toUTC();
    quint64 ticks = (static_cast<qint64>(base.date().daysTo(utc.date()))
            * Q_INT64_C(86400000)
            + static_cast<qint64>(base.time().msecsTo(utc.time())))
        * Q_INT64_C(10000) + fineTicks;
#endif
    extra[timesPos + 4 + position] = static_cast<char>(ticks);
    extra[timesPos + 5 + position] = static_cast<char>(ticks >> 8);
    extra[timesPos + 6 + position] = static_cast<char>(ticks >> 16);
    extra[timesPos + 7 + position] = static_cast<char>(ticks >> 24);
    extra[timesPos + 8 + position] = static_cast<char>(ticks >> 32);
    extra[timesPos + 9 + position] = static_cast<char>(ticks >> 40);
    extra[timesPos + 10 + position] = static_cast<char>(ticks >> 48);
    extra[timesPos + 11 + position] = static_cast<char>(ticks >> 56);
}
```

Here is the caller graph for this function:

13.159 src/ckb/quazip/quazipnewinfo.h File Reference

```
#include <QDateTime>
#include <QFile>
#include <QString>
#include "quazip_global.h"
#include "quazipfileinfo.h"
```

Include dependency graph for quazipnewinfo.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct QuaZipNewInfo

  Information about a file to be created.

13.160 src/ckb/quazip/unzip.c File Reference

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include "zlib.h"
#include "unzip.h"
#include <errno.h>
#include "crypt.h"
```

Include dependency graph for unzip.c:

Data Structures

- struct unz_file_info64_internal_s
- struct file_in_zip64_read_info_s
- struct unz64_s

Macros

- #define local static
- #define CASESENSITIVITYDEFAULT_NO
- #define UNZ_BUFSIZE (16384)
- #define UNZ_MAXFILENAMEINZIP (256)
- #define ALLOC(size) (malloc(size))
- #define TRYFREE(p) {if (p) free(p);}
- #define SIZECENTRALDIRITEM (0x2e)
- #define SIZEZIPLOCALHEADER (0x1e)
- #define CASESENSITIVITYDEFAULTVALUE 2
- #define STRCMPCASENOSENTIVEFUNCTION strcmpcasenosensitive_internal
- #define BUFREADCOMMENT (0x400)

Typedefs

- typedef uLongf z_crc_t
- typedef struct unz_file_info64_internal_s unz_file_info64_internal

Functions

- static int unz64local_getByte _Z_OF ((const zlib_filefunc64_32_def ∗pzlib_filefunc_def, voidpf filestream, int ∗pi))
- static int unz64local_getByte (const zlib_filefunc64_32_def ∗pzlib_filefunc_def, voidpf filestream, int ∗pi)
- static int unz64local_getShort _Z_OF ((const zlib_filefunc64_32_def ∗pzlib_filefunc_def, voidpf filestream, uLong ∗pX))

- static int unz64local_getShort (const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, uLong *pX)
- static int unz64local_getLong (const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, uLong *pX)
- static int unz64local_getLong64 _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, ZPOS64_T *pX))
- static int unz64local_getLong64 (const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, ZPOS64_T *pX)
- static int strcmpcasenosensitive_internal (const char *fileName1, const char *fileName2)
- int ZEXPORT unzStringFileNameCompare (const char *fileName1, const char *fileName2, int iCaseSensitivity)
- static ZPOS64_T unz64local_SearchCentralDir _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream))
- static ZPOS64_T unz64local_SearchCentralDir (const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream)
- static ZPOS64_T unz64local_SearchCentralDir64 (const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream)
- unzFile unzOpenInternal (voidpf file, zlib_filefunc64_32_def *pzlib_filefunc64_32_def, int is64bitOpenFunction, unsigned flags)
- unzFile ZEXPORT unzOpen2 (voidpf file, zlib_filefunc_def *pzlib_filefunc32_def)
- unzFile ZEXPORT unzOpen2_64 (voidpf file, zlib_filefunc64_def *pzlib_filefunc_def)
- unzFile ZEXPORT unzOpen (voidpf file)
- unzFile ZEXPORT unzOpen64 (voidpf file)
- int ZEXPORT unzClose (unzFile file)
- int ZEXPORT unzGetGlobalInfo64 (unzFile file, unz_global_info64 *pglobal_info)
- int ZEXPORT unzGetGlobalInfo (unzFile file, unz_global_info *pglobal_info32)
- static void unz64local_DosDateToTmuDate (ZPOS64_T ulDosDate, tm_unz *ptm)
- static int unz64local_GetCurrentFileInfoInternal _Z_OF ((unzFile file, unz_file_info64 *pfile_info, unz_file_info64_internal *pfile_info_internal, char *szFileName, uLong fileNameBufferSize, void *extraField, uLong extraFieldBufferSize, char *szComment, uLong commentBufferSize))
- static int unz64local_GetCurrentFileInfoInternal (unzFile file, unz_file_info64 *pfile_info, unz_file_info64_internal *pfile_info_internal, char *szFileName, uLong fileNameBufferSize, void *extraField, uLong extraFieldBufferSize, char *szComment, uLong commentBufferSize)
- int ZEXPORT unzGetCurrentFileInfo64 (unzFile file, unz_file_info64 *pfile_info, char *szFileName, uLong fileNameBufferSize, void *extraField, uLong extraFieldBufferSize, char *szComment, uLong commentBufferSize)
- int ZEXPORT unzGetCurrentFileInfo (unzFile file, unz_file_info *pfile_info, char *szFileName, uLong fileNameBufferSize, void *extraField, uLong extraFieldBufferSize, char *szComment, uLong commentBufferSize)
- int ZEXPORT unzGoToFirstFile (unzFile file)
- int ZEXPORT unzGoToNextFile (unzFile file)
- int ZEXPORT unzLocateFile (unzFile file, const char *szFileName, int iCaseSensitivity)
- int ZEXPORT unzGetFilePos64 (unzFile file, unz64_file_pos *file_pos)
- int ZEXPORT unzGetFilePos (unzFile file, unz_file_pos *file_pos)
- int ZEXPORT unzGoToFilePos64 (unzFile file, const unz64_file_pos *file_pos)
- int ZEXPORT unzGoToFilePos (unzFile file, unz_file_pos *file_pos)
- static int unz64local_CheckCurrentFileCoherencyHeader (unz64_s *s, uInt *piSizeVar, ZPOS64_T *poffset_local_extrafield, uInt *psize_local_extrafield)
- int ZEXPORT unzOpenCurrentFile3 (unzFile file, int *method, int *level, int raw, const char *password)
- int ZEXPORT unzOpenCurrentFile (unzFile file)
- int ZEXPORT unzOpenCurrentFilePassword (unzFile file, const char *password)
- int ZEXPORT unzOpenCurrentFile2 (unzFile file, int *method, int *level, int raw)
- ZPOS64_T ZEXPORT unzGetCurrentFileZStreamPos64 (unzFile file)

  Addition for GDAL : START.
- int ZEXPORT unzReadCurrentFile (unzFile file, voidp buf, unsigned len)

Addition for GDAL : END.

- z_off_t ZEXPORT unztell (unzFile file)
- ZPOS64_T ZEXPORT unztell64 (unzFile file)
- int ZEXPORT unzeof (unzFile file)
- int ZEXPORT unzGetLocalExtrafield (unzFile file, voidp buf, unsigned len)
- int ZEXPORT unzCloseCurrentFile (unzFile file)
- int ZEXPORT unzGetGlobalComment (unzFile file, char *szComment, uLong uSizeBuf)
- ZPOS64_T ZEXPORT unzGetOffset64 (unzFile file)
- uLong ZEXPORT unzGetOffset (unzFile file)
- int ZEXPORT unzSetOffset64 (unzFile file, ZPOS64_T pos)
- int ZEXPORT unzSetOffset (unzFile file, uLong pos)
- int ZEXPORT unzSetFlags (unzFile file, unsigned flags)
- int ZEXPORT unzClearFlags (unzFile file, unsigned flags)

Variables

- const char unz_copyright []

13.160.1 Data Structure Documentation

13.160.1.1 struct unz_file_info64_internal_s

Definition at line 128 of file unzip.c.

Collaboration diagram for unz_file_info64_internal_s:

Data Fields

ZPOS64_T	offset_curfile	

13.160.1.2 struct file_in_zip64_read_info_s

Definition at line 136 of file unzip.c.

Collaboration diagram for file_in_zip64_read_info_s:

Data Fields

ZPOS64_T	byte_before_the_zipfile	
uLong	compression_method	
uLong	crc32	
uLong	crc32_wait	
voidpf	filestream	
ZPOS64_T	offset_local_extrafield	
ZPOS64_T	pos_in_zipfile	
ZPOS64_T	pos_local_extrafield	
int	raw	
char *	read_buffer	
ZPOS64_T	rest_read_compressed	
ZPOS64_T	rest_read_uncompressed	
uInt	size_local_extrafield	
z_stream	stream	
uLong	stream_initialised	
ZPOS64_T	total_out_64	
zlib_filefunc64_32_def	z_filefunc	

13.160.1.3 struct unz64_s

Definition at line 167 of file unzip.c.

Collaboration diagram for unz64_s:

Data Fields

ZPOS64_T	byte_before_the_zipfile	
ZPOS64_T	central_pos	
unz_file_info64	cur_file_info	
unz_file_info64_internal	cur_file_info_internal	
ZPOS64_T	current_file_ok	
int	encrypted	
voidpf	filestream	
unsigned	flags	
unz_global_info64	gi	
int	is64bitOpenFunction	
int	isZip64	
unsigned long	keys[3]	
ZPOS64_T	num_file	
ZPOS64_T	offset_central_dir	
const z_crc_t FAR *	pcrc_32_tab	
file_in_zip64_read_info_s *	pfile_in_zip_read	
ZPOS64_T	pos_in_central_dir	
ZPOS64_T	size_central_dir	
zlib_filefunc64_32_def	z_filefunc	

13.160.2 Macro Definition Documentation

13.160.2.1 #define ALLOC(*size*) (malloc(size))

Definition at line 114 of file unzip.c.

Referenced by unz64local_SearchCentralDir(), unz64local_SearchCentralDir64(), unzOpenCurrentFile3(), and

unzOpenInternal().

13.160.2.2 #define BUFREADCOMMENT (0x400)

Definition at line 408 of file unzip.c.

Referenced by unz64local_SearchCentralDir(), and unz64local_SearchCentralDir64().

13.160.2.3 #define CASESENSITIVITYDEFAULT_NO

Definition at line 100 of file unzip.c.

13.160.2.4 #define CASESENSITIVITYDEFAULTVALUE 2

Definition at line 375 of file unzip.c.

Referenced by unzStringFileNameCompare().

13.160.2.5 #define local static

Definition at line 93 of file unzip.c.

13.160.2.6 #define SIZECENTRALDIRITEM (0x2e)

Definition at line 120 of file unzip.c.

Referenced by unzGoToNextFile().

13.160.2.7 #define SIZEZIPLOCALHEADER (0x1e)

Definition at line 121 of file unzip.c.

Referenced by unz64local_CheckCurrentFileCoherencyHeader(), and unzOpenCurrentFile3().

13.160.2.8 #define STRCMPCASENOSENTIVEFUNCTION strcmpcasenosensitive_internal

Definition at line 381 of file unzip.c.

Referenced by unzStringFileNameCompare().

13.160.2.9 #define TRYFREE(*p*) {if (p) free(p);}

Definition at line 117 of file unzip.c.

Referenced by unz64local_SearchCentralDir(), unz64local_SearchCentralDir64(), unzClose(), unzCloseCurrentFile(), and unzOpenCurrentFile3().

13.160.2.10 #define UNZ_BUFSIZE (16384)

Definition at line 106 of file unzip.c.

Referenced by unzOpenCurrentFile3(), and unzReadCurrentFile().

13.160.2.11 #define UNZ_MAXFILENAMEINZIP (256)

Definition at line 110 of file unzip.c.

Referenced by unzLocateFile().

13.160.3 Typedef Documentation

13.160.3.1 typedef struct unz_file_info64_internal_s unz_file_info64_internal

13.160.3.2 typedef uLongf z_crc_t

Definition at line 76 of file unzip.c.

13.160.4 Function Documentation

13.160.4.1 static int unz64local_getByte _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, int *pi)) [static]

13.160.4.2 static int unz64local_getShort _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, uLong *pX)) [static]

13.160.4.3 static int unz64local_getLong64 _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, ZPOS64_T *pX)) [static]

13.160.4.4 static ZPOS64_T unz64local_SearchCentralDir _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream)) [static]

13.160.4.5 static int unz64local_GetCurrentFileInfoInternal _Z_OF ((unzFile file, unz_file_info64 *pfile_info, unz_file_info64_internal *pfile_info_internal, char *szFileName, uLong fileNameBufferSize, void *extraField, uLong extraFieldBufferSize, char *szComment, uLong commentBufferSize)) [static]

13.160.4.6 static int strcmpcasenosensitive_internal (const char * *fileName1*, const char * *fileName2*) [static]

Definition at line 352 of file unzip.c.

```
{
    for (;;)
    {
        char c1=*(fileName1++);
        char c2=*(fileName2++);
        if ((c1>='a') && (c1<='z'))
            c1 -= 0x20;
        if ((c2>='a') && (c2<='z'))
            c2 -= 0x20;
        if (c1=='\0')
            return ((c2=='\0') ? 0 : -1);
        if (c2=='\0')
            return 1;
        if (c1<c2)
            return -1;
        if (c1>c2)
            return 1;
    }
}
```

13.160.4.7 static int unz64local_CheckCurrentFileCoherencyHeader (unz64_s * *s*, uInt * *piSizeVar*, ZPOS64_T * *poffset_local_extrafield*, uInt * *psize_local_extrafield*) [static]

Definition at line 1393 of file unzip.c.

References unz64_s::byte_before_the_zipfile, unz_file_info64_s::compressed_size, unz_file_info64_s::compression_method, unz_file_info64_s::crc, unz64_s::cur_file_info, unz64_s::cur_file_info_internal, unz64_s::filestream, unz_file_info64_internal_s::offset_curfile, unz_file_info64_s::size_filename, SIZEZIPLOCALHEADER, unz_file_info64_s::uncompressed_size, unz64local_getLong(), unz64local_getShort(), UNZ_BADZIPFILE, UNZ_ERRNO, UNZ_OK, Z_BZIP2ED, unz64_s::z_filefunc, ZLIB_FILEFUNC_SEEK_SET, and ZSEEK64.

Referenced by unzOpenCurrentFile3().

```
{
    uLong uMagic,uData,uFlags;
    uLong size_filename;
    uLong size_extra_field;
    int err=UNZ_OK;

    *piSizeVar = 0;
    *poffset_local_extrafield = 0;
    *psize_local_extrafield = 0;

    if (ZSEEK64(s->z_filefunc, s->filestream,s->cur_file_info_internal.offset_curfile +
                                s->byte_before_the_zipfile, ZLIB_FILEFUNC_SEEK_SET)!=0)
        return UNZ_ERRNO;


    if (err==UNZ_OK)
    {
        if (unz64local_getLong(&s->z_filefunc, s->filestream,&uMagic) != UNZ_OK)
            err=UNZ_ERRNO;
        else if (uMagic!=0x04034b50)
            err=UNZ_BADZIPFILE;
    }

    if (unz64local_getShort(&s->z_filefunc, s->filestream,&uData) != UNZ_OK)
        err=UNZ_ERRNO;
/*
    else if ((err==UNZ_OK) && (uData!=s->cur_file_info.wVersion))
        err=UNZ_BADZIPFILE;
*/
    if (unz64local_getShort(&s->z_filefunc, s->filestream,&uFlags) != UNZ_OK)
        err=UNZ_ERRNO;

    if (unz64local_getShort(&s->z_filefunc, s->filestream,&uData) != UNZ_OK)
        err=UNZ_ERRNO;
    else if ((err==UNZ_OK) && (uData!=s->cur_file_info.compression_method))
        err=UNZ_BADZIPFILE;

    if ((err==UNZ_OK) && (s->cur_file_info.compression_method!=0) &&
/* #ifdef HAVE_BZIP2 */
                        (s->cur_file_info.compression_method!=Z_BZIP2ED) &&
/* #endif */
                        (s->cur_file_info.compression_method!=Z_DEFLATED))
        err=UNZ_BADZIPFILE;

    if (unz64local_getLong(&s->z_filefunc, s->filestream,&uData) != UNZ_OK) /* date/time */
        err=UNZ_ERRNO;

    if (unz64local_getLong(&s->z_filefunc, s->filestream,&uData) != UNZ_OK) /* crc */
        err=UNZ_ERRNO;
    else if ((err==UNZ_OK) && (uData!=s->cur_file_info.crc) && ((uFlags & 8)==0))
        err=UNZ_BADZIPFILE;

    if (unz64local_getLong(&s->z_filefunc, s->filestream,&uData) != UNZ_OK) /* size compr */
        err=UNZ_ERRNO;
    else if (uData != 0xFFFFFFFF && (err==UNZ_OK) && (uData!=s->cur_file_info.compressed_size) && ((uFlags & 8)==0))
        err=UNZ_BADZIPFILE;

    if (unz64local_getLong(&s->z_filefunc, s->filestream,&uData) != UNZ_OK) /* size uncompr */
        err=UNZ_ERRNO;
    else if (uData != 0xFFFFFFFF && (err==UNZ_OK) && (uData!=s->cur_file_info.uncompressed_size) && ((uFlags & 8)==0))
        err=UNZ_BADZIPFILE;

    if (unz64local_getShort(&s->z_filefunc, s->
```

```
    filestream,&size_filename) != UNZ_OK)
        err=UNZ_ERRNO;
    else if ((err==UNZ_OK) && (size_filename!=s->cur_file_info.size_filename))
        err=UNZ_BADZIPFILE;

    *piSizeVar += (uInt)size_filename;

    if (unz64local_getShort(&s->z_filefunc, s->filestream,&size_extra_field) != UNZ_OK)
        err=UNZ_ERRNO;
    *poffset_local_extrafield= s->cur_file_info_internal.offset_curfile +
                                    SIZEZIPLOCALHEADER + size_filename;
    *psize_local_extrafield = (uInt)size_extra_field;

    *piSizeVar += (uInt)size_extra_field;

    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.8 static void unz64local_DosDateToTmuDate (ZPOS64_T *ulDosDate*, tm_unz * *ptm*) [static]

Definition at line 862 of file unzip.c.

References tm_unz_s::tm_hour, tm_unz_s::tm_mday, tm_unz_s::tm_min, tm_unz_s::tm_mon, tm_unz_s::tm_sec, and tm_unz_s::tm_year.

Referenced by unz64local_GetCurrentFileInfoInternal().

```
{
    ZPOS64_T uDate;
    uDate = (ZPOS64_T)(ulDosDate>>16);
    ptm->tm_mday = (uInt)(uDate&0x1f) ;
    ptm->tm_mon =  (uInt)((((uDate)&0x1E0)/0x20)-1) ;
    ptm->tm_year = (uInt)(((uDate&0x0FE00)/0x0200)+1980) ;

    ptm->tm_hour = (uInt) ((ulDosDate &0xF800)/0x800);
    ptm->tm_min =  (uInt) ((ulDosDate&0x7E0)/0x20) ;
```

```
    ptm->tm_sec =  (uInt) (2*(ulDosDate&0x1f)) ;
}
```

Here is the caller graph for this function:

13.160.4.9 static int unz64local_getByte (const zlib_filefunc64_32_def * *pzlib_filefunc_def,* voidpf *filestream,* int * *pi*) [static]

Definition at line 215 of file unzip.c.

References UNZ_EOF, UNZ_ERRNO, UNZ_OK, ZERROR64, and ZREAD64.

Referenced by unz64local_getLong(), unz64local_getLong64(), and unz64local_getShort().

```
{
    unsigned char c;
    int err = (int)ZREAD64(*pzlib_filefunc_def,filestream,&c,1);
    if (err==1)
    {
        *pi = (int)c;
        return UNZ_OK;
    }
    else
    {
        if (ZERROR64(*pzlib_filefunc_def,filestream))
            return UNZ_ERRNO;
        else
            return UNZ_EOF;
    }
}
```

Here is the caller graph for this function:

13.160.4.10 static int unz64local_GetCurrentFileInfoInternal (unzFile *file*, unz_file_info64 * *pfile_info*, unz_file_info64_internal * *pfile_info_internal*, char * *szFileName*, uLong *fileNameBufferSize*, void * *extraField*, uLong *extraFieldBufferSize*, char * *szComment*, uLong *commentBufferSize*) [static]

Definition at line 889 of file unzip.c.

References unz64_s::byte_before_the_zipfile, unz_file_info64_s::compressed_size, unz_file_info64_s::compression_method, unz_file_info64_s::crc, unz_file_info64_s::disk_num_start, unz_file_info64_s::dosDate, unz_file_info64_s::external_fa, unz64_s::filestream, unz_file_info64_s::flag, unz_file_info64_s::internal_fa, unz_file_info64_internal_s::offset_curfile, unz64_s::pos_in_central_dir, unz_file_info64_s::size_file_comment, unz_file_info64_s::size_file_extra, unz_file_info64_s::size_filename, unz_file_info64_s::tmu_date, unz_file_info64_s::uncompressed_size, unz64local_DosDateToTmuDate(), unz64local_getLong(), unz64local_getLong64(), unz64local_getShort(), UNZ_BADZIPFILE, UNZ_ERRNO, UNZ_OK, UNZ_PARAMERROR, unz_file_info64_s::version, unz_file_info64_s::version_needed, unz64_s::z_filefunc, ZLIB_FILEFUNC_SEEK_CUR, ZLIB_FILEFUNC_SEEK_SET, ZREAD64, and ZSEEK64.

Referenced by unzGetCurrentFileInfo(), unzGetCurrentFileInfo64(), unzGoToFilePos64(), unzGoToFirstFile(), unzGoToNextFile(), and unzSetOffset64().

```
{
    unz64_s* s;
    unz_file_info64 file_info;
    unz_file_info64_internal file_info_internal;
    int err=UNZ_OK;
    uLong uMagic;
    ZPOS64_T llSeek=0;
    uLong uL;

    if (file==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;
    if (ZSEEK64(s->z_filefunc, s->filestream,
              s->pos_in_central_dir+s->byte_before_the_zipfile,
              ZLIB_FILEFUNC_SEEK_SET)!=0)
        err=UNZ_ERRNO;


    /* we check the magic */
    if (err==UNZ_OK)
    {
        if (unz64local_getLong(&s->z_filefunc, s->filestream,&uMagic) != UNZ_OK)
            err=UNZ_ERRNO;
        else if (uMagic!=0x02014b50)
            err=UNZ_BADZIPFILE;
    }

    if (unz64local_getShort(&s->z_filefunc, s->filestream,&file_info.version) != UNZ_OK)
        err=UNZ_ERRNO;

    if (unz64local_getShort(&s->z_filefunc, s->filestream,&file_info.version_needed) != UNZ_OK)
        err=UNZ_ERRNO;

    if (unz64local_getShort(&s->z_filefunc, s->filestream,&file_info.flag) != UNZ_OK)
        err=UNZ_ERRNO;

    if (unz64local_getShort(&s->z_filefunc, s->filestream,&file_info.compression_method) != UNZ_OK)
        err=UNZ_ERRNO;

    if (unz64local_getLong(&s->z_filefunc, s->filestream,&file_info.dosDate) != UNZ_OK)
        err=UNZ_ERRNO;

    unz64local_DosDateToTmuDate(file_info.dosDate,&file_info.tmu_date);

    if (unz64local_getLong(&s->z_filefunc, s->filestream,&file_info.crc) != UNZ_OK)
        err=UNZ_ERRNO;

    if (unz64local_getLong(&s->z_filefunc, s->filestream,&uL) != UNZ_OK)
        err=UNZ_ERRNO;
    file_info.compressed_size = uL;

    if (unz64local_getLong(&s->z_filefunc, s->
```

```
filestream,&uL) != UNZ_OK)
        err=UNZ_ERRNO;
  file_info.uncompressed_size = uL;

  if (unz64local_getShort(&s->z_filefunc, s->filestream,&file_info.size_filename) != UNZ_OK)
        err=UNZ_ERRNO;

  if (unz64local_getShort(&s->z_filefunc, s->filestream,&file_info.size_file_extra) != UNZ_OK)
        err=UNZ_ERRNO;

  if (unz64local_getShort(&s->z_filefunc, s->filestream,&file_info.size_file_comment) != UNZ_OK)
        err=UNZ_ERRNO;

  if (unz64local_getShort(&s->z_filefunc, s->filestream,&file_info.disk_num_start) != UNZ_OK)
        err=UNZ_ERRNO;

  if (unz64local_getShort(&s->z_filefunc, s->filestream,&file_info.internal_fa) != UNZ_OK)
        err=UNZ_ERRNO;

  if (unz64local_getLong(&s->z_filefunc, s->filestream,&file_info.external_fa) != UNZ_OK)
        err=UNZ_ERRNO;

                /* relative offset of local header */
  if (unz64local_getLong(&s->z_filefunc, s->filestream,&uL) != UNZ_OK)
        err=UNZ_ERRNO;
  file_info_internal.offset_curfile = uL;

  llSeek+=file_info.size_filename;
  if ((err==UNZ_OK) && (szFileName!=NULL))
  {
      uLong uSizeRead ;
      if (file_info.size_filename<fileNameBufferSize)
      {
          *(szFileName+file_info.size_filename)='\0';
          uSizeRead = file_info.size_filename;
      }
      else
          uSizeRead = fileNameBufferSize;

      if ((file_info.size_filename>0) && (fileNameBufferSize>0))
          if (ZREAD64(s->z_filefunc, s->filestream,szFileName,uSizeRead)!=uSizeRead)
              err=UNZ_ERRNO;
      llSeek -= uSizeRead;
  }

  /* Read extrafield */
  if ((err==UNZ_OK) && (extraField!=NULL))
  {
      ZPOS64_T uSizeRead ;
      if (file_info.size_file_extra<extraFieldBufferSize)
          uSizeRead = file_info.size_file_extra;
       else
          uSizeRead = extraFieldBufferSize;

       if (llSeek!=0)
       {
          if (ZSEEK64(s->z_filefunc, s->filestream,llSeek,ZLIB_FILEFUNC_SEEK_CUR)==0)
              llSeek=0;
          else
              err=UNZ_ERRNO;
       }

       if ((file_info.size_file_extra>0) && (extraFieldBufferSize>0))
          if (ZREAD64(s->z_filefunc, s->filestream,extraField,(uLong)uSizeRead)!=uSizeRead)
              err=UNZ_ERRNO;

       llSeek += file_info.size_file_extra - (uLong)uSizeRead;
    }
    else
       llSeek += file_info.size_file_extra;


    if ((err==UNZ_OK) && (file_info.size_file_extra != 0))
    {
                                uLong acc = 0;

       /* since lSeek now points to after the extra field we need to move back */
```

```
        llSeek -= file_info.size_file_extra;

        if (llSeek!=0)
        {
            if (ZSEEK64(s->z_filefunc, s->filestream,llSeek,ZLIB_FILEFUNC_SEEK_CUR)==0)
                llSeek=0;
            else
                err=UNZ_ERRNO;
        }

        while(acc < file_info.size_file_extra)
        {
            uLong headerId;
                                                uLong dataSize;

            if (unz64local_getShort(&s->z_filefunc, s->filestream,&headerId) != UNZ_OK)
                err=UNZ_ERRNO;

            if (unz64local_getShort(&s->z_filefunc, s->filestream,&dataSize) != UNZ_OK)
                err=UNZ_ERRNO;

            /* ZIP64 extra fields */
            if (headerId == 0x0001)
            {
                uLong uL;

                if(file_info.uncompressed_size == (ZPOS64_T)0xFFFFFFFFu)
                {
                    if (unz64local_getLong64(&s->z_filefunc, s->filestream,&file_info.uncompressed_size) != UNZ_OK)
                        err=UNZ_ERRNO;
                }

                if(file_info.compressed_size == (ZPOS64_T)0xFFFFFFFFu)
                {
                    if (unz64local_getLong64(&s->z_filefunc, s->filestream,&file_info.compressed_size) != UNZ_OK)
                        err=UNZ_ERRNO;
                }

                if(file_info_internal.offset_curfile == (ZPOS64_T)0xFFFFFFFFu)
                {
                    /* Relative Header offset */
                    if (unz64local_getLong64(&s->z_filefunc, s->filestream,&file_info_internal.offset_curfile) != UNZ_OK)
                        err=UNZ_ERRNO;
                }

                if(file_info.disk_num_start == 0xFFFFFFFFu)
                {
                    /* Disk Start Number */
                    if (unz64local_getLong(&s->z_filefunc, s->filestream,&uL) != UNZ_OK)
                        err=UNZ_ERRNO;
                }

            }
            else
            {
                if (ZSEEK64(s->z_filefunc, s->filestream,dataSize,ZLIB_FILEFUNC_SEEK_CUR)!=0)
                    err=UNZ_ERRNO;
            }

            acc += 2 + 2 + dataSize;
        }
    }

    if ((err==UNZ_OK) && (szComment!=NULL))
    {
        uLong uSizeRead ;
        if (file_info.size_file_comment<commentBufferSize)
        {
            *(szComment+file_info.size_file_comment)='\0';
            uSizeRead = file_info.size_file_comment;
        }
        else
            uSizeRead = commentBufferSize;

        if (llSeek!=0)
        {
            if (ZSEEK64(s->z_filefunc, s->filestream,llSeek,ZLIB_FILEFUNC_SEEK_CUR)==0)
                llSeek=0;
```

```
            else
                err=UNZ_ERRNO;
        }

        if ((file_info.size_file_comment>0) && (commentBufferSize>0))
            if (ZREAD64(s->z_filefunc, s->filestream,szComment,uSizeRead)!=
    uSizeRead)
                err=UNZ_ERRNO;
        llSeek+=file_info.size_file_comment - uSizeRead;
    }
    else
        llSeek+=file_info.size_file_comment;


    if ((err==UNZ_OK) && (pfile_info!=NULL))
        *pfile_info=file_info;

    if ((err==UNZ_OK) && (pfile_info_internal!=NULL))
        *pfile_info_internal=file_info_internal;

    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.11 static int unz64local_getLong (const zlib_filefunc64_32_def * *pzlib_filefunc_def*, voidpf *filestream*, uLong * *pX*) [static]

Definition at line 269 of file unzip.c.

References unz64local_getByte(), UNZ_OK, and x.

Referenced by unz64local_CheckCurrentFileCoherencyHeader(), unz64local_GetCurrentFileInfoInternal(), unz64local_SearchCentralDir64(), and unzOpenInternal().

```
{
    uLong x ;
```

```
    int i = 0;
    int err;

    err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x = (uLong)i;

    if (err==UNZ_OK)
        err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x |= ((uLong)i)<<8;

    if (err==UNZ_OK)
        err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x |= ((uLong)i)<<16;

    if (err==UNZ_OK)
        err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x += ((uLong)i)<<24;

    if (err==UNZ_OK)
        *pX = x;
    else
        *pX = 0;
    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.12 static int unz64local_getLong64 (const zlib_filefunc64_32_def * *pzlib_filefunc_def*, voidpf *filestream*, ZPOS64_T * *pX*) [static]

Definition at line 305 of file unzip.c.

References unz64local_getByte(), UNZ_OK, and x.

Referenced by unz64local_GetCurrentFileInfoInternal(), unz64local_SearchCentralDir64(), and unzOpenInternal().

```
{
    ZPOS64_T x ;
    int i = 0;
    int err;

    err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x = (ZPOS64_T)i;

    if (err==UNZ_OK)
        err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x |= ((ZPOS64_T)i)<<8;

    if (err==UNZ_OK)
        err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x |= ((ZPOS64_T)i)<<16;

    if (err==UNZ_OK)
        err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x |= ((ZPOS64_T)i)<<24;

    if (err==UNZ_OK)
        err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x |= ((ZPOS64_T)i)<<32;

    if (err==UNZ_OK)
        err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x |= ((ZPOS64_T)i)<<40;

    if (err==UNZ_OK)
        err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x |= ((ZPOS64_T)i)<<48;

    if (err==UNZ_OK)
        err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x |= ((ZPOS64_T)i)<<56;

    if (err==UNZ_OK)
        *pX = x;
    else
        *pX = 0;
    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.13 static int unz64local_getShort (const zlib_filefunc64_32_def * *pzlib_filefunc_def,* voidpf *filestream,* uLong * *pX*) [static]

Definition at line 242 of file unzip.c.

References unz64local_getByte(), UNZ_OK, and x.

Referenced by unz64local_CheckCurrentFileCoherencyHeader(), unz64local_GetCurrentFileInfoInternal(), and unzOpenInternal().

```
{
    uLong x ;
    int i = 0;
    int err;

    err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x = (uLong)i;

    if (err==UNZ_OK)
        err = unz64local_getByte(pzlib_filefunc_def,filestream,&i);
    x |= ((uLong)i)<<8;

    if (err==UNZ_OK)
        *pX = x;
    else
        *pX = 0;
    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.14 static ZPOS64_T unz64local_SearchCentralDir (const zlib_filefunc64_32_def * *pzlib_filefunc_def,* voidpf *filestream*) [static]

Definition at line 416 of file unzip.c.

References ALLOC, BUFREADCOMMENT, TRYFREE, ZLIB_FILEFUNC_SEEK_END, ZLIB_FILEFUNC_SEEK_-SET, ZREAD64, ZSEEK64, and ZTELL64.

Referenced by unzOpenInternal().

```
{
    unsigned char* buf;
    ZPOS64_T uSizeFile;
    ZPOS64_T uBackRead;
    ZPOS64_T uMaxBack=0xffff; /* maximum size of global comment */
    ZPOS64_T uPosFound=0;

    if (ZSEEK64(*pzlib_filefunc_def,filestream,0,ZLIB_FILEFUNC_SEEK_END) != 0)
        return 0;


    uSizeFile = ZTELL64(*pzlib_filefunc_def,filestream);

    if (uMaxBack>uSizeFile)
        uMaxBack = uSizeFile;

    buf = (unsigned char*)ALLOC(BUFREADCOMMENT+4);
    if (buf==NULL)
        return 0;

    uBackRead = 4;
    while (uBackRead<uMaxBack)
    {
        uLong uReadSize;
        ZPOS64_T uReadPos ;
        int i;
        if (uBackRead+BUFREADCOMMENT>uMaxBack)
            uBackRead = uMaxBack;
        else
            uBackRead+=BUFREADCOMMENT;
        uReadPos = uSizeFile-uBackRead ;

        uReadSize = ((BUFREADCOMMENT+4) < (uSizeFile-uReadPos)) ?
                     (BUFREADCOMMENT+4) : (uLong)(uSizeFile-uReadPos);
        if (ZSEEK64(*pzlib_filefunc_def,filestream,uReadPos,
    ZLIB_FILEFUNC_SEEK_SET)!=0)
            break;

        if (ZREAD64(*pzlib_filefunc_def,filestream,buf,uReadSize)!=uReadSize)
            break;

        for (i=(int)uReadSize-3; (i--)>0;)
            if (((*(buf+i))==0x50) && ((*(buf+i+1))==0x4b) &&
                ((*(buf+i+2))==0x05) && ((*(buf+i+3))==0x06))
            {
                uPosFound = uReadPos+i;
                break;
            }

        if (uPosFound!=0)
            break;
    }
    TRYFREE(buf);
    return uPosFound;
}
```

Here is the caller graph for this function:

13.160.4.15 static ZPOS64_T unz64local_SearchCentralDir64 (const zlib_filefunc64_32_def * *pzlib_filefunc_def*, voidpf *filestream*) [static]

Definition at line 481 of file unzip.c.

References ALLOC, BUFREADCOMMENT, TRYFREE, unz64local_getLong(), unz64local_getLong64(), UNZ_OK, ZLIB_FILEFUNC_SEEK_END, ZLIB_FILEFUNC_SEEK_SET, ZREAD64, ZSEEK64, and ZTELL64.

Referenced by unzOpenInternal().

```
483 {
484     unsigned char* buf;
485     ZPOS64_T uSizeFile;
486     ZPOS64_T uBackRead;
487     ZPOS64_T uMaxBack=0xffff; /* maximum size of global comment */
488     ZPOS64_T uPosFound=0;
489     uLong uL;
490                 ZPOS64_T relativeOffset;
491
492     if (ZSEEK64(*pzlib_filefunc_def,filestream,0,ZLIB_FILEFUNC_SEEK_END) != 0)
493         return 0;
494
495
496     uSizeFile = ZTELL64(*pzlib_filefunc_def,filestream);
497
498     if (uMaxBack>uSizeFile)
499         uMaxBack = uSizeFile;
500
501     buf = (unsigned char*)ALLOC(BUFREADCOMMENT+4);
502     if (buf==NULL)
503         return 0;
504
505     uBackRead = 4;
506     while (uBackRead<uMaxBack)
507     {
508         uLong uReadSize;
509         ZPOS64_T uReadPos;
510         int i;
511         if (uBackRead+BUFREADCOMMENT>uMaxBack)
512             uBackRead = uMaxBack;
513         else
514             uBackRead+=BUFREADCOMMENT;
515         uReadPos = uSizeFile-uBackRead ;
516
517         uReadSize = ((BUFREADCOMMENT+4) < (uSizeFile-uReadPos)) ?
518                       (BUFREADCOMMENT+4) : (uLong)(uSizeFile-uReadPos);
519         if (ZSEEK64(*pzlib_filefunc_def,filestream,uReadPos,
    ZLIB_FILEFUNC_SEEK_SET)!=0)
520             break;
521
522         if (ZREAD64(*pzlib_filefunc_def,filestream,buf,uReadSize)!=uReadSize)
523             break;
524
525         for (i=(int)uReadSize-3; (i--)>0;)
526             if (((*(buf+i))==0x50) && ((*(buf+i+1))==0x4b) &&
527                 ((*(buf+i+2))==0x06) && ((*(buf+i+3))==0x07))
528             {
529                 uPosFound = uReadPos+i;
530                 break;
531             }
532
533         if (uPosFound!=0)
534             break;
535     }
536     TRYFREE(buf);
537     if (uPosFound == 0)
538         return 0;
539
540     /* Zip64 end of central directory locator */
541     if (ZSEEK64(*pzlib_filefunc_def,filestream, uPosFound,
    ZLIB_FILEFUNC_SEEK_SET)!=0)
542         return 0;
543
544     /* the signature, already checked */
545     if (unz64local_getLong(pzlib_filefunc_def,filestream,&uL)!=
    UNZ_OK)
546         return 0;
547
548     /* number of the disk with the start of the zip64 end of  central directory */
549     if (unz64local_getLong(pzlib_filefunc_def,filestream,&uL)!=
    UNZ_OK)
550         return 0;
551     if (uL != 0)
552         return 0;
```

```
    /* relative offset of the zip64 end of central directory record */
    if (unz64local_getLong64(pzlib_filefunc_def,filestream,&relativeOffset)!=
UNZ_OK)
        return 0;

    /* total number of disks */
    if (unz64local_getLong(pzlib_filefunc_def,filestream,&uL)!=
UNZ_OK)
        return 0;
    if (uL != 1)
        return 0;

    /* Goto end of central directory record */
    if (ZSEEK64(*pzlib_filefunc_def,filestream, relativeOffset,
ZLIB_FILEFUNC_SEEK_SET)!=0)
        return 0;

     /* the signature */
    if (unz64local_getLong(pzlib_filefunc_def,filestream,&uL)!=
UNZ_OK)
        return 0;

    if (uL != 0x06064b50)
        return 0;

    return relativeOffset;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.16 int ZEXPORT unzClearFlags (unzFile *file*, unsigned *flags*)

Definition at line 2147 of file unzip.c.

References unz64_s::flags, UNZ_OK, and UNZ_PARAMERROR.

Referenced by QuaZip::open().

```
{
    unz64_s* s;
    if (file == NULL)
        return UNZ_PARAMERROR;
    s = (unz64_s*)file;
    s->flags &= ~flags;
    return UNZ_OK;
}
```

Here is the caller graph for this function:

13.160.4.17 int ZEXPORT unzClose (unzFile *file*)

Definition at line 815 of file unzip.c.

References unz64_s::filestream, unz64_s::flags, unz64_s::pfile_in_zip_read, TRYFREE, UNZ_AUTO_CLOSE, UNZ_OK, UNZ_PARAMERROR, unzCloseCurrentFile(), unz64_s::z_filefunc, ZCLOSE64, and ZFAKECLOSE64.

Referenced by QuaZip::close(), and QuaZip::open().

```
{
    unz64_s* s;
    if (file==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;

    if (s->pfile_in_zip_read!=NULL)
        unzCloseCurrentFile(file);

    if ((s->flags & UNZ_AUTO_CLOSE) != 0)
        ZCLOSE64(s->z_filefunc, s->filestream);
    else
        ZFAKECLOSE64(s->z_filefunc, s->filestream);
    TRYFREE(s);
    return UNZ_OK;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.18 int ZEXPORT unzCloseCurrentFile (unzFile *file*)

Definition at line 2012 of file unzip.c.

References file_in_zip64_read_info_s::crc32, file_in_zip64_read_info_s::crc32_wait, unz64_s::pfile_in_zip_read, file_in_zip64_read_info_s::raw, file_in_zip64_read_info_s::read_buffer, file_in_zip64_read_info_s::rest_read_uncompressed, file_in_zip64_read_info_s::stream, file_in_zip64_read_info_s::stream_initialised, TRYFREE, UNZ_CRCERROR, UNZ_OK, UNZ_PARAMERROR, and Z_BZIP2ED.

Referenced by QuaZipFile::close(), unzClose(), and unzOpenCurrentFile3().

```
{
    int err=UNZ_OK;

    unz64_s* s;
    file_in_zip64_read_info_s* pfile_in_zip_read_info;
    if (file==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;
    pfile_in_zip_read_info=s->pfile_in_zip_read;

    if (pfile_in_zip_read_info==NULL)
        return UNZ_PARAMERROR;


    if ((pfile_in_zip_read_info->rest_read_uncompressed == 0) &&
        (!pfile_in_zip_read_info->raw))
    {
        if (pfile_in_zip_read_info->crc32 != pfile_in_zip_read_info->crc32_wait)
            err=UNZ_CRCERROR;
    }


    TRYFREE(pfile_in_zip_read_info->read_buffer);
    pfile_in_zip_read_info->read_buffer = NULL;
    if (pfile_in_zip_read_info->stream_initialised == Z_DEFLATED)
        inflateEnd(&pfile_in_zip_read_info->stream);
#ifdef HAVE_BZIP2
    else if (pfile_in_zip_read_info->stream_initialised == Z_BZIP2ED)
        BZ2_bzDecompressEnd(&pfile_in_zip_read_info->bstream);
#endif


    pfile_in_zip_read_info->stream_initialised = 0;
    TRYFREE(pfile_in_zip_read_info);

    s->pfile_in_zip_read=NULL;

    return err;
}
```

Here is the caller graph for this function:

13.160.4.19 int ZEXPORT unzeof (unzFile *file*)

Definition at line 1932 of file unzip.c.

References unz64_s::pfile_in_zip_read, file_in_zip64_read_info_s::rest_read_uncompressed, and UNZ_PARAMERROR.

Referenced by QuaZipFile::atEnd().

```
1933 {
1934     unz64_s* s;
1935     file_in_zip64_read_info_s* pfile_in_zip_read_info;
1936     if (file==NULL)
1937         return UNZ_PARAMERROR;
1938     s=(unz64_s*)file;
1939     pfile_in_zip_read_info=s->pfile_in_zip_read;
1940
1941     if (pfile_in_zip_read_info==NULL)
1942         return UNZ_PARAMERROR;
1943
1944     if (pfile_in_zip_read_info->rest_read_uncompressed == 0)
1945         return 1;
1946     else
1947         return 0;
1948 }
```

Here is the caller graph for this function:

13.160.4.20 int ZEXPORT unzGetCurrentFileInfo (unzFile *file*, unz_file_info * *pfile_info*, char * *szFileName*, uLong *fileNameBufferSize*, void * *extraField*, uLong *extraFieldBufferSize*, char * *szComment*, uLong *commentBufferSize*)

Definition at line 1146 of file unzip.c.

References unz_file_info64_s::compressed_size, unz_file_info_s::compressed_size, unz_file_info64_s::compression_method, unz_file_info_s::compression_method, unz_file_info64_s::crc, unz_file_info_s::crc, unz_file_info64_s::disk_num_start, unz_file_info_s::disk_num_start, unz_file_info64_s::dosDate, unz_file_info_s::dosDate,

unz_file_info64_s::external_fa, unz_file_info_s::external_fa, unz_file_info64_s::flag, unz_file_info_s::flag, unz_file_info64_s::internal_fa, unz_file_info_s::internal_fa, unz_file_info64_s::size_file_comment, unz_file_info_s::size_file_comment, unz_file_info64_s::size_file_extra, unz_file_info_s::size_file_extra, unz_file_info64_s::size_filename, unz_file_info_s::size_filename, unz_file_info64_s::tmu_date, unz_file_info_s::tmu_date, unz_file_info64_s::uncompressed_size, unz_file_info_s::uncompressed_size, unz64local_GetCurrentFileInfoInternal(), UNZ_OK, unz_file_info64_s::version, unz_file_info_s::version, unz_file_info64_s::version_needed, and unz_file_info_s::version_needed.

```
1151 {
1152     int err;
1153     unz_file_info64 file_info64;
1154     err = unz64local_GetCurrentFileInfoInternal(file,&file_info64,NULL
     ,
1155                                                 szFileName,fileNameBufferSize,
1156                                                 extraField,extraFieldBufferSize,
1157                                                 szComment,commentBufferSize);
1158     if (err==UNZ_OK && pfile_info != NULL)
1159     {
1160         pfile_info->version = file_info64.version;
1161         pfile_info->version_needed = file_info64.version_needed;
1162         pfile_info->flag = file_info64.flag;
1163         pfile_info->compression_method = file_info64.
     compression_method;
1164         pfile_info->dosDate = file_info64.dosDate;
1165         pfile_info->crc = file_info64.crc;
1166
1167         pfile_info->size_filename = file_info64.size_filename;
1168         pfile_info->size_file_extra = file_info64.size_file_extra;
1169         pfile_info->size_file_comment = file_info64.
     size_file_comment;
1170
1171         pfile_info->disk_num_start = file_info64.disk_num_start;
1172         pfile_info->internal_fa = file_info64.internal_fa;
1173         pfile_info->external_fa = file_info64.external_fa;
1174
1175         pfile_info->tmu_date = file_info64.tmu_date,
1176
1177
1178         pfile_info->compressed_size = (uLong)file_info64.
     compressed_size;
1179         pfile_info->uncompressed_size = (uLong)file_info64.
     uncompressed_size;
1180
1181     }
1182     return err;
1183 }
```

Here is the call graph for this function:

13.160.4.21 int ZEXPORT unzGetCurrentFileInfo64 (unzFile *file*, unz_file_info64 * *pfile_info*, char * *szFileName*, uLong *fileNameBufferSize*, void * *extraField*, uLong *extraFieldBufferSize*, char * *szComment*, uLong *commentBufferSize*)

Definition at line 1134 of file unzip.c.

References unz64local_GetCurrentFileInfoInternal().

Referenced by QuaZipFile::csize(), QuaZip::getCurrentFileInfo(), QuaZip::getCurrentFileName(), unzLocateFile(), and QuaZipFile::usize().

```
{
    return unz64local_GetCurrentFileInfoInternal(file,pfile_info,NULL,
                                                 szFileName,fileNameBufferSize,
                                                 extraField,extraFieldBufferSize,
                                                 szComment,commentBufferSize);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.22 ZPOS64_T ZEXPORT unzGetCurrentFileZStreamPos64 (unzFile *file*)

Definition at line 1666 of file unzip.c.

References file_in_zip64_read_info_s::byte_before_the_zipfile, unz64_s::pfile_in_zip_read, and file_in_zip64_read_info_s::pos_in_zipfile.

```
{
    unz64_s* s;
    file_in_zip64_read_info_s* pfile_in_zip_read_info;
    s=(unz64_s*)file;
    if (file==NULL)
        return 0; /*UNZ_PARAMERROR; */
    pfile_in_zip_read_info=s->pfile_in_zip_read;
    if (pfile_in_zip_read_info==NULL)
        return 0; /*UNZ_PARAMERROR; */
    return pfile_in_zip_read_info->pos_in_zipfile +
                         pfile_in_zip_read_info->byte_before_the_zipfile;
}
```

13.160.4.23 int ZEXPORT unzGetFilePos (unzFile *file*, unz_file_pos * *file_pos*)

Definition at line 1334 of file unzip.c.

References unz_file_pos_s::num_of_file, unz64_file_pos_s::num_of_file, unz_file_pos_s::pos_in_zip_directory, unz64_file_pos_s::pos_in_zip_directory, UNZ_OK, and unzGetFilePos64().

```
{
    unz64_file_pos file_pos64;
    int err = unzGetFilePos64(file,&file_pos64);
    if (err==UNZ_OK)
    {
```

```
        file_pos->pos_in_zip_directory = (uLong)file_pos64.
    pos_in_zip_directory;
        file_pos->num_of_file = (uLong)file_pos64.num_of_file;
    }
    return err;
}
```

Here is the call graph for this function:

13.160.4.24 int ZEXPORT unzGetFilePos64 (unzFile *file*, unz64_file_pos * *file_pos*)

Definition at line 1318 of file unzip.c.

References unz64_s::current_file_ok, unz64_s::num_file, unz64_file_pos_s::num_of_file, unz64_s::pos_in_central_dir, unz64_file_pos_s::pos_in_zip_directory, UNZ_END_OF_LIST_OF_FILE, UNZ_OK, and UNZ_PARAMERROR.

Referenced by QuaZipPrivate::addCurrentFileToDirectoryMap(), and unzGetFilePos().

```
{
    unz64_s* s;

    if (file==NULL || file_pos==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;
    if (!s->current_file_ok)
        return UNZ_END_OF_LIST_OF_FILE;

    file_pos->pos_in_zip_directory  = s->pos_in_central_dir;
    file_pos->num_of_file           = s->num_file;

    return UNZ_OK;
}
```

Here is the caller graph for this function:

13.160.4.25 int ZEXPORT unzGetGlobalComment (unzFile *file*, char * *szComment*, uLong *uSizeBuf*)

Definition at line 2059 of file unzip.c.

References unz64_s::central_pos, unz64_s::filestream, unz64_s::gi, unz_global_info64_s::size_comment, UNZ_ERRNO, UNZ_PARAMERROR, unz64_s::z_filefunc, ZLIB_FILEFUNC_SEEK_SET, ZREAD64, and ZSEEK64.

Referenced by QuaZip::getComment().

```
{
    unz64_s* s;
    uLong uReadThis ;
    if (file==NULL)
        return (int)UNZ_PARAMERROR;
    s=(unz64_s*)file;

    uReadThis = uSizeBuf;
    if (uReadThis>s->gi.size_comment)
        uReadThis = s->gi.size_comment;

    if (ZSEEK64(s->z_filefunc,s->filestream,s->central_pos+22,ZLIB_FILEFUNC_SEEK_SET)!=0)
        return UNZ_ERRNO;

    if (uReadThis>0)
    {
      *szComment='\0';
      if (ZREAD64(s->z_filefunc,s->filestream,szComment,uReadThis)!=uReadThis)
        return UNZ_ERRNO;
    }

    if ((szComment != NULL) && (uSizeBuf > s->gi.size_comment))
        *(szComment+s->gi.size_comment)='\0';
    return (int)uReadThis;
}
```

Here is the caller graph for this function:

13.160.4.26 int ZEXPORT unzGetGlobalInfo (unzFile *file*, unz_global_info * *pglobal_info32*)

Definition at line 848 of file unzip.c.

References unz64_s::gi, unz_global_info64_s::number_entry, unz_global_info_s::number_entry, unz_global_info64_s::size_comment, unz_global_info_s::size_comment, UNZ_OK, and UNZ_PARAMERROR.

```
{
    unz64_s* s;
    if (file==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;
    /* to do : check if number_entry is not truncated */
    pglobal_info32->number_entry = (uLong)s->gi.number_entry;
    pglobal_info32->size_comment = s->gi.size_comment;
    return UNZ_OK;
}
```

13.160.4.27 int ZEXPORT unzGetGlobalInfo64 (unzFile *file*, unz_global_info64 * *pglobal_info*)

Definition at line 838 of file unzip.c.

References unz64_s::gi, UNZ_OK, and UNZ_PARAMERROR.

Referenced by QuaZip::getComment(), and QuaZip::getEntriesCount().

```
{
    unz64_s* s;
    if (file==NULL)
```

```
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;
    *pglobal_info=s->gi;
    return UNZ_OK;
}
```

Here is the caller graph for this function:

13.160.4.28 int ZEXPORT unzGetLocalExtrafield (unzFile *file*, voidp *buf*, unsigned *len*)

Definition at line 1964 of file unzip.c.

References file_in_zip64_read_info_s::filestream, file_in_zip64_read_info_s::offset_local_extrafield, unz64_s::pfile_in_zip_read, file_in_zip64_read_info_s::pos_local_extrafield, file_in_zip64_read_info_s::size_local_extrafield, UNZ_ERRNO, UNZ_PARAMERROR, file_in_zip64_read_info_s::z_filefunc, ZLIB_FILEFUNC_SEEK_SET, ZREAD64, and ZSEEK64.

```
{
    unz64_s* s;
    file_in_zip64_read_info_s* pfile_in_zip_read_info;
    uInt read_now;
    ZPOS64_T size_to_read;

    if (file==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;
    pfile_in_zip_read_info=s->pfile_in_zip_read;

    if (pfile_in_zip_read_info==NULL)
        return UNZ_PARAMERROR;

    size_to_read = (pfile_in_zip_read_info->size_local_extrafield -
                pfile_in_zip_read_info->pos_local_extrafield);

    if (buf==NULL)
        return (int)size_to_read;

    if (len>size_to_read)
        read_now = (uInt)size_to_read;
    else
        read_now = (uInt)len ;

    if (read_now==0)
        return 0;

    if (ZSEEK64(pfile_in_zip_read_info->z_filefunc,
              pfile_in_zip_read_info->filestream,
              pfile_in_zip_read_info->offset_local_extrafield +
              pfile_in_zip_read_info->pos_local_extrafield,
              ZLIB_FILEFUNC_SEEK_SET)!=0)
        return UNZ_ERRNO;

    if (ZREAD64(pfile_in_zip_read_info->z_filefunc,
              pfile_in_zip_read_info->filestream,
              buf,read_now)!=read_now)
        return UNZ_ERRNO;

    return (int)read_now;
}
```

13.160.4.29 uLong ZEXPORT unzGetOffset (unzFile *file*)

Definition at line 2102 of file unzip.c.

References unzGetOffset64().

```
2103 {
2104     ZPOS64_T offset64;
2105
2106     if (file==NULL)
2107           return 0; /*UNZ_PARAMERROR; */
2108     offset64 = unzGetOffset64(file);
2109     return (uLong)offset64;
2110 }
```

Here is the call graph for this function:

13.160.4.30 ZPOS64_T ZEXPORT unzGetOffset64 (unzFile *file*)

Definition at line 2087 of file unzip.c.

References unz64_s::current_file_ok, unz64_s::gi, unz64_s::num_file, unz_global_info64_s::number_entry, and unz64_s::pos_in_central_dir.

Referenced by unzGetOffset().

```
2088 {
2089     unz64_s* s;
2090
2091     if (file==NULL)
2092           return 0; /*UNZ_PARAMERROR; */
2093     s=(unz64_s*)file;
2094     if (!s->current_file_ok)
2095       return 0;
2096     if (s->gi.number_entry != 0 && s->gi.number_entry != 0xffff)
2097       if (s->num_file==s->gi.number_entry)
2098          return 0;
2099     return s->pos_in_central_dir;
2100 }
```

Here is the caller graph for this function:

13.160.4.31 int ZEXPORT unzGoToFilePos (unzFile *file*, unz_file_pos * *file_pos*)

Definition at line 1370 of file unzip.c.

References unz_file_pos_s::num_of_file, unz64_file_pos_s::num_of_file, unz_file_pos_s::pos_in_zip_directory, unz64_file_pos_s::pos_in_zip_directory, UNZ_PARAMERROR, and unzGoToFilePos64().

```
{
    unz64_file_pos file_pos64;
    if (file_pos == NULL)
        return UNZ_PARAMERROR;

    file_pos64.pos_in_zip_directory = file_pos->pos_in_zip_directory;
    file_pos64.num_of_file = file_pos->num_of_file;
    return unzGoToFilePos64(file,&file_pos64);
}
```

Here is the call graph for this function:

13.160.4.32 int ZEXPORT unzGoToFilePos64 (unzFile *file*, const unz64_file_pos * *file_pos*)

Definition at line 1348 of file unzip.c.

References unz64_s::cur_file_info, unz64_s::cur_file_info_internal, unz64_s::current_file_ok, unz64_s::num_file, unz64_file_pos_s::num_of_file, unz64_s::pos_in_central_dir, unz64_file_pos_s::pos_in_zip_directory, unz64local_GetCurrentFileInfoInternal(), UNZ_OK, and UNZ_PARAMERROR.

Referenced by QuaZipPrivate::goToFirstUnmappedFile(), QuaZip::setCurrentFile(), and unzGoToFilePos().

```
{
    unz64_s* s;
    int err;

    if (file==NULL || file_pos==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;

    /* jump to the right spot */
    s->pos_in_central_dir = file_pos->pos_in_zip_directory;
    s->num_file           = file_pos->num_of_file;

    /* set the current file */
    err = unz64local_GetCurrentFileInfoInternal(file,&s->cur_file_info,
                                                &s->cur_file_info_internal,
                                                NULL,0,NULL,0,NULL,0);
    /* return results */
    s->current_file_ok = (err == UNZ_OK);
    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.33 int ZEXPORT unzGoToFirstFile (unzFile *file*)

Definition at line 1188 of file unzip.c.

References unz64_s::cur_file_info, unz64_s::cur_file_info_internal, unz64_s::current_file_ok, unz64_s::num_file, unz64_s::offset_central_dir, unz64_s::pos_in_central_dir, unz64local_GetCurrentFileInfoInternal(), UNZ_OK, and UNZ_PARAMERROR.

Referenced by QuaZip::goToFirstFile(), QuaZipPrivate::goToFirstUnmappedFile(), unzLocateFile(), and unzOpenInternal().

```
{
    int err=UNZ_OK;
    unz64_s* s;
    if (file==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;
    s->pos_in_central_dir=s->offset_central_dir;
    s->num_file=0;
    err=unz64local_GetCurrentFileInfoInternal(file,&s->cur_file_info,
                                              &s->cur_file_info_internal,
                                              NULL,0,NULL,0,NULL,0);
    s->current_file_ok = (err == UNZ_OK);
    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.34 int ZEXPORT unzGoToNextFile (unzFile *file*)

Definition at line 1209 of file unzip.c.

References unz64_s::cur_file_info, unz64_s::cur_file_info_internal, unz64_s::current_file_ok, unz64_s::gi, unz64_s::num_file, unz_global_info64_s::number_entry, unz64_s::pos_in_central_dir, unz_file_info64_s::size_file_comment, unz_file_info64_s::size_file_extra, unz_file_info64_s::size_filename, SIZECENTRALDIRITEM, unz64local_GetCurrentFileInfoInternal(), UNZ_END_OF_LIST_OF_FILE, UNZ_OK, and UNZ_PARAMERROR.

Referenced by QuaZipPrivate::goToFirstUnmappedFile(), QuaZip::goToNextFile(), and unzLocateFile().

```
{
    unz64_s* s;
    int err;

    if (file==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;
    if (!s->current_file_ok)
        return UNZ_END_OF_LIST_OF_FILE;
    if (s->gi.number_entry != 0xffff)    /* 2^16 files overflow hack */
      if (s->num_file+1==s->gi.number_entry)
        return UNZ_END_OF_LIST_OF_FILE;

    s->pos_in_central_dir += SIZECENTRALDIRITEM + s->cur_file_info.size_filename +
            s->cur_file_info.size_file_extra + s->cur_file_info.size_file_comment ;
    s->num_file++;
    err = unz64local_GetCurrentFileInfoInternal(file,&s->cur_file_info,
                                                &s->cur_file_info_internal,
                                                NULL,0,NULL,0,NULL,0);
    s->current_file_ok = (err == UNZ_OK);
    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.35 int ZEXPORT unzLocateFile (unzFile *file*, const char * *szFileName*, int *iCaseSensitivity*)

Definition at line 1242 of file unzip.c.

References unz64_s::cur_file_info, unz64_s::cur_file_info_internal, unz64_s::current_file_ok, unz64_s::num_file, unz64_s::pos_in_central_dir, UNZ_END_OF_LIST_OF_FILE, UNZ_MAXFILENAMEINZIP, UNZ_OK, UNZ_PARAMERROR, unzGetCurrentFileInfo64(), unzGoToFirstFile(), unzGoToNextFile(), and unzStringFileNameCompare().

```
{
    unz64_s* s;
    int err;

    /* We remember the 'current' position in the file so that we can jump
     * back there if we fail.
     */
    unz_file_info64 cur_file_infoSaved;
    unz_file_info64_internal cur_file_info_internalSaved;
    ZPOS64_T num_fileSaved;
    ZPOS64_T pos_in_central_dirSaved;


    if (file==NULL)
        return UNZ_PARAMERROR;

    if (strlen(szFileName)>=UNZ_MAXFILENAMEINZIP)
        return UNZ_PARAMERROR;

    s=(unz64_s*)file;
    if (!s->current_file_ok)
        return UNZ_END_OF_LIST_OF_FILE;

    /* Save the current state */
    num_fileSaved = s->num_file;
    pos_in_central_dirSaved = s->pos_in_central_dir;
    cur_file_infoSaved = s->cur_file_info;
    cur_file_info_internalSaved = s->cur_file_info_internal;

    err = unzGoToFirstFile(file);

    while (err == UNZ_OK)
    {
        char szCurrentFileName[UNZ_MAXFILENAMEINZIP+1];
        err = unzGetCurrentFileInfo64(file,NULL,
                                      szCurrentFileName,sizeof(szCurrentFileName)-1,
                                      NULL,0,NULL,0);
        if (err == UNZ_OK)
        {
            if (unzStringFileNameCompare(szCurrentFileName,
                                         szFileName,iCaseSensitivity)==0)
                return UNZ_OK;
            err = unzGoToNextFile(file);
        }
    }

    /* We failed, so restore the state of the 'current file' to where we
     * were.
     */
    s->num_file = num_fileSaved ;
    s->pos_in_central_dir = pos_in_central_dirSaved ;
    s->cur_file_info = cur_file_infoSaved;
    s->cur_file_info_internal = cur_file_info_internalSaved;
    return err;
}
```

Here is the call graph for this function:

13.160.4.36 unzFile ZEXPORT unzOpen (voidpf *file*)

Definition at line 800 of file unzip.c.

References UNZ_DEFAULT_FLAGS, and unzOpenInternal().

```
801 {
802     return unzOpenInternal(file, NULL, 0, UNZ_DEFAULT_FLAGS);
803 }
```

Here is the call graph for this function:

13.160.4.37 unzFile ZEXPORT unzOpen2 (voidpf *file*, zlib_filefunc_def * *pzlib_filefunc32_def*)

Definition at line 772 of file unzip.c.

References fill_zlib_filefunc64_32_def_from_filefunc32(), UNZ_DEFAULT_FLAGS, and unzOpenInternal().

Referenced by QuaZip::open().

```
774 {
775     if (pzlib_filefunc32_def != NULL)
776     {
777         zlib_filefunc64_32_def zlib_filefunc64_32_def_fill;
778         fill_zlib_filefunc64_32_def_from_filefunc32(&
```

```
    zlib_filefunc64_32_def_fill,pzlib_filefunc32_def);
        return unzOpenInternal(file, &zlib_filefunc64_32_def_fill, 0,
    UNZ_DEFAULT_FLAGS);
    }
    else
        return unzOpenInternal(file, NULL, 0, UNZ_DEFAULT_FLAGS);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.38 unzFile ZEXPORT unzOpen2_64 (voidpf *file*, zlib_filefunc64_def * *pzlib_filefunc_def*)

Definition at line 785 of file unzip.c.

References UNZ_DEFAULT_FLAGS, unzOpenInternal(), zlib_filefunc64_32_def_s::zfile_func64, zlib_filefunc64_-32_def_s::zseek32_file, and zlib_filefunc64_32_def_s::ztell32_file.

```
{
    if (pzlib_filefunc_def != NULL)
    {
        zlib_filefunc64_32_def zlib_filefunc64_32_def_fill;
        zlib_filefunc64_32_def_fill.zfile_func64 = *pzlib_filefunc_def;
        zlib_filefunc64_32_def_fill.ztell32_file = NULL;
        zlib_filefunc64_32_def_fill.zseek32_file = NULL;
        return unzOpenInternal(file, &zlib_filefunc64_32_def_fill, 1,
    UNZ_DEFAULT_FLAGS);
    }
    else
```

```
        return unzOpenInternal(file, NULL, 1, UNZ_DEFAULT_FLAGS);
}
```

Here is the call graph for this function:

13.160.4.39 unzFile ZEXPORT unzOpen64 (voidpf *file*)

Definition at line 805 of file unzip.c.

References UNZ_DEFAULT_FLAGS, and unzOpenInternal().

```
{
    return unzOpenInternal(file, NULL, 1, UNZ_DEFAULT_FLAGS);
}
```

Here is the call graph for this function:

13.160.4.40 int ZEXPORT unzOpenCurrentFile (unzFile *file*)

Definition at line 1649 of file unzip.c.

References unzOpenCurrentFile3().

```
1650 {
1651     return unzOpenCurrentFile3(file, NULL, NULL, 0, NULL);
1652 }
```

Here is the call graph for this function:

13.160.4.41 int ZEXPORT unzOpenCurrentFile2 (unzFile *file*, int * *method*, int * *level*, int *raw*)

Definition at line 1659 of file unzip.c.

References unzOpenCurrentFile3().

```
1660 {
1661     return unzOpenCurrentFile3(file, method, level, raw, NULL);
1662 }
```

Here is the call graph for this function:

13.160.4.42 int ZEXPORT unzOpenCurrentFile3 (unzFile *file*, int * *method*, int * *level*, int *raw*, const char * *password*)

Definition at line 1480 of file unzip.c.

References ALLOC, file_in_zip64_read_info_s::byte_before_the_zipfile, unz64_s::byte_before_the_zipfile, unz_file_info64_s::compressed_size, unz_file_info64_s::compression_method, file_in_zip64_read_info_s::compression_method, unz_file_info64_s::crc, file_in_zip64_read_info_s::crc32, file_in_zip64_read_info_s::crc32_wait, unz64_s::cur_file_info, unz64_s::cur_file_info_internal, unz64_s::current_file_ok, unz64_s::encrypted, file_in_zip64_read_info_s::filestream, unz64_s::filestream, unz_file_info64_s::flag, init_keys(), unz64_s::keys, unz_file_info64_internal_s::offset_curfile, file_in_zip64_read_info_s::offset_local_extrafield, unz64_s::pcrc_32_tab, unz64_s::pfile_in_zip_read, file_in_zip64_read_info_s::pos_in_zipfile, file_in_zip64_read_info_s::pos_local_extrafield, file_in_zip64_read_info_s::raw, file_in_zip64_read_info_s::read_buffer, file_in_zip64_read_info_s::rest_read_compressed, file_in_zip64_read_info_s::rest_read_uncompressed, SEEK_SET, file_in_zip64_read_info_s::size_local_extrafield,

SIZEZIPLOCALHEADER, file_in_zip64_read_info_s::stream, file_in_zip64_read_info_s::stream_initialised, file_in_zip64_read_info_s::total_out_64, TRYFREE, unz_file_info64_s::uncompressed_size, unz64local_CheckCurrentFileCoherencyHeader(), UNZ_BADZIPFILE, UNZ_BUFSIZE, UNZ_INTERNALERROR, UNZ_OK, UNZ_PARAMERROR, unzCloseCurrentFile(), Z_BZIP2ED, file_in_zip64_read_info_s::z_filefunc, unz64_s::z_filefunc, zdecode, ZREAD64, and ZSEEK64.

Referenced by QuaZipFile::open(), unzOpenCurrentFile(), unzOpenCurrentFile2(), and unzOpenCurrentFilePassword().

```
{
    int err=UNZ_OK;
    uInt iSizeVar;
    unz64_s* s;
    file_in_zip64_read_info_s* pfile_in_zip_read_info;
    ZPOS64_T offset_local_extrafield;  /* offset of the local extra field */
    uInt  size_local_extrafield;    /* size of the local extra field */
#    ifndef NOUNCRYPT
    char source[12];
#    else
    if (password != NULL)
        return UNZ_PARAMERROR;
#    endif

    if (file==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;
    if (!s->current_file_ok)
        return UNZ_PARAMERROR;

    if (s->pfile_in_zip_read != NULL)
        unzCloseCurrentFile(file);

    if (unz64local_CheckCurrentFileCoherencyHeader(s,&iSizeVar, &offset_local_extrafield,&size_local_extrafield)!=UNZ_OK)
        return UNZ_BADZIPFILE;

    pfile_in_zip_read_info = (file_in_zip64_read_info_s*)ALLOC(sizeof(file_in_zip64_read_info_s));
    if (pfile_in_zip_read_info==NULL)
        return UNZ_INTERNALERROR;

    pfile_in_zip_read_info->read_buffer=(char*)ALLOC(UNZ_BUFSIZE);
    pfile_in_zip_read_info->offset_local_extrafield = offset_local_extrafield;
    pfile_in_zip_read_info->size_local_extrafield = size_local_extrafield;
    pfile_in_zip_read_info->pos_local_extrafield=0;
    pfile_in_zip_read_info->raw=raw;

    if (pfile_in_zip_read_info->read_buffer==NULL)
    {
        TRYFREE(pfile_in_zip_read_info);
        return UNZ_INTERNALERROR;
    }

    pfile_in_zip_read_info->stream_initialised=0;

    if (method!=NULL)
        *method = (int)s->cur_file_info.compression_method;

    if (level!=NULL)
    {
        *level = 6;
        switch (s->cur_file_info.flag & 0x06)
        {
          case 6 : *level = 1; break;
          case 4 : *level = 2; break;
          case 2 : *level = 9; break;
        }
    }

    if ((s->cur_file_info.compression_method!=0) &&
/* #ifdef HAVE_BZIP2 */
        (s->cur_file_info.compression_method!=Z_BZIP2ED) &&
/* #endif */
        (s->cur_file_info.compression_method!=Z_DEFLATED))

        err=UNZ_BADZIPFILE;

    pfile_in_zip_read_info->crc32_wait=s->cur_file_info.crc;
    pfile_in_zip_read_info->crc32=0;
    pfile_in_zip_read_info->total_out_64=0;
    pfile_in_zip_read_info->compression_method = s->cur_file_info.compression_method;
```

```
    pfile_in_zip_read_info->filestream=s->filestream;
    pfile_in_zip_read_info->z_filefunc=s->z_filefunc;
    pfile_in_zip_read_info->byte_before_the_zipfile=s->byte_before_the_zipfile;

    pfile_in_zip_read_info->stream.total_out = 0;

    if ((s->cur_file_info.compression_method==Z_BZIP2ED) && (!raw))
    {
#ifdef HAVE_BZIP2
      pfile_in_zip_read_info->bstream.bzalloc = (void *(*) (void *, int, int))0;
      pfile_in_zip_read_info->bstream.bzfree = (free_func)0;
      pfile_in_zip_read_info->bstream.opaque = (voidpf)0;
      pfile_in_zip_read_info->bstream.state = (voidpf)0;

      pfile_in_zip_read_info->stream.zalloc = (alloc_func)0;
      pfile_in_zip_read_info->stream.zfree = (free_func)0;
      pfile_in_zip_read_info->stream.opaque = (voidpf)0;
      pfile_in_zip_read_info->stream.next_in = (voidpf)0;
      pfile_in_zip_read_info->stream.avail_in = 0;

      err=BZ2_bzDecompressInit(&pfile_in_zip_read_info->bstream, 0, 0);
      if (err == Z_OK)
        pfile_in_zip_read_info->stream_initialised=Z_BZIP2ED;
      else
      {
        TRYFREE(pfile_in_zip_read_info);
        return err;
      }
#else
      pfile_in_zip_read_info->raw=1;
#endif
    }
    else if ((s->cur_file_info.compression_method==Z_DEFLATED) && (!raw))
    {
      pfile_in_zip_read_info->stream.zalloc = (alloc_func)0;
      pfile_in_zip_read_info->stream.zfree = (free_func)0;
      pfile_in_zip_read_info->stream.opaque = (voidpf)0;
      pfile_in_zip_read_info->stream.next_in = 0;
      pfile_in_zip_read_info->stream.avail_in = 0;

      err=inflateInit2(&pfile_in_zip_read_info->stream, -MAX_WBITS);
      if (err == Z_OK)
        pfile_in_zip_read_info->stream_initialised=Z_DEFLATED;
      else
      {
        TRYFREE(pfile_in_zip_read_info);
        return err;
      }
        /* windowBits is passed < 0 to tell that there is no zlib header.
         * Note that in this case inflate *requires* an extra "dummy" byte
         * after the compressed stream in order to complete decompression and
         * return Z_STREAM_END.
         * In unzip, i don't wait absolutely Z_STREAM_END because I known the
         * size of both compressed and uncompressed data
         */
    }
    pfile_in_zip_read_info->rest_read_compressed =
            s->cur_file_info.compressed_size ;
    pfile_in_zip_read_info->rest_read_uncompressed =
            s->cur_file_info.uncompressed_size ;


    pfile_in_zip_read_info->pos_in_zipfile =
            s->cur_file_info_internal.offset_curfile + SIZEZIPLOCALHEADER +
              iSizeVar;

    pfile_in_zip_read_info->stream.avail_in = (uInt)0;

    s->pfile_in_zip_read = pfile_in_zip_read_info;
                s->encrypted = 0;

#    ifndef NOUNCRYPT
    if (password != NULL)
    {
        int i;
        s->pcrc_32_tab = get_crc_table();
        init_keys(password,s->keys,s->pcrc_32_tab);
        if (ZSEEK64(s->z_filefunc, s->filestream,
                  s->pfile_in_zip_read->pos_in_zipfile +
                     s->pfile_in_zip_read->byte_before_the_zipfile,
                  SEEK_SET)!=0)
            return UNZ_INTERNALERROR;
        if(ZREAD64(s->z_filefunc, s->filestream,source, 12)<12)
```

```
            return UNZ_INTERNALERROR;

        for (i = 0; i<12; i++)
            zdecode(s->keys,s->pcrc_32_tab,source[i]);

        s->pfile_in_zip_read->pos_in_zipfile+=12;
        s->encrypted=1;
    }
#    endif


    return UNZ_OK;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.43 int ZEXPORT unzOpenCurrentFilePassword (unzFile *file*, const char * *password*)

Definition at line 1654 of file unzip.c.

References unzOpenCurrentFile3().

```
{
    return unzOpenCurrentFile3(file, NULL, NULL, 0, password);
}
```

Here is the call graph for this function:

13.160.4.44 unzFile unzOpenInternal (voidpf *file*, zlib_filefunc64_32_def * *pzlib_filefunc64_32_def*, int *is64bitOpenFunction*, unsigned *flags*)

Definition at line 587 of file unzip.c.

References ALLOC, unz64_s::byte_before_the_zipfile, unz64_s::central_pos, unz64_s::encrypted, unz64_s::filestream, fill_qiodevice64_filefunc(), unz64_s::flags, unz64_s::gi, unz64_s::is64bitOpenFunction, unz64_s::isZip64, unz_global_info64_s::number_entry, unz64_s::offset_central_dir, unz64_s::pfile_in_zip_read, unz64_s::size_central_dir, unz_global_info64_s::size_comment, unz64local_getLong(), unz64local_getLong64(), unz64local_getShort(), unz64local_SearchCentralDir(), unz64local_SearchCentralDir64(), UNZ_AUTO_CLOSE, UNZ_BADZIPFILE, unz_copyright, UNZ_ERRNO, UNZ_OK, unzGoToFirstFile(), unz64_s::z_filefunc, ZCLOSE64, ZFAKECLOSE64, zlib_filefunc64_32_def_s::zfile_func64, ZLIB_FILEFUNC_MODE_EXISTING, ZLIB_FILEFUNC_MODE_READ, ZLIB_FILEFUNC_SEEK_SET, ZOPEN64, zlib_filefunc64_32_def_s::zseek32_file, ZSEEK64, and zlib_filefunc64_32_def_s::ztell32_file.

Referenced by QuaZip::open(), unzOpen(), unzOpen2(), unzOpen2_64(), and unzOpen64().

```
{
    unz64_s us;
    unz64_s *s;
    ZPOS64_T central_pos;
    uLong   uL;

    uLong number_disk;          /* number of the current dist, used for
                                   spaning ZIP, unsupported, always 0*/
    uLong number_disk_with_CD;  /* number the the disk with central dir, used
                                   for spaning ZIP, unsupported, always 0*/
    ZPOS64_T number_entry_CD;      /* total number of entries in
                                   the central dir
                                   (same than number_entry on nospan) */

    int err=UNZ_OK;

    if (unz_copyright[0]!=' ')
        return NULL;

    us.flags = flags;
    us.z_filefunc.zseek32_file = NULL;
    us.z_filefunc.ztell32_file = NULL;
    if (pzlib_filefunc64_32_def==NULL)
        fill_qiodevice64_filefunc(&us.z_filefunc.zfile_func64);
    else
        us.z_filefunc = *pzlib_filefunc64_32_def;
    us.is64bitOpenFunction = is64bitOpenFunction;



    us.filestream = ZOPEN64(us.z_filefunc,
                                                file,
                                                ZLIB_FILEFUNC_MODE_READ |
                                                ZLIB_FILEFUNC_MODE_EXISTING);
    if (us.filestream==NULL)
        return NULL;

    central_pos = unz64local_SearchCentralDir64(&us.z_filefunc,us.filestream);
    if (central_pos)
    {
        uLong uS;
        ZPOS64_T uL64;

```

```
        us.isZip64 = 1;

        if (ZSEEK64(us.z_filefunc, us.filestream,
                                    central_pos,ZLIB_FILEFUNC_SEEK_SET)!=0)
        err=UNZ_ERRNO;

        /* the signature, already checked */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* size of zip64 end of central directory record */
        if (unz64local_getLong64(&us.z_filefunc, us.filestream,&uL64)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* version made by */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&uS)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* version needed to extract */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&uS)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* number of this disk */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&number_disk)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* number of the disk with the start of the central directory */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&number_disk_with_CD)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* total number of entries in the central directory on this disk */
        if (unz64local_getLong64(&us.z_filefunc, us.filestream,&us.gi.number_entry)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* total number of entries in the central directory */
        if (unz64local_getLong64(&us.z_filefunc, us.filestream,&number_entry_CD)!=UNZ_OK)
            err=UNZ_ERRNO;

        if ((number_entry_CD!=us.gi.number_entry) ||
            (number_disk_with_CD!=0) ||
            (number_disk!=0))
            err=UNZ_BADZIPFILE;

        /* size of the central directory */
        if (unz64local_getLong64(&us.z_filefunc, us.filestream,&us.size_central_dir)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* offset of start of central directory with respect to the
          starting disk number */
        if (unz64local_getLong64(&us.z_filefunc, us.filestream,&us.offset_central_dir)!=UNZ_OK)
            err=UNZ_ERRNO;

        us.gi.size_comment = 0;
    }
    else
    {
        central_pos = unz64local_SearchCentralDir(&us.z_filefunc,us.filestream);
        if (central_pos==0)
            err=UNZ_ERRNO;

        us.isZip64 = 0;

        if (ZSEEK64(us.z_filefunc, us.filestream,
                                    central_pos,ZLIB_FILEFUNC_SEEK_SET)!=0)
            err=UNZ_ERRNO;

        /* the signature, already checked */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* number of this disk */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&number_disk)!=UNZ_OK)
            err=UNZ_ERRNO;

```

```
        /* number of the disk with the start of the central directory */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&number_disk_with_CD)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* total number of entries in the central dir on this disk */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;
        us.gi.number_entry = uL;

        /* total number of entries in the central dir */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;
        number_entry_CD = uL;

        if ((number_entry_CD!=us.gi.number_entry) ||
            (number_disk_with_CD!=0) ||
            (number_disk!=0))
            err=UNZ_BADZIPFILE;

        /* size of the central directory */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;
        us.size_central_dir = uL;

        /* offset of start of central directory with respect to the
            starting disk number */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;
        us.offset_central_dir = uL;

        /* zipfile comment length */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&us.gi.size_comment)!=UNZ_OK)
            err=UNZ_ERRNO;
    }

    if ((central_pos<us.offset_central_dir+us.size_central_dir) &&
        (err==UNZ_OK))
        err=UNZ_BADZIPFILE;

    if (err!=UNZ_OK)
    {
        if ((us.flags & UNZ_AUTO_CLOSE) != 0)
            ZCLOSE64(us.z_filefunc, us.filestream);
        else
            ZFAKECLOSE64(us.z_filefunc, us.filestream);
        return NULL;
    }

    us.byte_before_the_zipfile = central_pos -
                            (us.offset_central_dir+us.size_central_dir);
    us.central_pos = central_pos;
    us.pfile_in_zip_read = NULL;
    us.encrypted = 0;


    s=(unz64_s*)ALLOC(sizeof(unz64_s));
    if( s != NULL)
    {
        *s=us;
        unzGoToFirstFile((unzFile)s);
    }
    return (unzFile)s;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.45 int ZEXPORT unzReadCurrentFile (unzFile *file*, voidp *buf*, unsigned *len*)

Definition at line 1692 of file unzip.c.

References file_in_zip64_read_info_s::byte_before_the_zipfile, file_in_zip64_read_info_s::compression_method, file_in_zip64_read_info_s::crc32, unz64_s::encrypted, file_in_zip64_read_info_s::filestream, unz64_s::keys, unz64_s::pcrc_32_tab, unz64_s::pfile_in_zip_read, file_in_zip64_read_info_s::pos_in_zipfile, file_in_zip64_read_info_s::raw, file_in_zip64_read_info_s::read_buffer, file_in_zip64_read_info_s::rest_read_compressed, file_in_zip64_read_info_s::rest_read_uncompressed, file_in_zip64_read_info_s::stream, file_in_zip64_read_info_s::total_out_64, UNZ_BUFSIZE, UNZ_END_OF_LIST_OF_FILE, UNZ_EOF, UNZ_ERRNO, UNZ_OK, UNZ_PARAMERROR, Z_BZIP2ED, file_in_zip64_read_info_s::z_filefunc, zdecode, ZLIB_FILEFUNC_SEEK_SET, ZREAD64, and ZSEEK64.

Referenced by QuaZipFile::readData().

```
{
    int err=UNZ_OK;
    uInt iRead = 0;
    unz64_s* s;
    file_in_zip64_read_info_s* pfile_in_zip_read_info;
    if (file==NULL)
```

```
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;
    pfile_in_zip_read_info=s->pfile_in_zip_read;

    if (pfile_in_zip_read_info==NULL)
        return UNZ_PARAMERROR;


    if (pfile_in_zip_read_info->read_buffer == NULL)
        return UNZ_END_OF_LIST_OF_FILE;
    if (len==0)
        return 0;

    pfile_in_zip_read_info->stream.next_out = (Bytef*)buf;

    pfile_in_zip_read_info->stream.avail_out = (uInt)len;

    if ((len>pfile_in_zip_read_info->rest_read_uncompressed) &&
        (!(pfile_in_zip_read_info->raw)))
        pfile_in_zip_read_info->stream.avail_out =
            (uInt)pfile_in_zip_read_info->rest_read_uncompressed;

    if ((len>pfile_in_zip_read_info->rest_read_compressed+
           pfile_in_zip_read_info->stream.avail_in) &&
         (pfile_in_zip_read_info->raw))
        pfile_in_zip_read_info->stream.avail_out =
            (uInt)pfile_in_zip_read_info->rest_read_compressed+
            pfile_in_zip_read_info->stream.avail_in;

    while (pfile_in_zip_read_info->stream.avail_out>0)
    {
        if ((pfile_in_zip_read_info->stream.avail_in==0) &&
            (pfile_in_zip_read_info->rest_read_compressed>0))
        {
            uInt uReadThis = UNZ_BUFSIZE;
            if (pfile_in_zip_read_info->rest_read_compressed<uReadThis)
                uReadThis = (uInt)pfile_in_zip_read_info->rest_read_compressed;
            if (uReadThis == 0)
                return UNZ_EOF;
            if (ZSEEK64(pfile_in_zip_read_info->z_filefunc,
                      pfile_in_zip_read_info->filestream,
                      pfile_in_zip_read_info->pos_in_zipfile +
                         pfile_in_zip_read_info->byte_before_the_zipfile,
                         ZLIB_FILEFUNC_SEEK_SET)!=0)
                return UNZ_ERRNO;
            if (ZREAD64(pfile_in_zip_read_info->z_filefunc,
                      pfile_in_zip_read_info->filestream,
                      pfile_in_zip_read_info->read_buffer,
                      uReadThis)!=uReadThis)
                return UNZ_ERRNO;


#            ifndef NOUNCRYPT
            if(s->encrypted)
            {
                uInt i;
                for(i=0;i<uReadThis;i++)
                  pfile_in_zip_read_info->read_buffer[i] =
                      zdecode(s->keys,s->pcrc_32_tab,
                              pfile_in_zip_read_info->read_buffer[i]);
            }
#            endif


            pfile_in_zip_read_info->pos_in_zipfile += uReadThis;

            pfile_in_zip_read_info->rest_read_compressed-=uReadThis;

            pfile_in_zip_read_info->stream.next_in =
                (Bytef*)pfile_in_zip_read_info->read_buffer;
            pfile_in_zip_read_info->stream.avail_in = (uInt)uReadThis;
        }

        if ((pfile_in_zip_read_info->compression_method==0) || (pfile_in_zip_read_info->
    raw))
        {
            uInt uDoCopy,i ;

            if ((pfile_in_zip_read_info->stream.avail_in == 0) &&
                (pfile_in_zip_read_info->rest_read_compressed == 0))
                return (iRead==0) ? UNZ_EOF : iRead;

            if (pfile_in_zip_read_info->stream.avail_out <
                            pfile_in_zip_read_info->stream.avail_in)
                uDoCopy = pfile_in_zip_read_info->stream.avail_out ;
            else
                uDoCopy = pfile_in_zip_read_info->stream.avail_in ;
```

```

            for (i=0;i<uDoCopy;i++)
                *(pfile_in_zip_read_info->stream.next_out+i) =
                        *(pfile_in_zip_read_info->stream.next_in+i);

            pfile_in_zip_read_info->total_out_64 = pfile_in_zip_read_info->total_out_64 + uDoCopy;

            pfile_in_zip_read_info->crc32 = crc32(pfile_in_zip_read_info->crc32,
                                    pfile_in_zip_read_info->stream.next_out,
                                    uDoCopy);
            pfile_in_zip_read_info->rest_read_uncompressed-=uDoCopy;
            pfile_in_zip_read_info->stream.avail_in -= uDoCopy;
            pfile_in_zip_read_info->stream.avail_out -= uDoCopy;
            pfile_in_zip_read_info->stream.next_out += uDoCopy;
            pfile_in_zip_read_info->stream.next_in += uDoCopy;
            pfile_in_zip_read_info->stream.total_out += uDoCopy;
            iRead += uDoCopy;
        }
        else if (pfile_in_zip_read_info->compression_method==Z_BZIP2ED)
        {
#ifdef HAVE_BZIP2
            uLong uTotalOutBefore,uTotalOutAfter;
            const Bytef *bufBefore;
            uLong uOutThis;

            pfile_in_zip_read_info->bstream.next_in        = (char*)pfile_in_zip_read_info->stream.next_in;
            pfile_in_zip_read_info->bstream.avail_in       = pfile_in_zip_read_info->stream.avail_in;
            pfile_in_zip_read_info->bstream.total_in_lo32  = pfile_in_zip_read_info->stream.total_in;
            pfile_in_zip_read_info->bstream.total_in_hi32  = 0;
            pfile_in_zip_read_info->bstream.next_out       = (char*)pfile_in_zip_read_info->stream.next_out;
            pfile_in_zip_read_info->bstream.avail_out      = pfile_in_zip_read_info->stream.avail_out;
            pfile_in_zip_read_info->bstream.total_out_lo32 = pfile_in_zip_read_info->stream.total_out;
            pfile_in_zip_read_info->bstream.total_out_hi32 = 0;

            uTotalOutBefore = pfile_in_zip_read_info->bstream.total_out_lo32;
            bufBefore = (const Bytef *)pfile_in_zip_read_info->bstream.next_out;

            err=BZ2_bzDecompress(&pfile_in_zip_read_info->bstream);

            uTotalOutAfter = pfile_in_zip_read_info->bstream.total_out_lo32;
            uOutThis = uTotalOutAfter-uTotalOutBefore;

            pfile_in_zip_read_info->total_out_64 = pfile_in_zip_read_info->total_out_64 + uOutThis;

            pfile_in_zip_read_info->crc32 = crc32(pfile_in_zip_read_info->crc32,bufBefore, (uInt)(uOutThis));
            pfile_in_zip_read_info->rest_read_uncompressed -= uOutThis;
            iRead += (uInt)(uTotalOutAfter - uTotalOutBefore);

            pfile_in_zip_read_info->stream.next_in   = (Bytef*)pfile_in_zip_read_info->bstream.next_in;
            pfile_in_zip_read_info->stream.avail_in  = pfile_in_zip_read_info->bstream.avail_in;
            pfile_in_zip_read_info->stream.total_in  = pfile_in_zip_read_info->bstream.total_in_lo32;
            pfile_in_zip_read_info->stream.next_out  = (Bytef*)pfile_in_zip_read_info->bstream.next_out;
            pfile_in_zip_read_info->stream.avail_out = pfile_in_zip_read_info->bstream.avail_out;
            pfile_in_zip_read_info->stream.total_out = pfile_in_zip_read_info->bstream.total_out_lo32;

            if (err==BZ_STREAM_END)
              return (iRead==0) ? UNZ_EOF : iRead;
            if (err!=BZ_OK)
              break;
#endif
        } /* end Z_BZIP2ED */
        else
        {
            ZPOS64_T uTotalOutBefore,uTotalOutAfter;
            const Bytef *bufBefore;
            ZPOS64_T uOutThis;
            int flush=Z_SYNC_FLUSH;

            uTotalOutBefore = pfile_in_zip_read_info->stream.total_out;
            bufBefore = pfile_in_zip_read_info->stream.next_out;

            /*
            if ((pfile_in_zip_read_info->rest_read_uncompressed ==
```

```
                    pfile_in_zip_read_info->stream.avail_out) &&
                (pfile_in_zip_read_info->rest_read_compressed == 0))
                flush = Z_FINISH;
            */
            err=inflate(&pfile_in_zip_read_info->stream,flush);

            if ((err>=0) && (pfile_in_zip_read_info->stream.msg!=NULL))
              err = Z_DATA_ERROR;

            uTotalOutAfter = pfile_in_zip_read_info->stream.total_out;
            uOutThis = uTotalOutAfter-uTotalOutBefore;

            pfile_in_zip_read_info->total_out_64 = pfile_in_zip_read_info->total_out_64 + uOutThis;

            pfile_in_zip_read_info->crc32 =
                crc32(pfile_in_zip_read_info->crc32,bufBefore,
                        (uInt)(uOutThis));

            pfile_in_zip_read_info->rest_read_uncompressed -=
                uOutThis;

            iRead += (uInt)(uTotalOutAfter - uTotalOutBefore);

            if (err==Z_STREAM_END)
                return (iRead==0) ? UNZ_EOF : iRead;
            if (err!=Z_OK)
                break;
        }
    }

    if (err==Z_OK)
        return iRead;
    return err;
}
```

Here is the caller graph for this function:

13.160.4.46 int ZEXPORT unzSetFlags (unzFile *file*, unsigned *flags*)

Definition at line 2136 of file unzip.c.

References unz64_s::flags, UNZ_OK, and UNZ_PARAMERROR.

Referenced by QuaZip::open().

```
{
    unz64_s* s;
    if (file == NULL)
        return UNZ_PARAMERROR;
    s = (unz64_s*)file;
    s->flags |= flags;
    return UNZ_OK;
}
```

Here is the caller graph for this function:

13.160.4.47 int ZEXPORT unzSetOffset (unzFile *file*, uLong *pos*)

Definition at line 2130 of file unzip.c.

References unzSetOffset64().

```
2131 {
2132     return unzSetOffset64(file,pos);
2133 }
```

Here is the call graph for this function:

13.160.4.48 int ZEXPORT unzSetOffset64 (unzFile *file*, ZPOS64_T *pos*)

Definition at line 2112 of file unzip.c.

References unz64_s::cur_file_info, unz64_s::cur_file_info_internal, unz64_s::current_file_ok, unz64_s::gi, unz64_s::num_file, unz_global_info64_s::number_entry, unz64_s::pos_in_central_dir, unz64local_GetCurrentFileInfoInternal(), UNZ_OK, and UNZ_PARAMERROR.

Referenced by unzSetOffset().

```
2113 {
2114     unz64_s* s;
2115     int err;
2116
2117     if (file==NULL)
2118         return UNZ_PARAMERROR;
2119     s=(unz64_s*)file;
2120
2121     s->pos_in_central_dir = pos;
2122     s->num_file = s->gi.number_entry;       /* hack */
2123     err = unz64local_GetCurrentFileInfoInternal(file,&s->
      cur_file_info,
2124                                                 &s->cur_file_info_internal,
2125                                                 NULL,0,NULL,0,NULL,0);
2126     s->current_file_ok = (err == UNZ_OK);
2127     return err;
2128 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.160.4.49 int ZEXPORT unzStringFileNameCompare (const char * *fileName1*, const char * *fileName2*, int *iCaseSensitivity*)

Definition at line 393 of file unzip.c.

References CASESENSITIVITYDEFAULTVALUE, and STRCMPCASENOSENTIVEFUNCTION.

Referenced by unzLocateFile().

```
397 {
398     if (iCaseSensitivity==0)
399         iCaseSensitivity=CASESENSITIVITYDEFAULTVALUE;
400
401     if (iCaseSensitivity==1)
402         return strcmp(fileName1,fileName2);
403
404     return STRCMPCASENOSENTIVEFUNCTION(fileName1,fileName2);
405 }
```

Here is the caller graph for this function:

13.160.4.50 z_off_t ZEXPORT unztell (unzFile *file*)

Definition at line 1897 of file unzip.c.

References unz64_s::pfile_in_zip_read, file_in_zip64_read_info_s::stream, and UNZ_PARAMERROR.

Referenced by QuaZipFile::pos().

```
{
    unz64_s* s;
    file_in_zip64_read_info_s* pfile_in_zip_read_info;
    if (file==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;
    pfile_in_zip_read_info=s->pfile_in_zip_read;

    if (pfile_in_zip_read_info==NULL)
        return UNZ_PARAMERROR;

    return (z_off_t)pfile_in_zip_read_info->stream.total_out;
}
```

Here is the caller graph for this function:

13.160.4.51 ZPOS64_T ZEXPORT unztell64 (unzFile *file*)

Definition at line 1912 of file unzip.c.

References unz64_s::pfile_in_zip_read, and file_in_zip64_read_info_s::total_out_64.

```
{

    unz64_s* s;
    file_in_zip64_read_info_s* pfile_in_zip_read_info;
    if (file==NULL)
        return (ZPOS64_T)-1;
    s=(unz64_s*)file;
    pfile_in_zip_read_info=s->pfile_in_zip_read;

    if (pfile_in_zip_read_info==NULL)
        return (ZPOS64_T)-1;

    return pfile_in_zip_read_info->total_out_64;
}
```

13.160.5 Variable Documentation

13.160.5.1 const char unz_copyright[ ]

Initial value:

```
=
   " unzip 1.01 Copyright 1998-2004 Gilles Vollant - http://www.winimage.com/zLibDll"
```

Definition at line 124 of file unzip.c.

Referenced by unzOpenInternal().

13.161 src/ckb/quazip/unzip.h File Reference

```
#include "zlib.h"
#include "ioapi.h"
```

Include dependency graph for unzip.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct tm_unz_s
- struct unz_global_info64_s
- struct unz_global_info_s
- struct unz_file_info64_s
- struct unz_file_info_s
- struct unz_file_pos_s
- struct unz64_file_pos_s

Macros

- #define Z_BZIP2ED 12

- #define UNZ_OK (0)
- #define UNZ_END_OF_LIST_OF_FILE (-100)
- #define UNZ_ERRNO (Z_ERRNO)
- #define UNZ_EOF (0)
- #define UNZ_PARAMERROR (-102)
- #define UNZ_BADZIPFILE (-103)
- #define UNZ_INTERNALERROR (-104)
- #define UNZ_CRCERROR (-105)
- #define UNZ_AUTO_CLOSE 0x01u
- #define UNZ_DEFAULT_FLAGS UNZ_AUTO_CLOSE

Typedefs

- typedef voidp unzFile
- typedef struct tm_unz_s tm_unz
- typedef struct unz_global_info64_s unz_global_info64
- typedef struct unz_global_info_s unz_global_info
- typedef struct unz_file_info64_s unz_file_info64
- typedef struct unz_file_info_s unz_file_info
- typedef struct unz_file_pos_s unz_file_pos
- typedef struct unz64_file_pos_s unz64_file_pos

Functions

- int ZEXPORT unzStringFileNameCompare _Z_OF ((const char ∗fileName1, const char ∗fileName2, int iCaseSensitivity))
- unzFile ZEXPORT unzOpen _Z_OF ((voidpf file))
- unzFile ZEXPORT unzOpen2 _Z_OF ((voidpf file, zlib_filefunc_def ∗pzlib_filefunc_def))
- unzFile ZEXPORT unzOpen2_64 _Z_OF ((voidpf file, zlib_filefunc64_def ∗pzlib_filefunc_def))
- unzFile unzOpenInternal (voidpf file, zlib_filefunc64_32_def ∗pzlib_filefunc64_32_def, int is64bitOpenFunction, unsigned flags)
- int ZEXPORT unzClose _Z_OF ((unzFile file))

  Addition for GDAL : START.
- int ZEXPORT unzGetGlobalInfo _Z_OF ((unzFile file, unz_global_info ∗pglobal_info))
- int ZEXPORT unzGetGlobalInfo64 _Z_OF ((unzFile file, unz_global_info64 ∗pglobal_info))
- int ZEXPORT unzGetGlobalComment _Z_OF ((unzFile file, char ∗szComment, uLong uSizeBuf))
- int ZEXPORT unzLocateFile _Z_OF ((unzFile file, const char ∗szFileName, int iCaseSensitivity))
- int ZEXPORT unzGetFilePos (unzFile file, unz_file_pos ∗file_pos)
- int ZEXPORT unzGoToFilePos (unzFile file, unz_file_pos ∗file_pos)
- int ZEXPORT unzGetFilePos64 (unzFile file, unz64_file_pos ∗file_pos)
- int ZEXPORT unzGoToFilePos64 (unzFile file, const unz64_file_pos ∗file_pos)
- int ZEXPORT unzGetCurrentFileInfo64 _Z_OF ((unzFile file, unz_file_info64 ∗pfile_info, char ∗szFileName, uLong fileNameBufferSize, void ∗extraField, uLong extraFieldBufferSize, char ∗szComment, uLong commentBufferSize))
- int ZEXPORT unzGetCurrentFileInfo _Z_OF ((unzFile file, unz_file_info ∗pfile_info, char ∗szFileName, uLong fileNameBufferSize, void ∗extraField, uLong extraFieldBufferSize, char ∗szComment, uLong commentBufferSize))
- int ZEXPORT unzOpenCurrentFilePassword _Z_OF ((unzFile file, const char ∗password))
- int ZEXPORT unzOpenCurrentFile2 _Z_OF ((unzFile file, int ∗method, int ∗level, int raw))
- int ZEXPORT unzOpenCurrentFile3 _Z_OF ((unzFile file, int ∗method, int ∗level, int raw, const char ∗password))
- int ZEXPORT unzReadCurrentFile _Z_OF ((unzFile file, voidp buf, unsigned len))
- ZPOS64_T ZEXPORT unzGetOffset64 (unzFile file)

- uLong ZEXPORT unzGetOffset (unzFile file)
- int ZEXPORT unzSetOffset64 (unzFile file, ZPOS64_T pos)
- int ZEXPORT unzSetOffset (unzFile file, uLong pos)
- int ZEXPORT unzSetFlags (unzFile file, unsigned flags)
- int ZEXPORT unzClearFlags (unzFile file, unsigned flags)

13.161.1 Data Structure Documentation

13.161.1.1 struct tm_unz_s

Definition at line 92 of file unzip.h.

Collaboration diagram for tm_unz_s:

Data Fields

uInt	tm_hour	
uInt	tm_mday	
uInt	tm_min	
uInt	tm_mon	
uInt	tm_sec	
uInt	tm_year	

13.161.1.2 struct unz_global_info64_s

Definition at line 104 of file unzip.h.

Collaboration diagram for unz_global_info64_s:

Data Fields

ZPOS64_T	number_entry	
uLong	size_comment	

13.161.1.3 struct unz_global_info_s

Definition at line 111 of file unzip.h.

Collaboration diagram for unz_global_info_s:

Data Fields

uLong	number_entry	
uLong	size_comment	

13.161.1.4 struct unz_file_info64_s

Definition at line 119 of file unzip.h.

Collaboration diagram for unz_file_info64_s:

Data Fields

ZPOS64_T	compressed_-size	

uLong	compression_-method	
uLong	crc	
uLong	disk_num_start	
uLong	dosDate	
uLong	external_fa	
uLong	flag	
uLong	internal_fa	
uLong	size_file_-comment	
uLong	size_file_extra	
uLong	size_filename	
tm_unz	tmu_date	
ZPOS64_T	uncompressed_-size	
uLong	version	
uLong	version_needed	

13.161.1.5 struct unz_file_info_s

Definition at line 140 of file unzip.h.

Collaboration diagram for unz_file_info_s:

Data Fields

uLong	compressed_-size	

uLong	compression_-method	
uLong	crc	
uLong	disk_num_start	
uLong	dosDate	
uLong	external_fa	
uLong	flag	
uLong	internal_fa	
uLong	size_file_-comment	
uLong	size_file_extra	
uLong	size_filename	
tm_unz	tmu_date	
uLong	uncompressed_-size	
uLong	version	
uLong	version_needed	

13.161.1.6 struct unz_file_pos_s

Definition at line 278 of file unzip.h.

Collaboration diagram for unz_file_pos_s:

Data Fields

uLong	num_of_file	
uLong	pos_in_zip_-directory	

13.161.1.7 struct unz64_file_pos_s

Definition at line 292 of file unzip.h.

Collaboration diagram for unz64_file_pos_s:

Data Fields

ZPOS64_T	num_of_file	
ZPOS64_T	pos_in_zip_-directory	

13.161.2 Macro Definition Documentation

13.161.2.1 #define UNZ_AUTO_CLOSE 0x01u

Definition at line 88 of file unzip.h.

Referenced by QuaZip::open(), unzClose(), and unzOpenInternal().

13.161.2.2 #define UNZ_BADZIPFILE (-103)

Definition at line 84 of file unzip.h.

Referenced by unz64local_CheckCurrentFileCoherencyHeader(), unz64local_GetCurrentFileInfoInternal(), unzOpenCurrentFile3(), and unzOpenInternal().

13.161.2.3 #define UNZ_CRCERROR (-105)

Definition at line 86 of file unzip.h.

Referenced by unzCloseCurrentFile().

13.161.2.4 #define UNZ_DEFAULT_FLAGS UNZ_AUTO_CLOSE

Definition at line 89 of file unzip.h.

Referenced by unzOpen(), unzOpen2(), unzOpen2_64(), and unzOpen64().

13.161.2.5 #define UNZ_END_OF_LIST_OF_FILE (-100)

Definition at line 80 of file unzip.h.

Referenced by QuaZipPrivate::goToFirstUnmappedFile(), QuaZip::goToNextFile(), unzGetFilePos64(), unzGoToNextFile(), unzLocateFile(), and unzReadCurrentFile().

13.161.2.6 #define UNZ_EOF (0)

Definition at line 82 of file unzip.h.

Referenced by unz64local_getByte(), and unzReadCurrentFile().

13.161.2.7 #define UNZ_ERRNO (Z_ERRNO)

Definition at line 81 of file unzip.h.

Referenced by unz64local_CheckCurrentFileCoherencyHeader(), unz64local_getByte(), unz64local_GetCurrentFileInfoInternal(), unzGetGlobalComment(), unzGetLocalExtrafield(), unzOpenInternal(), and unzReadCurrentFile().

13.161.2.8 #define UNZ_INTERNALERROR (-104)

Definition at line 85 of file unzip.h.

Referenced by unzOpenCurrentFile3().

13.161.2.9 #define UNZ_OK (0)

Definition at line 79 of file unzip.h.

Referenced by QuaZip::close(), QuaZipFile::close(), JlCompress::compressFile(), QuaZipFile::csize(), JlCompress::extractFile(), QuaZipFile::getActualFileName(), QuaZip::getComment(), QuaZip::getCurrentFileInfo(), QuaZip::getCurrentFileName(), QuaZip::getEntriesCount(), QuaZipFile::getFileInfo(), QuaZipPrivate::getFileInfoList(), QuaZip::goToFirstFile(), QuaZipPrivate::goToFirstUnmappedFile(), QuaZip::goToNextFile(), QuaZip::open(), QuaZipFile::open(), QuaZipFile::readData(), QuaZipFilePrivate::resetZipError(), QuaZip::setCurrentFile(), QuaZipFilePrivate::setZipError(), unz64local_CheckCurrentFileCoherencyHeader(), unz64local_getByte(), unz64local_GetCurrentFileInfoInternal(), unz64local_getLong(), unz64local_getLong64(), unz64local_getShort(), unz64local_SearchCentralDir64(), unzClearFlags(), unzClose(), unzCloseCurrentFile(), unzGetCurrentFileInfo(), unzGetFilePos(), unzGetFilePos64(), unzGetGlobalInfo(), unzGetGlobalInfo64(), unzGoToFilePos64(), unzGoToFirstFile(), unzGoToNextFile(), unzLocateFile(), unzOpenCurrentFile3(), unzOpenInternal(), unzReadCurrentFile(), unzSetFlags(), unzSetOffset64(), and QuaZipFile::usize().

13.161.2.10 #define UNZ_PARAMERROR (-102)

Definition at line 83 of file unzip.h.

Referenced by QuaZip::setCurrentFile(), unz64local_GetCurrentFileInfoInternal(), unzClearFlags(), unzClose(), unzCloseCurrentFile(), unzeof(), unzGetFilePos64(), unzGetGlobalComment(), unzGetGlobalInfo(), unzGetGlobalInfo64(), unzGetLocalExtrafield(), unzGoToFilePos(), unzGoToFilePos64(), unzGoToFirstFile(), unzGoToNextFile(), unzLocateFile(), unzOpenCurrentFile3(), unzReadCurrentFile(), unzSetFlags(), unzSetOffset64(), and unztell().

13.161.2.11 #define Z_BZIP2ED 12

Definition at line 67 of file unzip.h.

Referenced by unz64local_CheckCurrentFileCoherencyHeader(), unzCloseCurrentFile(), unzOpenCurrentFile3(), unzReadCurrentFile(), zip64FlushWriteBuffer(), zipCloseFileInZipRaw64(), zipOpenNewFileInZip4_64(), and zipWriteInFileInZip().

13.161.3 Typedef Documentation

13.161.3.1 typedef struct tm_unz_s tm_unz

13.161.3.2 typedef struct unz64_file_pos_s unz64_file_pos

13.161.3.3 typedef struct unz_file_info_s unz_file_info

13.161.3.4 typedef struct unz_file_info64_s unz_file_info64

13.161.3.5 typedef struct unz_file_pos_s unz_file_pos

13.161.3.6 typedef struct unz_global_info_s unz_global_info

13.161.3.7 typedef struct unz_global_info64_s unz_global_info64

13.161.3.8 typedef voidp unzFile

Definition at line 75 of file unzip.h.

13.161.4 Function Documentation

13.161.4.1 int ZEXPORT unzStringFileNameCompare _Z_OF ((const char *fileName1, const char *fileName2, int iCaseSensitivity))

13.161.4.2 unzFile ZEXPORT unzOpen _Z_OF ((voidpf file))

13.161.4.3 unzFile ZEXPORT unzOpen2 _Z_OF ((voidpf file, zlib_filefunc_def *pzlib_filefunc_def))

13.161.4.4 unzFile ZEXPORT unzOpen2_64 _Z_OF ((voidpf file, zlib_filefunc64_def *pzlib_filefunc_def))

13.161.4.5 int ZEXPORT unzClose _Z_OF ((unzFile file))

Addition for GDAL : END.

13.161.4.6 int ZEXPORT unzGetGlobalInfo _Z_OF ((unzFile file, unz_global_info *pglobal_info))

13.161.4.7 int ZEXPORT unzGetGlobalInfo64 _Z_OF ((unzFile file, unz_global_info64 *pglobal_info))

13.161.4.8 int ZEXPORT unzGetGlobalComment _Z_OF ((unzFile file, char *szComment, uLong uSizeBuf))

13.161.4.9 int ZEXPORT unzLocateFile _Z_OF ((unzFile file, const char *szFileName, int iCaseSensitivity))

13.161.4.10 int ZEXPORT unzGetCurrentFileInfo64 _Z_OF ((unzFile file, unz_file_info64 *pfile_info, char *szFileName, uLong fileNameBufferSize, void *extraField, uLong extraFieldBufferSize, char *szComment, uLong commentBufferSize))

13.161.4.11 int ZEXPORT unzGetCurrentFileInfo _Z_OF ((unzFile file, unz_file_info ∗pfile_info, char ∗szFileName, uLong fileNameBufferSize, void ∗extraField, uLong extraFieldBufferSize, char ∗szComment, uLong commentBufferSize))

13.161.4.12 int ZEXPORT unzOpenCurrentFilePassword _Z_OF ((unzFile file, const char ∗password))

13.161.4.13 int ZEXPORT unzOpenCurrentFile2 _Z_OF ((unzFile file, int ∗method, int ∗level, int raw))

13.161.4.14 int ZEXPORT unzOpenCurrentFile3 _Z_OF ((unzFile file, int ∗method, int ∗level, int raw, const char ∗password))

13.161.4.15 int ZEXPORT unzReadCurrentFile _Z_OF ((unzFile file, voidp buf, unsigned len))

13.161.4.16 int ZEXPORT unzClearFlags (unzFile *file*, unsigned *flags*)

Definition at line 2147 of file unzip.c.

References unz64_s::flags, UNZ_OK, and UNZ_PARAMERROR.

Referenced by QuaZip::open().

```
2148 {
2149     unz64_s* s;
2150     if (file == NULL)
2151         return UNZ_PARAMERROR;
2152     s = (unz64_s*)file;
2153     s->flags &= ~flags;
2154     return UNZ_OK;
2155 }
```

Here is the caller graph for this function:

13.161.4.17 int ZEXPORT unzGetFilePos (unzFile *file*, unz_file_pos ∗ *file_pos*)

Definition at line 1334 of file unzip.c.

References unz_file_pos_s::num_of_file, unz64_file_pos_s::num_of_file, unz_file_pos_s::pos_in_zip_directory, unz64_file_pos_s::pos_in_zip_directory, UNZ_OK, and unzGetFilePos64().

```
1337 {
1338     unz64_file_pos file_pos64;
1339     int err = unzGetFilePos64(file,&file_pos64);
1340     if (err==UNZ_OK)
1341     {
1342         file_pos->pos_in_zip_directory = (uLong)file_pos64.
      pos_in_zip_directory;
1343         file_pos->num_of_file = (uLong)file_pos64.num_of_file;
1344     }
1345     return err;
1346 }
```

Here is the call graph for this function:

13.161.4.18 int ZEXPORT unzGetFilePos64 (unzFile *file*, unz64_file_pos * *file_pos*)

Definition at line 1318 of file unzip.c.

References unz64_s::current_file_ok, unz64_s::num_file, unz64_file_pos_s::num_of_file, unz64_s::pos_in_central_dir, unz64_file_pos_s::pos_in_zip_directory, UNZ_END_OF_LIST_OF_FILE, UNZ_OK, and UNZ_PARAMERROR.

Referenced by QuaZipPrivate::addCurrentFileToDirectoryMap(), and unzGetFilePos().

```
1319 {
1320     unz64_s* s;
1321
1322     if (file==NULL || file_pos==NULL)
1323         return UNZ_PARAMERROR;
1324     s=(unz64_s*)file;
1325     if (!s->current_file_ok)
1326         return UNZ_END_OF_LIST_OF_FILE;
1327
1328     file_pos->pos_in_zip_directory  = s->pos_in_central_dir;
1329     file_pos->num_of_file           = s->num_file;
1330
1331     return UNZ_OK;
1332 }
```

Here is the caller graph for this function:

13.161.4.19 uLong ZEXPORT unzGetOffset (unzFile *file*)

Definition at line 2102 of file unzip.c.

References unzGetOffset64().

```
2103 {
2104     ZPOS64_T offset64;
2105
2106     if (file==NULL)
2107           return 0; /*UNZ_PARAMERROR; */
2108     offset64 = unzGetOffset64(file);
2109     return (uLong)offset64;
2110 }
```

Here is the call graph for this function:

13.161.4.20 ZPOS64_T ZEXPORT unzGetOffset64 (unzFile *file*)

Definition at line 2087 of file unzip.c.

References unz64_s::current_file_ok, unz64_s::gi, unz64_s::num_file, unz_global_info64_s::number_entry, and unz64_s::pos_in_central_dir.

Referenced by unzGetOffset().

```
{
    unz64_s* s;

    if (file==NULL)
          return 0; /*UNZ_PARAMERROR; */
    s=(unz64_s*)file;
    if (!s->current_file_ok)
      return 0;
    if (s->gi.number_entry != 0 && s->gi.number_entry != 0xffff)
      if (s->num_file==s->gi.number_entry)
         return 0;
    return s->pos_in_central_dir;
}
```

Here is the caller graph for this function:

13.161.4.21 int ZEXPORT unzGoToFilePos (unzFile *file*, unz_file_pos * *file_pos*)

Definition at line 1370 of file unzip.c.

References unz_file_pos_s::num_of_file, unz64_file_pos_s::num_of_file, unz_file_pos_s::pos_in_zip_directory, unz64_file_pos_s::pos_in_zip_directory, UNZ_PARAMERROR, and unzGoToFilePos64().

```
{
    unz64_file_pos file_pos64;
    if (file_pos == NULL)
        return UNZ_PARAMERROR;

    file_pos64.pos_in_zip_directory = file_pos->
  pos_in_zip_directory;
    file_pos64.num_of_file = file_pos->num_of_file;
    return unzGoToFilePos64(file,&file_pos64);
}
```

Here is the call graph for this function:

13.161.4.22 int ZEXPORT unzGoToFilePos64 (unzFile *file*, const unz64_file_pos * *file_pos*)

Definition at line 1348 of file unzip.c.

References unz64_s::cur_file_info, unz64_s::cur_file_info_internal, unz64_s::current_file_ok, unz64_s::num_file, unz64_file_pos_s::num_of_file, unz64_s::pos_in_central_dir, unz64_file_pos_s::pos_in_zip_directory, unz64local_GetCurrentFileInfoInternal(), UNZ_OK, and UNZ_PARAMERROR.

Referenced by QuaZipPrivate::goToFirstUnmappedFile(), QuaZip::setCurrentFile(), and unzGoToFilePos().

```
{
    unz64_s* s;
    int err;

    if (file==NULL || file_pos==NULL)
        return UNZ_PARAMERROR;
    s=(unz64_s*)file;

    /* jump to the right spot */
    s->pos_in_central_dir = file_pos->pos_in_zip_directory;
    s->num_file           = file_pos->num_of_file;

    /* set the current file */
    err = unz64local_GetCurrentFileInfoInternal(file,&s->cur_file_info,
                                                &s->cur_file_info_internal,
                                                NULL,0,NULL,0,NULL,0);
    /* return results */
    s->current_file_ok = (err == UNZ_OK);
    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.161.4.23 unzFile unzOpenInternal (voidpf *file*, zlib_filefunc64_32_def * *pzlib_filefunc64_32_def*, int *is64bitOpenFunction*, unsigned *flags*)

Definition at line 587 of file unzip.c.

References ALLOC, unz64_s::byte_before_the_zipfile, unz64_s::central_pos, unz64_s::encrypted, unz64_s::filestream, fill_qiodevice64_filefunc(), unz64_s::flags, unz64_s::gi, unz64_s::is64bitOpenFunction, unz64_s::isZip64, unz_global_info64_s::number_entry, unz64_s::offset_central_dir, unz64_s::pfile_in_zip_read, unz64_s::size_central_dir, unz_global_info64_s::size_comment, unz64local_getLong(), unz64local_getLong64(), unz64local_getShort(), unz64local_SearchCentralDir(), unz64local_SearchCentralDir64(), UNZ_AUTO_CLOSE, UNZ_BADZIPFILE, unz_copyright, UNZ_ERRNO, UNZ_OK, unzGoToFirstFile(), unz64_s::z_filefunc, ZCLOSE64, ZFAKECLOSE64, zlib_filefunc64_32_def_s::zfile_func64, ZLIB_FILEFUNC_MODE_EXISTING, ZLIB_FILEFUNC_MODE_READ, ZLIB_FILEFUNC_SEEK_SET, ZOPEN64, zlib_filefunc64_32_def_s::zseek32_file, ZSEEK64, and zlib_filefunc64_32_def_s::ztell32_file.

Referenced by QuaZip::open(), unzOpen(), unzOpen2(), unzOpen2_64(), and unzOpen64().

```
{
    unz64_s us;
    unz64_s *s;
    ZPOS64_T central_pos;
    uLong   uL;

    uLong number_disk;          /* number of the current dist, used for
                                   spaning ZIP, unsupported, always 0*/
    uLong number_disk_with_CD;  /* number the the disk with central dir, used
                                   for spaning ZIP, unsupported, always 0*/
    ZPOS64_T number_entry_CD;      /* total number of entries in
                                   the central dir
                                   (same than number_entry on nospan) */

    int err=UNZ_OK;

    if (unz_copyright[0]!=' ')
        return NULL;

    us.flags = flags;
    us.z_filefunc.zseek32_file = NULL;
    us.z_filefunc.ztell32_file = NULL;
    if (pzlib_filefunc64_32_def==NULL)
        fill_qiodevice64_filefunc(&us.z_filefunc.zfile_func64);
    else
        us.z_filefunc = *pzlib_filefunc64_32_def;
    us.is64bitOpenFunction = is64bitOpenFunction;



    us.filestream = ZOPEN64(us.z_filefunc,
                                                file,
                                                ZLIB_FILEFUNC_MODE_READ |
                                                ZLIB_FILEFUNC_MODE_EXISTING);
    if (us.filestream==NULL)
        return NULL;

    central_pos = unz64local_SearchCentralDir64(&us.z_filefunc,us.filestream);
    if (central_pos)
    {
        uLong uS;
        ZPOS64_T uL64;

```

```
        us.isZip64 = 1;

        if (ZSEEK64(us.z_filefunc, us.filestream,
                                        central_pos,ZLIB_FILEFUNC_SEEK_SET)!=0)
        err=UNZ_ERRNO;

        /* the signature, already checked */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* size of zip64 end of central directory record */
        if (unz64local_getLong64(&us.z_filefunc, us.filestream,&uL64)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* version made by */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&uS)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* version needed to extract */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&uS)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* number of this disk */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&number_disk)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* number of the disk with the start of the central directory */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&number_disk_with_CD)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* total number of entries in the central directory on this disk */
        if (unz64local_getLong64(&us.z_filefunc, us.filestream,&us.gi.number_entry)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* total number of entries in the central directory */
        if (unz64local_getLong64(&us.z_filefunc, us.filestream,&number_entry_CD)!=UNZ_OK)
            err=UNZ_ERRNO;

        if ((number_entry_CD!=us.gi.number_entry) ||
            (number_disk_with_CD!=0) ||
            (number_disk!=0))
            err=UNZ_BADZIPFILE;

        /* size of the central directory */
        if (unz64local_getLong64(&us.z_filefunc, us.filestream,&us.size_central_dir)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* offset of start of central directory with respect to the
          starting disk number */
        if (unz64local_getLong64(&us.z_filefunc, us.filestream,&us.offset_central_dir)!=UNZ_OK)
            err=UNZ_ERRNO;

        us.gi.size_comment = 0;
    }
    else
    {
        central_pos = unz64local_SearchCentralDir(&us.z_filefunc,us.filestream);
        if (central_pos==0)
            err=UNZ_ERRNO;

        us.isZip64 = 0;

        if (ZSEEK64(us.z_filefunc, us.filestream,
                                        central_pos,ZLIB_FILEFUNC_SEEK_SET)!=0)
            err=UNZ_ERRNO;

        /* the signature, already checked */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* number of this disk */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&number_disk)!=UNZ_OK)
            err=UNZ_ERRNO;

```

```
        /* number of the disk with the start of the central directory */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&number_disk_with_CD)!=UNZ_OK)
            err=UNZ_ERRNO;

        /* total number of entries in the central dir on this disk */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;
        us.gi.number_entry = uL;

        /* total number of entries in the central dir */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;
        number_entry_CD = uL;

        if ((number_entry_CD!=us.gi.number_entry) ||
            (number_disk_with_CD!=0) ||
            (number_disk!=0))
            err=UNZ_BADZIPFILE;

        /* size of the central directory */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;
        us.size_central_dir = uL;

        /* offset of start of central directory with respect to the
            starting disk number */
        if (unz64local_getLong(&us.z_filefunc, us.filestream,&uL)!=UNZ_OK)
            err=UNZ_ERRNO;
        us.offset_central_dir = uL;

        /* zipfile comment length */
        if (unz64local_getShort(&us.z_filefunc, us.filestream,&us.gi.size_comment)!=UNZ_OK)
            err=UNZ_ERRNO;
    }

    if ((central_pos<us.offset_central_dir+us.size_central_dir) &&
        (err==UNZ_OK))
        err=UNZ_BADZIPFILE;

    if (err!=UNZ_OK)
    {
        if ((us.flags & UNZ_AUTO_CLOSE) != 0)
            ZCLOSE64(us.z_filefunc, us.filestream);
        else
            ZFAKECLOSE64(us.z_filefunc, us.filestream);
        return NULL;
    }

    us.byte_before_the_zipfile = central_pos -
                            (us.offset_central_dir+us.size_central_dir);
    us.central_pos = central_pos;
    us.pfile_in_zip_read = NULL;
    us.encrypted = 0;


    s=(unz64_s*)ALLOC(sizeof(unz64_s));
    if( s != NULL)
    {
        *s=us;
        unzGoToFirstFile((unzFile)s);
    }
    return (unzFile)s;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.161.4.24 int ZEXPORT unzSetFlags (unzFile *file*, unsigned *flags*)

Definition at line 2136 of file unzip.c.

References unz64_s::flags, UNZ_OK, and UNZ_PARAMERROR.

Referenced by QuaZip::open().

```
{
    unz64_s* s;
    if (file == NULL)
        return UNZ_PARAMERROR;
    s = (unz64_s*)file;
    s->flags |= flags;
    return UNZ_OK;
}
```

Here is the caller graph for this function:

13.161.4.25 int ZEXPORT unzSetOffset (unzFile *file*, uLong *pos*)

Definition at line 2130 of file unzip.c.

References unzSetOffset64().

```
2131 {
2132     return unzSetOffset64(file,pos);
2133 }
```

Here is the call graph for this function:

13.161.4.26 int ZEXPORT unzSetOffset64 (unzFile *file*, ZPOS64_T *pos*)

Definition at line 2112 of file unzip.c.

References unz64_s::cur_file_info, unz64_s::cur_file_info_internal, unz64_s::current_file_ok, unz64_s::gi, unz64_s::num_file, unz_global_info64_s::number_entry, unz64_s::pos_in_central_dir, unz64local_GetCurrentFileInfoInternal(), UNZ_OK, and UNZ_PARAMERROR.

Referenced by unzSetOffset().

```
2113 {
2114     unz64_s* s;
2115     int err;
2116
2117     if (file==NULL)
2118         return UNZ_PARAMERROR;
2119     s=(unz64_s*)file;
2120
2121     s->pos_in_central_dir = pos;
2122     s->num_file = s->gi.number_entry;       /* hack */
2123     err = unz64local_GetCurrentFileInfoInternal(file,&s->
      cur_file_info,
2124                                                 &s->cur_file_info_internal,
2125                                                 NULL,0,NULL,0,NULL,0);
2126     s->current_file_ok = (err == UNZ_OK);
2127     return err;
2128 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162 src/ckb/quazip/zip.c File Reference

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <time.h>
#include "zlib.h"
#include "zip.h"
#include <errno.h>
#include "crypt.h"
```

Include dependency graph for zip.c:

Data Structures

- struct linkedlist_datablock_internal_s
- struct linkedlist_data_s
- struct curfile64_info
- struct zip64_internal

Macros

- #define local static
- #define VERSIONMADEBY (0x031e) /∗ best for standard pkware crypt ∗/
- #define Z_BUFSIZE (64∗1024) /∗ (16384) ∗/
- #define Z_MAXFILENAMEINZIP (256)
- #define ALLOC(size) (malloc(size))
- #define TRYFREE(p) {if (p) free(p);}
- #define MAKEULONG64(a, b) ((ZPOS64_T)(((unsigned long)(a)) | ((ZPOS64_T)((unsigned long)(b))) << 32))
- #define SEEK_CUR 1
- #define SEEK_END 2
- #define SEEK_SET 0
- #define SIZEDATA_INDATABLOCK (4096-(4∗4))
- #define LOCALHEADERMAGIC (0x04034b50)
- #define DESCRIPTORHEADERMAGIC (0x08074b50)
- #define CENTRALHEADERMAGIC (0x02014b50)
- #define ENDHEADERMAGIC (0x06054b50)
- #define ZIP64ENDHEADERMAGIC (0x6064b50)
- #define ZIP64ENDLOCHEADERMAGIC (0x7064b50)
- #define FLAG_LOCALHEADER_OFFSET (0x06)
- #define CRC_LOCALHEADER_OFFSET (0x0e)
- #define SIZECENTRALHEADER (0x2e) /∗ 46 ∗/
- #define INCLUDECRYPTINGCODE_IFCRYPTALLOWED
- #define BUFREADCOMMENT (0x400)

Typedefs

- typedef uLongf z_crc_t
- typedef struct linkedlist_datablock_internal_s linkedlist_datablock_internal
- typedef struct linkedlist_data_s linkedlist_data

Functions

- static linkedlist_datablock_internal ∗ allocate_new_datablock ()
- static void free_datablock (linkedlist_datablock_internal ∗ldi)
- static void init_linkedlist (linkedlist_data ∗ll)
- static void free_linkedlist (linkedlist_data ∗ll)
- static int add_data_in_datablock (linkedlist_data ∗ll, const void ∗buf, uLong len)
- static int zip64local_putValue _Z_OF ((const zlib_filefunc64_32_def ∗pzlib_filefunc_def, voidpf filestream, ZPOS64_T x, int nbByte))
- static int zip64local_putValue (const zlib_filefunc64_32_def ∗pzlib_filefunc_def, voidpf filestream, ZPOS64_T x, int nbByte)
- static void zip64local_putValue_inmemory _Z_OF ((void ∗dest, ZPOS64_T x, int nbByte))

- static void zip64local_putValue_inmemory (void *dest, ZPOS64_T x, int nbByte)
- static uLong zip64local_TmzDateToDosDate (const tm_zip *ptm)
- static int zip64local_getByte _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, int *pi))
- static int zip64local_getByte (const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, int *pi)
- static int zip64local_getShort _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, uLong *pX))
- static int zip64local_getShort (const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, uLong *pX)
- static int zip64local_getLong (const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, uLong *pX)
- static int zip64local_getLong64 _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, ZPOS64_T *pX))
- static int zip64local_getLong64 (const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, ZPOS64_T *pX)
- static ZPOS64_T zip64local_SearchCentralDir _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream))
- static ZPOS64_T zip64local_SearchCentralDir (const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream)
- static ZPOS64_T zip64local_SearchCentralDir64 (const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream)
- int LoadCentralDirectoryRecord (zip64_internal *pziinit)
- zipFile ZEXPORT zipOpen3 (voidpf file, int append, zipcharpc *globalcomment, zlib_filefunc64_32_def *pzlib_filefunc64_32_def, unsigned flags)
- zipFile ZEXPORT zipOpen2 (voidpf file, int append, zipcharpc *globalcomment, zlib_filefunc_def *pzlib_filefunc32_def)
- zipFile ZEXPORT zipOpen2_64 (voidpf file, int append, zipcharpc *globalcomment, zlib_filefunc64_def *pzlib_filefunc_def)
- zipFile ZEXPORT zipOpen (voidpf file, int append)
- zipFile ZEXPORT zipOpen64 (voidpf file, int append)
- int Write_LocalFileHeader (zip64_internal *zi, const char *filename, uInt size_extrafield_local, const void *extrafield_local, uLong version_to_extract)
- int ZEXPORT zipOpenNewFileInZip4_64 (zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_global, const char *comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char *password, uLong crcForCrypting, uLong versionMadeBy, uLong flagBase, int zip64)
- int ZEXPORT zipOpenNewFileInZip4 (zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_global, const char *comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char *password, uLong crcForCrypting, uLong versionMadeBy, uLong flagBase)
- int ZEXPORT zipOpenNewFileInZip3 (zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_global, const char *comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char *password, uLong crcForCrypting)
- int ZEXPORT zipOpenNewFileInZip3_64 (zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_global, const char *comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char *password, uLong crcForCrypting, int zip64)
- int ZEXPORT zipOpenNewFileInZip2 (zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_global, const char *comment, int method, int level, int raw)
- int ZEXPORT zipOpenNewFileInZip2_64 (zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_global, const char *comment, int method, int level, int raw, int zip64)
- int ZEXPORT zipOpenNewFileInZip64 (zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_global, const char *comment, int method, int level, int zip64)

- int ZEXPORT zipOpenNewFileInZip (zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_global, const char *comment, int method, int level)
- static int zip64FlushWriteBuffer (zip64_internal *zi)
- int ZEXPORT zipWriteInFileInZip (zipFile file, const void *buf, unsigned int len)
- int ZEXPORT zipCloseFileInZipRaw (zipFile file, uLong uncompressed_size, uLong crc32)
- int ZEXPORT zipCloseFileInZipRaw64 (zipFile file, ZPOS64_T uncompressed_size, uLong crc32)
- int ZEXPORT zipCloseFileInZip (zipFile file)
- int Write_Zip64EndOfCentralDirectoryLocator (zip64_internal *zi, ZPOS64_T zip64eocd_pos_inzip)
- int Write_Zip64EndOfCentralDirectoryRecord (zip64_internal *zi, uLong size_centraldir, ZPOS64_T centraldir_pos_inzip)
- int Write_EndOfCentralDirectoryRecord (zip64_internal *zi, uLong size_centraldir, ZPOS64_T centraldir_pos_inzip)
- int Write_GlobalComment (zip64_internal *zi, const char *global_comment)
- int ZEXPORT zipClose (zipFile file, const char *global_comment)
- int ZEXPORT zipRemoveExtraInfoBlock (char *pData, int *dataLen, short sHeader)
- int ZEXPORT zipSetFlags (zipFile file, unsigned flags)
- int ZEXPORT zipClearFlags (zipFile file, unsigned flags)

Variables

- const char zip_copyright [] =" zip 1.01 Copyright 1998-2004 Gilles Vollant - http://www.winimage.com/zLibDll"

13.162.1 Data Structure Documentation

13.162.1.1 struct linkedlist_datablock_internal_s

Definition at line 121 of file zip.c.

Collaboration diagram for linkedlist_datablock_internal_s:

Data Fields

uLong	avail_in_this_-block	
unsigned char	data[(4096-(4 ∗4))]	
uLong	filled_in_this_-block	
struct linkedlist_-datablock_-internal_s ∗	next_datablock	
uLong	unused	

13.162.1.2 struct linkedlist_data_s

Definition at line 130 of file zip.c.

Collaboration diagram for linkedlist_data_s:

Data Fields

linkedlist_-datablock_-internal *	first_block	
linkedlist_-datablock_-internal *	last_block	

13.162.1.3 struct curfile64_info

Definition at line 137 of file zip.c.

Collaboration diagram for curfile64_info:

Data Fields

Byte	buffered_-data[(64 *1024)]	
char *	central_header	
uLong	crc32	
int	crypt_header_-size	
uLong	dosDate	
int	encrypt	
uLong	flag	
unsigned long	keys[3]	
int	method	
const z_crc_t FAR *	pcrc_32_tab	
uInt	pos_in_buffered-_data	
ZPOS64_T	pos_local_-header	
ZPOS64_T	pos_-zip64extrainfo	

int	raw	
uLong	size_central-Extra	
uLong	size_central-ExtraFree	
uLong	size_-centralheader	
z_stream	stream	
int	stream_-initialised	
ZPOS64_T	total-Compressed-Data	
ZPOS64_T	total-Uncompressed-Data	
int	zip64	

13.162.1.4 struct zip64_internal

Definition at line 172 of file zip.c.

Collaboration diagram for zip64_internal:

Data Fields

ZPOS64_T	add_position_-when_writting_-offset	
ZPOS64_T	begin_pos	
linkedlist_data	central_dir	
curfile64_info	ci	
voidpf	filestream	
unsigned	flags	
char *	globalcomment	
int	in_opened_file_-inzip	
ZPOS64_T	number_entry	
zlib_filefunc64_-32_def	z_filefunc	

13.162.2 Macro Definition Documentation

13.162.2.1 #define ALLOC(*size*) (malloc(size))

Definition at line 68 of file zip.c.

Referenced by allocate_new_datablock(), LoadCentralDirectoryRecord(), zip64local_SearchCentralDir(), zip64local_SearchCentralDir64(), zipOpen3(), zipOpenNewFileInZip4_64(), and zipRemoveExtraInfoBlock().

13.162.2.2 #define BUFREADCOMMENT (0x400)

Definition at line 481 of file zip.c.

Referenced by zip64local_SearchCentralDir(), and zip64local_SearchCentralDir64().

13.162.2.3 #define CENTRALHEADERMAGIC (0x02014b50)

Definition at line 111 of file zip.c.

Referenced by zipOpenNewFileInZip4_64().

13.162.2.4 #define CRC_LOCALHEADER_OFFSET (0x0e)

Definition at line 117 of file zip.c.

13.162.2.5 #define DESCRIPTORHEADERMAGIC (0x08074b50)

Definition at line 110 of file zip.c.

Referenced by zipCloseFileInZipRaw64().

13.162.2.6 #define ENDHEADERMAGIC (0x06054b50)

Definition at line 112 of file zip.c.

Referenced by Write_EndOfCentralDirectoryRecord().

13.162.2.7 #define FLAG_LOCALHEADER_OFFSET (0x06)

Definition at line 116 of file zip.c.

13.162.2.8 #define INCLUDECRYPTINGCODE_IFCRYPTALLOWED

Definition at line 194 of file zip.c.

13.162.2.9 #define local static

Definition at line 51 of file zip.c.

13.162.2.10 #define LOCALHEADERMAGIC (0x04034b50)

Definition at line 109 of file zip.c.

Referenced by Write_LocalFileHeader().

13.162.2.11 #define MAKEULONG64(a, b) ((ZPOS64_T)(((unsigned long)(a)) | ((ZPOS64_T)((unsigned long)(b))) << 32))

Definition at line 83 of file zip.c.

13.162.2.12 #define SEEK_CUR 1

Definition at line 86 of file zip.c.

13.162.2.13 #define SEEK_END 2

Definition at line 90 of file zip.c.

Referenced by zipOpen3().

13.162.2.14 #define SEEK_SET 0

Definition at line 94 of file zip.c.

13.162.2.15 #define SIZECENTRALHEADER (0x2e) /* 46 */

Definition at line 119 of file zip.c.

Referenced by zipOpenNewFileInZip4_64().

13.162.2.16 #define SIZEDATA_INDATABLOCK (4096-(4*4))

Definition at line 107 of file zip.c.

Referenced by allocate_new_datablock(), and LoadCentralDirectoryRecord().

13.162.2.17 #define TRYFREE(p) {if (p) free(p);}

Definition at line 71 of file zip.c.

Referenced by free_datablock(), LoadCentralDirectoryRecord(), zip64local_SearchCentralDir(), zip64local_SearchCentralDir64(), zipClose(), zipOpen3(), and zipRemoveExtraInfoBlock().

13.162.2.18 #define VERSIONMADEBY (0x031e) /* best for standard pkware crypt */

Definition at line 56 of file zip.c.

Referenced by zipOpenNewFileInZip(), zipOpenNewFileInZip2(), zipOpenNewFileInZip2_64(), zipOpenNewFileInZip3(), zipOpenNewFileInZip3_64(), and zipOpenNewFileInZip64().

13.162.2.19 #define Z_BUFSIZE (64*1024) /* (16384) */

Definition at line 60 of file zip.c.

Referenced by zipCloseFileInZipRaw64(), zipOpenNewFileInZip4_64(), and zipWriteInFileInZip().

13.162.2.20 #define Z_MAXFILENAMEINZIP (256)

Definition at line 64 of file zip.c.

13.162.2.21 #define ZIP64ENDHEADERMAGIC (0x6064b50)

Definition at line 113 of file zip.c.

Referenced by Write_Zip64EndOfCentralDirectoryRecord().

13.162.2.22 #define ZIP64ENDLOCHEADERMAGIC (0x7064b50)

Definition at line 114 of file zip.c.

Referenced by Write_Zip64EndOfCentralDirectoryLocator().

13.162.3 Typedef Documentation

13.162.3.1 typedef struct linkedlist_data_s linkedlist_data

13.162.3.2 typedef struct linkedlist_datablock_internal_s linkedlist_datablock_internal

13.162.3.3 typedef uLongf z_crc_t

Definition at line 34 of file zip.c.

13.162.4 Function Documentation

13.162.4.1 static int zip64local_putValue _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, ZPOS64_T x, int nbByte)) [static]

13.162.4.2 static void zip64local_putValue_inmemory _Z_OF ((void *dest, ZPOS64_T x, int nbByte)) [static]

13.162.4.3 static int zip64local_getByte _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, int *pi)) [static]

13.162.4.4 static int zip64local_getShort _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, uLong *pX)) [static]

13.162.4.5 static int zip64local_getLong64 _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream, ZPOS64_T *pX)) [static]

13.162.4.6 static ZPOS64_T zip64local_SearchCentralDir _Z_OF ((const zlib_filefunc64_32_def *pzlib_filefunc_def, voidpf filestream)) [static]

13.162.4.7 static int add_data_in_datablock (linkedlist_data * *ll*, const void * *buf*, uLong *len*) [static]

Definition at line 234 of file zip.c.

References allocate_new_datablock(), linkedlist_datablock_internal_s::avail_in_this_block, linkedlist_datablock_internal_s::data, linkedlist_datablock_internal_s::filled_in_this_block, linkedlist_data_s::first_block, linkedlist_data_s::last_block, linkedlist_datablock_internal_s::next_datablock, ZIP_INTERNALERROR, and ZIP_OK.

Referenced by LoadCentralDirectoryRecord(), and zipCloseFileInZipRaw64().

```
{
    linkedlist_datablock_internal* ldi;
    const unsigned char* from_copy;

    if (ll==NULL)
        return ZIP_INTERNALERROR;

    if (ll->last_block == NULL)
    {
```

```
        ll->first_block = ll->last_block = allocate_new_datablock();
        if (ll->first_block == NULL)
            return ZIP_INTERNALERROR;
    }

    ldi = ll->last_block;
    from_copy = (unsigned char*)buf;

    while (len>0)
    {
        uInt copy_this;
        uInt i;
        unsigned char* to_copy;

        if (ldi->avail_in_this_block==0)
        {
            ldi->next_datablock = allocate_new_datablock();
            if (ldi->next_datablock == NULL)
                return ZIP_INTERNALERROR;
            ldi = ldi->next_datablock ;
            ll->last_block = ldi;
        }

        if (ldi->avail_in_this_block < len)
            copy_this = (uInt)ldi->avail_in_this_block;
        else
            copy_this = (uInt)len;

        to_copy = &(ldi->data[ldi->filled_in_this_block]);

        for (i=0;i<copy_this;i++)
            *(to_copy+i)=*(from_copy+i);

        ldi->filled_in_this_block += copy_this;
        ldi->avail_in_this_block -= copy_this;
        from_copy += copy_this ;
        len -= copy_this;
    }
    return ZIP_OK;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.8 static linkedlist_datablock_internal* allocate_new_datablock ( ) [static]

Definition at line 198 of file zip.c.

References ALLOC, linkedlist_datablock_internal_s::avail_in_this_block, linkedlist_datablock_internal_s::filled_in_-this_block, linkedlist_datablock_internal_s::next_datablock, and SIZEDATA_INDATABLOCK.

Referenced by add_data_in_datablock().

```
{
    linkedlist_datablock_internal* ldi;
    ldi = (linkedlist_datablock_internal*)
                ALLOC(sizeof(linkedlist_datablock_internal));
    if (ldi!=NULL)
    {
        ldi->next_datablock = NULL ;
        ldi->filled_in_this_block = 0 ;
        ldi->avail_in_this_block = SIZEDATA_INDATABLOCK ;
    }
    return ldi;
}
```

Here is the caller graph for this function:

13.162.4.9 static void free_datablock (linkedlist_datablock_internal * *ldi*) [static]

Definition at line 212 of file zip.c.

References linkedlist_datablock_internal_s::next_datablock, and TRYFREE.

Referenced by free_linkedlist().

```
{
    while (ldi!=NULL)
    {
        linkedlist_datablock_internal* ldinext = ldi->
next_datablock;
        TRYFREE(ldi);
        ldi = ldinext;
    }
}
```

Here is the caller graph for this function:

13.162.4.10 static void free_linkedlist (linkedlist_data * ll) [static]

Definition at line 227 of file zip.c.

References linkedlist_data_s::first_block, free_datablock(), and linkedlist_data_s::last_block.

Referenced by zipClose().

```
228 {
229     free_datablock(ll->first_block);
230     ll->first_block = ll->last_block = NULL;
231 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.11 static void init_linkedlist (linkedlist_data * ll) [static]

Definition at line 222 of file zip.c.

References linkedlist_data_s::first_block, and linkedlist_data_s::last_block.

Referenced by zipOpen3().

```
223 {
224     ll->first_block = ll->last_block = NULL;
225 }
```

Here is the caller graph for this function:

13.162.4.12 int LoadCentralDirectoryRecord (zip64_internal * *pziinit*)

Definition at line 649 of file zip.c.

References add_data_in_datablock(), zip64_internal::add_position_when_writting_offset, ALLOC, zip64_internal::begin_pos, zip64_internal::central_dir, zip64_internal::filestream, zip64_internal::flags, zip64_internal::globalcomment, zip64_internal::number_entry, SIZEDATA_INDATABLOCK, TRYFREE, zip64_internal::z_filefunc, ZCLOSE64, ZFAKECLOSE64, zip64local_getLong(), zip64local_getLong64(), zip64local_getShort(), zip64local_SearchCentralDir(), zip64local_SearchCentralDir64(), ZIP_AUTO_CLOSE, ZIP_BADZIPFILE, ZIP_ERRNO, ZIP_OK, ZLIB_FILEFUNC_SEEK_SET, ZREAD64, and ZSEEK64.

Referenced by zipOpen3().

```
{
  int err=ZIP_OK;
  ZPOS64_T byte_before_the_zipfile;/* byte before the zipfile, (>0 for sfx)*/

  ZPOS64_T size_central_dir;     /* size of the central directory  */
  ZPOS64_T offset_central_dir;   /* offset of start of central directory */
  ZPOS64_T central_pos;
  uLong uL;

  uLong number_disk;          /* number of the current dist, used for
                              spaning ZIP, unsupported, always 0*/
  uLong number_disk_with_CD;  /* number the the disk with central dir, used
                              for spaning ZIP, unsupported, always 0*/
  ZPOS64_T number_entry;
  ZPOS64_T number_entry_CD;      /* total number of entries in
                                the central dir
                                (same than number_entry on nospan) */
  uLong VersionMadeBy;
  uLong VersionNeeded;
  uLong size_comment;

  int hasZIP64Record = 0;

  /* check first if we find a ZIP64 record */
  central_pos = zip64local_SearchCentralDir64(&pziinit->z_filefunc,pziinit->filestream);
  if(central_pos > 0)
  {
    hasZIP64Record = 1;
  }
  else if(central_pos == 0)
  {
    central_pos = zip64local_SearchCentralDir(&pziinit->z_filefunc,pziinit->filestream);
  }

/* disable to allow appending to empty ZIP archive
        if (central_pos==0)
            err=ZIP_ERRNO;
*/

  if(hasZIP64Record)
  {
    ZPOS64_T sizeEndOfCentralDirectory;
    if (ZSEEK64(pziinit->z_filefunc, pziinit->filestream, central_pos, ZLIB_FILEFUNC_SEEK_SET) != 0)
      err=ZIP_ERRNO;

    /* the signature, already checked */
```

```
    if (zip64local_getLong(&pziinit->z_filefunc, pziinit->filestream,&uL)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* size of zip64 end of central directory record */
    if (zip64local_getLong64(&pziinit->z_filefunc, pziinit->filestream, &sizeEndOfCentralDirectory)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* version made by */
    if (zip64local_getShort(&pziinit->z_filefunc, pziinit->filestream, &VersionMadeBy)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* version needed to extract */
    if (zip64local_getShort(&pziinit->z_filefunc, pziinit->filestream, &VersionNeeded)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* number of this disk */
    if (zip64local_getLong(&pziinit->z_filefunc, pziinit->filestream,&number_disk)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* number of the disk with the start of the central directory */
    if (zip64local_getLong(&pziinit->z_filefunc, pziinit->filestream,&number_disk_with_CD)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* total number of entries in the central directory on this disk */
    if (zip64local_getLong64(&pziinit->z_filefunc, pziinit->filestream, &number_entry)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* total number of entries in the central directory */
    if (zip64local_getLong64(&pziinit->z_filefunc, pziinit->filestream,&number_entry_CD)!=ZIP_OK)
      err=ZIP_ERRNO;

    if ((number_entry_CD!=number_entry) || (number_disk_with_CD!=0) || (number_disk!=0))
      err=ZIP_BADZIPFILE;

    /* size of the central directory */
    if (zip64local_getLong64(&pziinit->z_filefunc, pziinit->filestream,&size_central_dir)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* offset of start of central directory with respect to the
    starting disk number */
    if (zip64local_getLong64(&pziinit->z_filefunc, pziinit->filestream,&offset_central_dir)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* TODO.. */
    /* read the comment from the standard central header. */
    size_comment = 0;
  }
  else
  {
    /* Read End of central Directory info */
    if (ZSEEK64(pziinit->z_filefunc, pziinit->filestream, central_pos, ZLIB_FILEFUNC_SEEK_SET)!=0)
      err=ZIP_ERRNO;

    /* the signature, already checked */
    if (zip64local_getLong(&pziinit->z_filefunc, pziinit->filestream,&uL)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* number of this disk */
    if (zip64local_getShort(&pziinit->z_filefunc, pziinit->filestream,&number_disk)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* number of the disk with the start of the central directory */
    if (zip64local_getShort(&pziinit->z_filefunc, pziinit->filestream,&number_disk_with_CD)!=ZIP_OK)
      err=ZIP_ERRNO;

    /* total number of entries in the central dir on this disk */
    number_entry = 0;
    if (zip64local_getShort(&pziinit->z_filefunc, pziinit->filestream, &uL)!=ZIP_OK)
      err=ZIP_ERRNO;
    else
      number_entry = uL;

```

```
    /* total number of entries in the central dir */
    number_entry_CD = 0;
    if (zip64local_getShort(&pziinit->z_filefunc, pziinit->filestream, &uL)!=ZIP_OK)
      err=ZIP_ERRNO;
    else
      number_entry_CD = uL;

    if ((number_entry_CD!=number_entry) || (number_disk_with_CD!=0) || (number_disk!=0))
      err=ZIP_BADZIPFILE;

    /* size of the central directory */
    size_central_dir = 0;
    if (zip64local_getLong(&pziinit->z_filefunc, pziinit->filestream, &uL)!=ZIP_OK)
      err=ZIP_ERRNO;
    else
      size_central_dir = uL;

    /* offset of start of central directory with respect to the starting disk number */
    offset_central_dir = 0;
    if (zip64local_getLong(&pziinit->z_filefunc, pziinit->filestream, &uL)!=ZIP_OK)
      err=ZIP_ERRNO;
    else
      offset_central_dir = uL;


    /* zipfile global comment length */
    if (zip64local_getShort(&pziinit->z_filefunc, pziinit->filestream, &size_comment)!=ZIP_OK)
      err=ZIP_ERRNO;
  }

  if ((central_pos<offset_central_dir+size_central_dir) &&
    (err==ZIP_OK))
    err=ZIP_BADZIPFILE;

  if (err!=ZIP_OK)
  {
      if ((pziinit->flags & ZIP_AUTO_CLOSE) != 0) {
        ZCLOSE64(pziinit->z_filefunc, pziinit->filestream);
      } else {
        ZFAKECLOSE64(pziinit->z_filefunc, pziinit->filestream);
      }
    return ZIP_ERRNO;
  }

  if (size_comment>0)
  {
    pziinit->globalcomment = (char*)ALLOC(size_comment+1);
    if (pziinit->globalcomment)
    {
      size_comment = ZREAD64(pziinit->z_filefunc, pziinit->filestream, pziinit->globalcomment,size_comment);
      pziinit->globalcomment[size_comment]=0;
    }
  }

  byte_before_the_zipfile = central_pos - (offset_central_dir+size_central_dir);
  pziinit->add_position_when_writting_offset = byte_before_the_zipfile;

  {
    ZPOS64_T size_central_dir_to_read = size_central_dir;
    size_t buf_size = SIZEDATA_INDATABLOCK;
    void* buf_read = (void*)ALLOC(buf_size);
    if (ZSEEK64(pziinit->z_filefunc, pziinit->filestream, offset_central_dir + byte_before_the_zipfile, ZLIB_FILEFUNC_SEEK_SET) != 0)
      err=ZIP_ERRNO;

    while ((size_central_dir_to_read>0) && (err==ZIP_OK))
    {
      ZPOS64_T read_this = SIZEDATA_INDATABLOCK;
      if (read_this > size_central_dir_to_read)
        read_this = size_central_dir_to_read;

      if (ZREAD64(pziinit->z_filefunc, pziinit->filestream,buf_read,(uLong)read_this) != read_this)
        err=ZIP_ERRNO;

      if (err==ZIP_OK)
        err = add_data_in_datablock(&pziinit->central_dir,buf_read, (uLong)read_this);

      size_central_dir_to_read-=read_this;
    }
```

```
    TRYFREE(buf_read);
  }
  pziinit->begin_pos = byte_before_the_zipfile;
  pziinit->number_entry = number_entry_CD;

  if (ZSEEK64(pziinit->z_filefunc, pziinit->filestream, offset_central_dir+
  byte_before_the_zipfile,ZLIB_FILEFUNC_SEEK_SET) != 0)
    err=ZIP_ERRNO;

  return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.13 int Write_EndOfCentralDirectoryRecord (zip64_internal * *zi*, uLong *size_centraldir*, ZPOS64_T *centraldir_pos_inzip*)

Definition at line 1876 of file zip.c.

References zip64_internal::add_position_when_writting_offset, ENDHEADERMAGIC, zip64_internal::filestream, zip64_internal::number_entry, zip64_internal::z_filefunc, zip64local_putValue(), and ZIP_OK.

Referenced by zipClose().

```
{
  int err = ZIP_OK;

  /*signature*/
  err = zip64local_putValue(&zi->z_filefunc,zi->
filestream,(uLong)ENDHEADERMAGIC,4);

  if (err==ZIP_OK) /* number of this disk */
    err = zip64local_putValue(&zi->z_filefunc,zi->
filestream,(uLong)0,2);

  if (err==ZIP_OK) /* number of the disk with the start of the central directory */
    err = zip64local_putValue(&zi->z_filefunc,zi->
filestream,(uLong)0,2);

  if (err==ZIP_OK) /* total number of entries in the central dir on this disk */
```

```
  {
    {
      if(zi->number_entry >= 0xFFFF)
        err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)0xffff,2); /* use value in ZIP64 record */
      else
        err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)zi->number_entry,2);
    }
  }

  if (err==ZIP_OK) /* total number of entries in the central dir */
  {
    if(zi->number_entry >= 0xFFFF)
      err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)0xffff,2); /* use value in ZIP64 record */
    else
      err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)zi->number_entry,2);
  }

  if (err==ZIP_OK) /* size of the central directory */
    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)size_centraldir,4);

  if (err==ZIP_OK) /* offset of start of central directory with respect to the starting disk number */
  {
    ZPOS64_T pos = centraldir_pos_inzip - zi->add_position_when_writting_offset;
    if(pos >= 0xffffffff)
    {
      err = zip64local_putValue(&zi->z_filefunc,zi->filestream, (uLong)0xffffffff,4);
    }
    else
                    err = zip64local_putValue(&zi->z_filefunc,zi->filestream, (uLong)(centraldir_pos_inzip - zi->add_position_when_writting_offset),4);
  }

   return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.14 int Write_GlobalComment (zip64_internal * *zi*, const char * *global_comment*)

Definition at line 1924 of file zip.c.

References zip64_internal::filestream, zip64_internal::z_filefunc, zip64local_putValue(), ZIP_ERRNO, ZIP_OK, and ZWRITE64.

Referenced by zipClose().

```
1925 {
1926   int err = ZIP_OK;
1927   uInt size_global_comment = 0;
1928
1929   if(global_comment != NULL)
1930     size_global_comment = (uInt)strlen(global_comment);
1931
1932   err = zip64local_putValue(&zi->z_filefunc,zi->
      filestream,(uLong)size_global_comment,2);
1933
1934   if (err == ZIP_OK && size_global_comment > 0)
1935   {
1936     if (ZWRITE64(zi->z_filefunc,zi->filestream, global_comment,
      size_global_comment) != size_global_comment)
1937       err = ZIP_ERRNO;
1938   }
1939   return err;
1940 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.15 int Write_LocalFileHeader (zip64_internal * *zi*, const char * *filename*, uInt *size_extrafield_local*, const void * *extrafield_local*, uLong *version_to_extract*)

Definition at line 977 of file zip.c.

References zip64_internal::ci, curfile64_info::dosDate, zip64_internal::filestream, curfile64_info::flag, LOCALHEADERMAGIC, curfile64_info::method, curfile64_info::pos_zip64extrainfo, zip64_internal::z_filefunc, curfile64_info::zip64, zip64local_putValue(), ZIP_ERRNO, ZIP_OK, ZTELL64, and ZWRITE64.

Referenced by zipOpenNewFileInZip4_64().

```
{
  /* write the local header */
  int err;
  uInt size_filename = (uInt)strlen(filename);
  uInt size_extrafield = size_extrafield_local;

  err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)LOCALHEADERMAGIC, 4);

  if (err==ZIP_OK)
  {
    if(zi->ci.zip64)
      err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)45,2);/* version needed to extract */
    else
      err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)version_to_extract,2);
  }

  if (err==ZIP_OK)
    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)zi->ci.flag,2);

  if (err==ZIP_OK)
    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)zi->ci.method,2);

  if (err==ZIP_OK)
    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)zi->ci.dosDate,4);

  /* CRC / Compressed size / Uncompressed size will be filled in later and rewritten later */
  if (err==ZIP_OK)
    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)0,4); /* crc 32, unknown */
  if (err==ZIP_OK)
  {
    if(zi->ci.zip64)
      err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)0xFFFFFFFF,4); /* compressed size, unknown */
    else
      err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)0,4); /* compressed size, unknown */
  }
  if (err==ZIP_OK)
  {
    if(zi->ci.zip64)
      err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)0xFFFFFFFF,4); /* uncompressed size, unknown */
    else
      err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)0,4); /* uncompressed size, unknown */
  }

  if (err==ZIP_OK)
    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)size_filename,2);

  if(zi->ci.zip64)
  {
    size_extrafield += 20;
  }

  if (err==ZIP_OK)
    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)size_extrafield,2);

  if ((err==ZIP_OK) && (size_filename > 0))
  {
    if (ZWRITE64(zi->z_filefunc,zi->filestream,filename,size_filename)!=size_filename)
      err = ZIP_ERRNO;
  }

  if ((err==ZIP_OK) && (size_extrafield_local > 0))
  {
    if (ZWRITE64(zi->z_filefunc, zi->filestream, extrafield_local, size_extrafield_local) != size_extrafield_local)
      err = ZIP_ERRNO;
  }


  if ((err==ZIP_OK) && (zi->ci.zip64))
  {
      /* write the Zip64 extended info */
      short HeaderID = 1;
      short DataSize = 16;
```

```
1053        ZPOS64_T CompressedSize = 0;
1054        ZPOS64_T UncompressedSize = 0;
1055
1056        /* Remember position of Zip64 extended info for the local file header. (needed when we update size
     after done with file) */
1057        zi->ci.pos_zip64extrainfo = ZTELL64(zi->
    z_filefunc,zi->filestream);
1058
1059        err = zip64local_putValue(&zi->z_filefunc, zi->
    filestream, (short)HeaderID,2);
1060        err = zip64local_putValue(&zi->z_filefunc, zi->
    filestream, (short)DataSize,2);
1061
1062        err = zip64local_putValue(&zi->z_filefunc, zi->
    filestream, (ZPOS64_T)UncompressedSize,8);
1063        err = zip64local_putValue(&zi->z_filefunc, zi->
    filestream, (ZPOS64_T)CompressedSize,8);
1064    }
1065
1066    return err;
1067 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.16 int Write_Zip64EndOfCentralDirectoryLocator (zip64_internal * *zi*, ZPOS64_T *zip64eocd_pos_inzip*)

Definition at line 1815 of file zip.c.

References zip64_internal::add_position_when_writting_offset, zip64_internal::filestream, zip64_internal::z_-filefunc, ZIP64ENDLOCHEADERMAGIC, zip64local_putValue(), and ZIP_OK.

Referenced by zipClose().

```
1816 {
1817    int err = ZIP_OK;
```

```
 ZPOS64_T pos = zip64eocd_pos_inzip - zi->add_position_when_writting_offset;

 err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)ZIP64ENDLOCHEADERMAGIC,4);

 /*num disks*/
   if (err==ZIP_OK) /* number of the disk with the start of the central directory */
     err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)0,4);

 /*relative offset*/
   if (err==ZIP_OK) /* Relative offset to the Zip64EndOfCentralDirectory */
     err = zip64local_putValue(&zi->z_filefunc,zi->filestream, pos,8);

 /*total disks*/ /* Do not support spawning of disk so always say 1 here*/
   if (err==ZIP_OK) /* number of the disk with the start of the central directory */
     err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)1,4);

   return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.17 int Write_Zip64EndOfCentralDirectoryRecord (zip64_internal * *zi*, uLong *size_centraldir*, ZPOS64_T *centraldir_pos_inzip*)

Definition at line 1837 of file zip.c.

References zip64_internal::add_position_when_writting_offset, zip64_internal::filestream, zip64_internal::number_entry, zip64_internal::z_filefunc, ZIP64ENDHEADERMAGIC, zip64local_putValue(), and ZIP_OK.

Referenced by zipClose().

```
{
  int err = ZIP_OK;

  uLong Zip64DataSize = 44;

  err = zip64local_putValue(&zi->z_filefunc,zi->
```

```
    filestream,(uLong)ZIP64ENDHEADERMAGIC,4);

 if (err==ZIP_OK) /* size of this 'zip64 end of central directory' */
   err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(ZPOS64_T)Zip64DataSize,8); /* why ZPOS64_T of this ? */

 if (err==ZIP_OK) /* version made by */
   err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)45,2);

 if (err==ZIP_OK) /* version needed */
   err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)45,2);

 if (err==ZIP_OK) /* number of this disk */
   err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)0,4);

 if (err==ZIP_OK) /* number of the disk with the start of the central directory */
   err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)0,4);

 if (err==ZIP_OK) /* total number of entries in the central dir on this disk */
   err = zip64local_putValue(&zi->z_filefunc, zi->filestream, zi->number_entry, 8);

 if (err==ZIP_OK) /* total number of entries in the central dir */
   err = zip64local_putValue(&zi->z_filefunc, zi->filestream, zi->number_entry, 8);

 if (err==ZIP_OK) /* size of the central directory */
   err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(ZPOS64_T)size_centraldir,8);

 if (err==ZIP_OK) /* offset of start of central directory with respect to the starting disk number */
 {
   ZPOS64_T pos = centraldir_pos_inzip - zi->add_position_when_writting_offset;
   err = zip64local_putValue(&zi->z_filefunc,zi->filestream, (ZPOS64_T)pos,8);
 }
 return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.18 static int zip64FlushWriteBuffer (zip64_internal * *zi*) [static]

Definition at line 1403 of file zip.c.

References curfile64_info::buffered_data, zip64_internal::ci, curfile64_info::encrypt, zip64_internal::filestream, curfile64_info::keys, curfile64_info::method, curfile64_info::pcrc_32_tab, curfile64_info::pos_in_buffered_data, curfile64_info::stream, curfile64_info::totalCompressedData, curfile64_info::totalUncompressedData, Z_BZIP2ED, zip64_internal::z_filefunc, zencode, ZIP_ERRNO, ZIP_OK, and ZWRITE64.

Referenced by zipCloseFileInZipRaw64(), and zipWriteInFileInZip().

```
{
    int err=ZIP_OK;

    if (zi->ci.encrypt != 0)
    {
#ifndef NOCRYPT
        uInt i;
        int t;
        for (i=0;i<zi->ci.pos_in_buffered_data;i++)
            zi->ci.buffered_data[i] = zencode(zi->ci.keys, zi->ci.pcrc_32_tab, zi->ci.buffered_data[i],t);
#endif
    }

    if (ZWRITE64(zi->z_filefunc,zi->filestream,zi->ci.buffered_data,zi->ci.pos_in_buffered_data) != zi->ci.pos_in_buffered_data)
      err = ZIP_ERRNO;

    zi->ci.totalCompressedData += zi->ci.pos_in_buffered_data;

#ifdef HAVE_BZIP2
    if(zi->ci.method == Z_BZIP2ED)
    {
      zi->ci.totalUncompressedData += zi->ci.bstream.total_in_lo32;
      zi->ci.bstream.total_in_lo32 = 0;
      zi->ci.bstream.total_in_hi32 = 0;
    }
    else
#endif
    {
      zi->ci.totalUncompressedData += zi->ci.stream.total_in;
      zi->ci.stream.total_in = 0;
    }


    zi->ci.pos_in_buffered_data = 0;

    return err;
}
```

Here is the caller graph for this function:

13.162.4.19 static int zip64local_getByte (const zlib_filefunc64_32_def * *pzlib_filefunc_def,* voidpf *filestream,* int * *pi*) [static]

Definition at line 358 of file zip.c.

References ZERROR64, ZIP_EOF, ZIP_ERRNO, ZIP_OK, and ZREAD64.

Referenced by zip64local_getLong(), zip64local_getLong64(), and zip64local_getShort().

```
{
    unsigned char c;
    int err = (int)ZREAD64(*pzlib_filefunc_def,filestream,&c,1);
    if (err==1)
    {
        *pi = (int)c;
        return ZIP_OK;
    }
    else
    {
        if (ZERROR64(*pzlib_filefunc_def,filestream))
            return ZIP_ERRNO;
        else
            return ZIP_EOF;
    }
}
```

Here is the caller graph for this function:

13.162.4.20 static int zip64local_getLong (const zlib_filefunc64_32_def * *pzlib_filefunc_def,* voidpf *filestream,* uLong * *pX*) [static]

Definition at line 404 of file zip.c.

References x, zip64local_getByte(), and ZIP_OK.

Referenced by LoadCentralDirectoryRecord(), and zip64local_SearchCentralDir64().

```
{
    uLong x ;
    int i = 0;
    int err;

    err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
    x = (uLong)i;

    if (err==ZIP_OK)
        err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
    x += ((uLong)i)<<8;

    if (err==ZIP_OK)
        err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
    x += ((uLong)i)<<16;

    if (err==ZIP_OK)
        err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
    x += ((uLong)i)<<24;

    if (err==ZIP_OK)
        *pX = x;
    else
        *pX = 0;
    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.21 static int zip64local_getLong64 (const zlib_filefunc64_32_def * *pzlib_filefunc_def,* voidpf *filestream,* ZPOS64_T * *pX*) [static]

Definition at line 435 of file zip.c.

References x, zip64local_getByte(), and ZIP_OK.

Referenced by LoadCentralDirectoryRecord(), and zip64local_SearchCentralDir64().

```
{
  ZPOS64_T x;
  int i = 0;
  int err;

  err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
  x = (ZPOS64_T)i;

  if (err==ZIP_OK)
    err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
  x += ((ZPOS64_T)i)<<8;

  if (err==ZIP_OK)
    err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
  x += ((ZPOS64_T)i)<<16;

  if (err==ZIP_OK)
    err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
  x += ((ZPOS64_T)i)<<24;

  if (err==ZIP_OK)
    err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
  x += ((ZPOS64_T)i)<<32;

  if (err==ZIP_OK)
    err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
  x += ((ZPOS64_T)i)<<40;

  if (err==ZIP_OK)
    err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
  x += ((ZPOS64_T)i)<<48;

  if (err==ZIP_OK)
    err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
  x += ((ZPOS64_T)i)<<56;

  if (err==ZIP_OK)
    *pX = x;
```

```
  else
    *pX = 0;

  return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.22 static int zip64local_getShort (const zlib_filefunc64_32_def * *pzlib_filefunc_def,* voidpf *filestream,* uLong * *pX*) [static]

Definition at line 382 of file zip.c.

References x, zip64local_getByte(), and ZIP_OK.

Referenced by LoadCentralDirectoryRecord().

```
{
    uLong x ;
    int i = 0;
    int err;

    err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
    x = (uLong)i;

    if (err==ZIP_OK)
        err = zip64local_getByte(pzlib_filefunc_def,filestream,&i);
    x += ((uLong)i)<<8;

    if (err==ZIP_OK)
        *pX = x;
    else
        *pX = 0;
    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.23 static int zip64local_putValue (const zlib_filefunc64_32_def * *pzlib_filefunc_def,* voidpf *filestream,* ZPOS64_T *x,* int *nbByte*) [static]

Definition at line 296 of file zip.c.

References ZIP_ERRNO, ZIP_OK, and ZWRITE64.

Referenced by Write_EndOfCentralDirectoryRecord(), Write_GlobalComment(), Write_LocalFileHeader(), Write_Zip64EndOfCentralDirectoryLocator(), Write_Zip64EndOfCentralDirectoryRecord(), and zipCloseFileInZipRaw64().

```
{
    unsigned char buf[8];
    int n;
    for (n = 0; n < nbByte; n++)
    {
        buf[n] = (unsigned char)(x & 0xff);
        x >>= 8;
    }
    if (x != 0)
      {     /* data overflow - hack for ZIP64 (X Roche) */
      for (n = 0; n < nbByte; n++)
        {
          buf[n] = 0xff;
        }
      }

    if (ZWRITE64(*pzlib_filefunc_def,filestream,buf,nbByte)!=(uLong)nbByte)
        return ZIP_ERRNO;
    else
        return ZIP_OK;
}
```

Here is the caller graph for this function:

13.162.4.24 static void zip64local_putValue_inmemory (void * *dest*, ZPOS64_T *x*, int *nbByte*) [static]

Definition at line 320 of file zip.c.

Referenced by zipCloseFileInZipRaw64(), and zipOpenNewFileInZip4_64().

```
{
    unsigned char* buf=(unsigned char*)dest;
    int n;
    for (n = 0; n < nbByte; n++) {
        buf[n] = (unsigned char)(x & 0xff);
        x >>= 8;
    }

    if (x != 0)
    {     /* data overflow - hack for ZIP64 */
       for (n = 0; n < nbByte; n++)
       {
          buf[n] = 0xff;
       }
    }
}
```

Here is the caller graph for this function:

13.162.4.25 static ZPOS64_T zip64local_SearchCentralDir (const zlib_filefunc64_32_def * *pzlib_filefunc_def*, voidpf *filestream*) [static]

Definition at line 489 of file zip.c.

References ALLOC, BUFREADCOMMENT, TRYFREE, ZLIB_FILEFUNC_SEEK_END, ZLIB_FILEFUNC_SEEK_-SET, ZREAD64, ZSEEK64, and ZTELL64.

Referenced by LoadCentralDirectoryRecord().

```
{
  unsigned char* buf;
  ZPOS64_T uSizeFile;
```

```
  ZPOS64_T uBackRead;
  ZPOS64_T uMaxBack=0xffff; /* maximum size of global comment */
  ZPOS64_T uPosFound=0;

  if (ZSEEK64(*pzlib_filefunc_def,filestream,0,ZLIB_FILEFUNC_SEEK_END) != 0)
    return 0;


  uSizeFile = ZTELL64(*pzlib_filefunc_def,filestream);

  if (uMaxBack>uSizeFile)
    uMaxBack = uSizeFile;

  buf = (unsigned char*)ALLOC(BUFREADCOMMENT+4);
  if (buf==NULL)
    return 0;

  uBackRead = 4;
  while (uBackRead<uMaxBack)
  {
    uLong uReadSize;
    ZPOS64_T uReadPos ;
    int i;
    if (uBackRead+BUFREADCOMMENT>uMaxBack)
      uBackRead = uMaxBack;
    else
      uBackRead+=BUFREADCOMMENT;
    uReadPos = uSizeFile-uBackRead ;

    uReadSize = ((BUFREADCOMMENT+4) < (uSizeFile-uReadPos)) ?
      (BUFREADCOMMENT+4) : (uLong)(uSizeFile-uReadPos);
    if (ZSEEK64(*pzlib_filefunc_def,filestream,uReadPos,
  ZLIB_FILEFUNC_SEEK_SET)!=0)
      break;

    if (ZREAD64(*pzlib_filefunc_def,filestream,buf,uReadSize)!=uReadSize)
      break;

    for (i=(int)uReadSize-3; (i--)>0;)
      if (((*(buf+i))==0x50) && ((*(buf+i+1))==0x4b) &&
        ((*(buf+i+2))==0x05) && ((*(buf+i+3))==0x06))
      {
        uPosFound = uReadPos+i;
        break;
      }

    if (uPosFound!=0)
      break;
  }
  TRYFREE(buf);
  return uPosFound;
}
```

Here is the caller graph for this function:

13.162.4.26 static ZPOS64_T zip64local_SearchCentralDir64 (const zlib_filefunc64_32_def * *pzlib_filefunc_def,* voidpf *filestream*) [static]

Definition at line 551 of file zip.c.

References ALLOC, BUFREADCOMMENT, TRYFREE, zip64local_getLong(), zip64local_getLong64(), ZIP_OK, ZLIB_FILEFUNC_SEEK_END, ZLIB_FILEFUNC_SEEK_SET, ZREAD64, ZSEEK64, and ZTELL64.

Referenced by LoadCentralDirectoryRecord().

```
552 {
```

```
unsigned char* buf;
ZPOS64_T uSizeFile;
ZPOS64_T uBackRead;
ZPOS64_T uMaxBack=0xffff; /* maximum size of global comment */
ZPOS64_T uPosFound=0;
uLong uL;
ZPOS64_T relativeOffset;

if (ZSEEK64(*pzlib_filefunc_def,filestream,0,ZLIB_FILEFUNC_SEEK_END) != 0)
  return 0;

uSizeFile = ZTELL64(*pzlib_filefunc_def,filestream);

if (uMaxBack>uSizeFile)
  uMaxBack = uSizeFile;

buf = (unsigned char*)ALLOC(BUFREADCOMMENT+4);
if (buf==NULL)
  return 0;

uBackRead = 4;
while (uBackRead<uMaxBack)
{
  uLong uReadSize;
  ZPOS64_T uReadPos;
  int i;
  if (uBackRead+BUFREADCOMMENT>uMaxBack)
    uBackRead = uMaxBack;
  else
    uBackRead+=BUFREADCOMMENT;
  uReadPos = uSizeFile-uBackRead ;

  uReadSize = ((BUFREADCOMMENT+4) < (uSizeFile-uReadPos)) ?
    (BUFREADCOMMENT+4) : (uLong)(uSizeFile-uReadPos);
  if (ZSEEK64(*pzlib_filefunc_def,filestream,uReadPos,
ZLIB_FILEFUNC_SEEK_SET)!=0)
    break;

  if (ZREAD64(*pzlib_filefunc_def,filestream,buf,uReadSize)!=uReadSize)
    break;

  for (i=(int)uReadSize-3; (i--)>0;)
  {
    /* Signature "0x07064b50" Zip64 end of central directory locater */
    if (((*(buf+i))==0x50) && ((*(buf+i+1))==0x4b) && ((*(buf+i+2))==0x06) && ((*(buf+i+3))==0x07))
    {
      uPosFound = uReadPos+i;
      break;
    }
  }

    if (uPosFound!=0)
      break;
}

TRYFREE(buf);
if (uPosFound == 0)
  return 0;

/* Zip64 end of central directory locator */
if (ZSEEK64(*pzlib_filefunc_def,filestream, uPosFound,
ZLIB_FILEFUNC_SEEK_SET)!=0)
  return 0;

/* the signature, already checked */
if (zip64local_getLong(pzlib_filefunc_def,filestream,&uL)!=
ZIP_OK)
  return 0;

/* number of the disk with the start of the zip64 end of  central directory */
if (zip64local_getLong(pzlib_filefunc_def,filestream,&uL)!=
ZIP_OK)
  return 0;
if (uL != 0)
  return 0;

/* relative offset of the zip64 end of central directory record */
if (zip64local_getLong64(pzlib_filefunc_def,filestream,&relativeOffset)!=
ZIP_OK)
  return 0;

/* total number of disks */
if (zip64local_getLong(pzlib_filefunc_def,filestream,&uL)!=
ZIP_OK)
  return 0;
if (uL != 1)
  return 0;
```

```
  /* Goto Zip64 end of central directory record */
  if (ZSEEK64(*pzlib_filefunc_def,filestream, relativeOffset,
  ZLIB_FILEFUNC_SEEK_SET)!=0)
    return 0;

  /* the signature */
  if (zip64local_getLong(pzlib_filefunc_def,filestream,&uL)!=
  ZIP_OK)
    return 0;

  if (uL != 0x06064b50) /* signature of 'Zip64 end of central directory' */
    return 0;

  return relativeOffset;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.27 static uLong zip64local_TmzDateToDosDate (const tm_zip * *ptm*) [static]

Definition at line 341 of file zip.c.

References tm_zip_s::tm_hour, tm_zip_s::tm_mday, tm_zip_s::tm_min, tm_zip_s::tm_mon, tm_zip_s::tm_sec, and tm_zip_s::tm_year.

Referenced by zipOpenNewFileInZip4_64().

```
{
    uLong year = (uLong)ptm->tm_year;
    if (year>=1980)
        year-=1980;
    else if (year>=80)
        year-=80;
    return
      (uLong) (((ptm->tm_mday) + (32 * (ptm->tm_mon+1)) + (512 * year)) << 16) |
        ((ptm->tm_sec/2) + (32* ptm->tm_min) + (2048 * (uLong)ptm->
  tm_hour));
}
```

Here is the caller graph for this function:

13.162.4.28 int ZEXPORT zipClearFlags (zipFile *file*, unsigned *flags*)

Definition at line 2091 of file zip.c.

References zip64_internal::flags, ZIP_OK, ZIP_PARAMERROR, ZIP_SEQUENTIAL, and ZIP_WRITE_DATA_DESCRIPTOR.

Referenced by QuaZipFile::open().

```
{
    zip64_internal* zi;
    if (file == NULL)
        return ZIP_PARAMERROR;
    zi = (zip64_internal*)file;
    zi->flags &= ~flags;
    // If the data descriptor is not written, we can't use a non-seekable output.
    if ((zi->flags & ZIP_WRITE_DATA_DESCRIPTOR) == 0) {
        zi->flags &= ~ZIP_SEQUENTIAL;
    }
    return ZIP_OK;
}
```

Here is the caller graph for this function:

13.162.4.29 int ZEXPORT zipClose (zipFile *file*, const char * *global_comment*)

Definition at line 1942 of file zip.c.

References zip64_internal::add_position_when_writting_offset, zip64_internal::central_dir, linkedlist_datablock_internal_s::data, zip64_internal::filestream, linkedlist_datablock_internal_s::filled_in_this_block, linkedlist_data_s::first_block, zip64_internal::flags, free_linkedlist(), zip64_internal::globalcomment, zip64_internal::in_opened_file_inzip, linkedlist_datablock_internal_s::next_datablock, zip64_internal::number_entry, TRYFREE, Write_EndOf-

CentralDirectoryRecord(), Write_GlobalComment(), Write_Zip64EndOfCentralDirectoryLocator(), Write_Zip64EndOfCentralDirectoryRecord(), zip64_internal::z_filefunc, ZCLOSE64, ZFAKECLOSE64, ZIP_AUTO_CLOSE, ZIP_ERRNO, ZIP_OK, ZIP_PARAMERROR, zipCloseFileInZip(), ZTELL64, and ZWRITE64.

Referenced by QuaZip::close(), and QuaZip::open().

```
{
    zip64_internal* zi;
    int err = 0;
    uLong size_centraldir = 0;
    ZPOS64_T centraldir_pos_inzip;
    ZPOS64_T pos;

    if (file == NULL)
        return ZIP_PARAMERROR;

    zi = (zip64_internal*)file;

    if (zi->in_opened_file_inzip == 1)
    {
        err = zipCloseFileInZip (file);
    }

#ifndef NO_ADDFILEINEXISTINGZIP
    if (global_comment==NULL)
        global_comment = zi->globalcomment;
#endif

    centraldir_pos_inzip = ZTELL64(zi->z_filefunc,zi->filestream);

    if (err==ZIP_OK)
    {
        linkedlist_datablock_internal* ldi = zi->central_dir.first_block;
        while (ldi!=NULL)
        {
            if ((err==ZIP_OK) && (ldi->filled_in_this_block>0))
            {
                if (ZWRITE64(zi->z_filefunc,zi->filestream, ldi->data, ldi->filled_in_this_block) != ldi->filled_in_this_block)
                    err = ZIP_ERRNO;
            }

            size_centraldir += ldi->filled_in_this_block;
            ldi = ldi->next_datablock;
        }
    }
    free_linkedlist(&(zi->central_dir));

    pos = centraldir_pos_inzip - zi->add_position_when_writting_offset;
    if(pos >= 0xffffffff || zi->number_entry > 0xFFFF)
    {
      ZPOS64_T Zip64EOCDpos = ZTELL64(zi->z_filefunc,zi->filestream);
      Write_Zip64EndOfCentralDirectoryRecord(zi, size_centraldir, centraldir_pos_inzip);

      Write_Zip64EndOfCentralDirectoryLocator(zi, Zip64EOCDpos);
    }

    if (err==ZIP_OK)
      err = Write_EndOfCentralDirectoryRecord(zi, size_centraldir, centraldir_pos_inzip);

    if(err == ZIP_OK)
      err = Write_GlobalComment(zi, global_comment);

    if ((zi->flags & ZIP_AUTO_CLOSE) != 0) {
        if (ZCLOSE64(zi->z_filefunc,zi->filestream) != 0) {
            if (err == ZIP_OK)
                err = ZIP_ERRNO;
        }
    } else {
        if (ZFAKECLOSE64(zi->z_filefunc,zi->filestream) != 0) {
            if (err == ZIP_OK)
                err = ZIP_ERRNO;
        }
    }

#ifndef NO_ADDFILEINEXISTINGZIP
    TRYFREE(zi->globalcomment);
#endif
    TRYFREE(zi);

```

```
    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.30 int ZEXPORT zipCloseFileInZip (zipFile *file*)

Definition at line 1810 of file zip.c.

References zipCloseFileInZipRaw().

Referenced by QuaZipFile::close(), zipClose(), and zipOpenNewFileInZip4_64().

```
{
    return zipCloseFileInZipRaw (file,0,0);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.31 int ZEXPORT zipCloseFileInZipRaw (zipFile *file,* uLong *uncompressed_size,* uLong *crc32*)

Definition at line 1549 of file zip.c.

References zipCloseFileInZipRaw64().

Referenced by zipCloseFileInZip().

```
1550 {
1551     return zipCloseFileInZipRaw64 (file, uncompressed_size, crc32);
1552 }
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.32 int ZEXPORT zipCloseFileInZipRaw64 (zipFile *file*, ZPOS64_T *uncompressed_size*, uLong *crc32*)

Definition at line 1554 of file zip.c.

References add_data_in_datablock(), curfile64_info::buffered_data, zip64_internal::central_dir, curfile64_info::central_header, zip64_internal::ci, curfile64_info::crc32, curfile64_info::crypt_header_size, DESCRIPTORHEADERMAGIC, zip64_internal::filestream, curfile64_info::flag, zip64_internal::flags, zip64_internal::in_opened_file_inzip, curfile64_info::method, zip64_internal::number_entry, curfile64_info::pos_in_buffered_data, curfile64_info::pos_local_header, curfile64_info::pos_zip64extrainfo, curfile64_info::raw, curfile64_info::size_centralExtra, curfile64_info::size_centralExtraFree, curfile64_info::size_centralheader, curfile64_info::stream, curfile64_info::stream_initialised, curfile64_info::totalCompressedData, curfile64_info::totalUncompressedData, Z_BUFSIZE, Z_BZIP2ED, zip64_internal::z_filefunc, curfile64_info::zip64, zip64FlushWriteBuffer(), zip64local_putValue(), zip64local_putValue_inmemory(), ZIP_BADZIPFILE, ZIP_ERRNO, ZIP_OK, ZIP_PARAMERROR, ZIP_SEQUENTIAL, ZLIB_FILEFUNC_SEEK_SET, ZSEEK64, and ZTELL64.

Referenced by QuaZipFile::close(), and zipCloseFileInZipRaw().

```
{
    zip64_internal* zi;
    ZPOS64_T compressed_size;
    uLong invalidValue = 0xffffffff;
    short datasize = 0;
    int err=ZIP_OK;

    if (file == NULL)
        return ZIP_PARAMERROR;
    zi = (zip64_internal*)file;

    if (zi->in_opened_file_inzip == 0)
        return ZIP_PARAMERROR;
    zi->ci.stream.avail_in = 0;

    if ((zi->ci.method == Z_DEFLATED) && (!zi->ci.raw))
                {
                        while (err==ZIP_OK)
                        {
                                uLong uTotalOutBefore;
                                if (zi->ci.stream.avail_out == 0)
                                {
                                        if (zip64FlushWriteBuffer(zi) == ZIP_ERRNO)
                                                err = ZIP_ERRNO;
                                        zi->ci.stream.avail_out = (uInt)Z_BUFSIZE;
                                        zi->ci.stream.next_out = zi->ci.buffered_data;
                                }
                                uTotalOutBefore = zi->ci.stream.total_out;
                                err=deflate(&zi->ci.stream,  Z_FINISH);
                                zi->ci.pos_in_buffered_data += (uInt)(zi->ci.stream.total_out - uTotalOutBefore) ;
                        }
                }
    else if ((zi->ci.method == Z_BZIP2ED) && (!zi->ci.raw))
    {
#ifdef HAVE_BZIP2
      err = BZ_FINISH_OK;
      while (err==BZ_FINISH_OK)
      {
        uLong uTotalOutBefore;
        if (zi->ci.bstream.avail_out == 0)
        {
          if (zip64FlushWriteBuffer(zi) == ZIP_ERRNO)
            err = ZIP_ERRNO;
          zi->ci.bstream.avail_out = (uInt)Z_BUFSIZE;
          zi->ci.bstream.next_out = (char*)zi->ci.buffered_data;
        }
        uTotalOutBefore = zi->ci.bstream.total_out_lo32;
        err=BZ2_bzCompress(&zi->ci.bstream,  BZ_FINISH);
        if(err == BZ_STREAM_END)
          err = Z_STREAM_END;

        zi->ci.pos_in_buffered_data += (uInt)(zi->ci.bstream.total_out_lo32 - uTotalOutBefore);
      }

      if(err == BZ_FINISH_OK)
        err = ZIP_OK;
#endif
    }

```

```
    if (err==Z_STREAM_END)
        err=ZIP_OK; /* this is normal */

    if ((zi->ci.pos_in_buffered_data>0) && (err==ZIP_OK))
                {
        if (zip64FlushWriteBuffer(zi)==ZIP_ERRNO)
            err = ZIP_ERRNO;
                }

    if ((zi->ci.method == Z_DEFLATED) && (!zi->ci.raw))
    {
        int tmp_err = deflateEnd(&zi->ci.stream);
        if (err == ZIP_OK)
            err = tmp_err;
        zi->ci.stream_initialised = 0;
    }
#ifdef HAVE_BZIP2
    else if((zi->ci.method == Z_BZIP2ED) && (!zi->ci.raw))
    {
      int tmperr = BZ2_bzCompressEnd(&zi->ci.bstream);
                        if (err==ZIP_OK)
                                err = tmperr;
                        zi->ci.stream_initialised = 0;
    }
#endif

    if (!zi->ci.raw)
    {
        crc32 = (uLong)zi->ci.crc32;
        uncompressed_size = zi->ci.totalUncompressedData;
    }
    compressed_size = zi->ci.totalCompressedData;

#    ifndef NOCRYPT
    compressed_size += zi->ci.crypt_header_size;
#    endif

    /* update Current Item crc and sizes, */
    if(compressed_size >= 0xffffffff || uncompressed_size >= 0xffffffff || zi->ci.pos_local_header >= 0xffffffff)
    {
      /*version Made by*/
      zip64local_putValue_inmemory(zi->ci.central_header+4,(uLong)45,2);
      /*version needed*/
      zip64local_putValue_inmemory(zi->ci.central_header+6,(uLong)45,2);

    }

    zip64local_putValue_inmemory(zi->ci.central_header+16,crc32,4); /*crc*/


    if(compressed_size >= 0xffffffff)
      zip64local_putValue_inmemory(zi->ci.central_header+20, invalidValue,4); /*compr size*/
    else
      zip64local_putValue_inmemory(zi->ci.central_header+20, compressed_size,4); /*compr size*/

    /* set internal file attributes field */
    if (zi->ci.stream.data_type == Z_ASCII)
        zip64local_putValue_inmemory(zi->ci.central_header+36,(uLong)Z_ASCII,2);

    if(uncompressed_size >= 0xffffffff)
      zip64local_putValue_inmemory(zi->ci.central_header+24, invalidValue,4); /*uncompr size*/
    else
      zip64local_putValue_inmemory(zi->ci.central_header+24, uncompressed_size,4); /*uncompr size*/

    /* Add ZIP64 extra info field for uncompressed size */
    if(uncompressed_size >= 0xffffffff)
      datasize += 8;

    /* Add ZIP64 extra info field for compressed size */
    if(compressed_size >= 0xffffffff)
      datasize += 8;

    /* Add ZIP64 extra info field for relative offset to local file header of current file */
    if(zi->ci.pos_local_header >= 0xffffffff)
      datasize += 8;

    if(datasize > 0)
    {
```

```
      char* p = NULL;

      if((uLong)(datasize + 4) > zi->ci.size_centralExtraFree)
      {
        /* we can not write more data to the buffer that we have room for. */
        return ZIP_BADZIPFILE;
      }

      p = zi->ci.central_header + zi->ci.size_centralheader;

      /* Add Extra Information Header for 'ZIP64 information' */
      zip64local_putValue_inmemory(p, 0x0001, 2); /* HeaderID */
      p += 2;
      zip64local_putValue_inmemory(p, datasize, 2); /* DataSize */
      p += 2;

      if(uncompressed_size >= 0xffffffff)
      {
        zip64local_putValue_inmemory(p, uncompressed_size, 8);
        p += 8;
      }

      if(compressed_size >= 0xffffffff)
      {
        zip64local_putValue_inmemory(p, compressed_size, 8);
        p += 8;
      }

      if(zi->ci.pos_local_header >= 0xffffffff)
      {
        zip64local_putValue_inmemory(p, zi->ci.pos_local_header, 8);
        p += 8;
      }

      /* Update how much extra free space we got in the memory buffer */
      /* and increase the centralheader size so the new ZIP64 fields are included */
      /* ( 4 below is the size of HeaderID and DataSize field ) */
      zi->ci.size_centralExtraFree -= datasize + 4;
      zi->ci.size_centralheader += datasize + 4;

      /* Update the extra info size field */
      zi->ci.size_centralExtra += datasize + 4;
      zip64local_putValue_inmemory(zi->ci.central_header+30,(uLong)zi->ci.size_centralExtra,2);
    }

    if (err==ZIP_OK)
        err = add_data_in_datablock(&zi->central_dir, zi->ci.central_header, (uLong)zi->ci.size_centralheader);

    free(zi->ci.central_header);

    if (err==ZIP_OK)
    {
        if ((zi->flags & ZIP_SEQUENTIAL) == 0) {
            /* Update the LocalFileHeader with the new values. */

            ZPOS64_T cur_pos_inzip = ZTELL64(zi->z_filefunc,zi->filestream);

            if (ZSEEK64(zi->z_filefunc,zi->filestream, zi->ci.pos_local_header + 14,ZLIB_FILEFUNC_SEEK_SET)!=0)
                err = ZIP_ERRNO;

            if (err==ZIP_OK)
                err = zip64local_putValue(&zi->z_filefunc,zi->filestream,crc32,4); /* crc 32, unknown */

            if(uncompressed_size >= 0xffffffff || compressed_size >= 0xffffffff)
            {
                if(zi->ci.pos_zip64extrainfo > 0)
                {
                    /* Update the size in the ZIP64 extended field. */
                    if (ZSEEK64(zi->z_filefunc,zi->filestream, zi->ci.pos_zip64extrainfo + 4,ZLIB_FILEFUNC_SEEK_SET)!=0)
                        err = ZIP_ERRNO;

                    if (err==ZIP_OK) /* compressed size, unknown */
                        err = zip64local_putValue(&zi->z_filefunc, zi->filestream, uncompressed_size, 8);

                    if (err==ZIP_OK) /* uncompressed size, unknown */
                        err = zip64local_putValue(&zi->z_filefunc, zi->filestream, compressed_size, 8);
                }
            }
```

```
            else
            {
                if (err==ZIP_OK) /* compressed size, unknown */
                    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,compressed_size,4);

                if (err==ZIP_OK) /* uncompressed size, unknown */
                    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,uncompressed_size,4);
            }

            if (ZSEEK64(zi->z_filefunc,zi->filestream, cur_pos_inzip, ZLIB_FILEFUNC_SEEK_SET)!=0)
                err = ZIP_ERRNO;
        }

        if ((zi->ci.flag & 8) != 0) {
            /* Write local Descriptor after file data */
            if (err==ZIP_OK)
                err = zip64local_putValue(&zi->z_filefunc,zi->filestream,(uLong)DESCRIPTORHEADERMAGIC,4);
            if (err==ZIP_OK)
                err = zip64local_putValue(&zi->z_filefunc,zi->filestream,crc32,4); /* crc 32, unknown */
            if (zi->ci.zip64) {
                if (err==ZIP_OK) /* compressed size, unknown */
                    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,compressed_size,8);

                if (err==ZIP_OK) /* uncompressed size, unknown */
                    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,uncompressed_size,8);
            } else {
                if (err==ZIP_OK) /* compressed size, unknown */
                    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,compressed_size,4);
                if (err==ZIP_OK) /* uncompressed size, unknown */
                    err = zip64local_putValue(&zi->z_filefunc,zi->filestream,uncompressed_size,4);
            }
        }
    }

    zi->number_entry ++;
    zi->in_opened_file_inzip = 0;

    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.33 zipFile ZEXPORT zipOpen (voidpf *file*, int *append*)

Definition at line 967 of file zip.c.

References ZIP_DEFAULT_FLAGS, and zipOpen3().

```
968 {
969     return zipOpen3(file,append,NULL,NULL, ZIP_DEFAULT_FLAGS);
970 }
```

Here is the call graph for this function:

13.162.4.34 zipFile ZEXPORT zipOpen2 (voidpf *file*, int *append*, zipcharpc * *globalcomment*, zlib_filefunc_def * *pzlib_filefunc32_def*)

Definition at line 939 of file zip.c.

References fill_zlib_filefunc64_32_def_from_filefunc32(), ZIP_DEFAULT_FLAGS, and zipOpen3().

Referenced by QuaZip::open().

```
{
    if (pzlib_filefunc32_def != NULL)
    {
        zlib_filefunc64_32_def zlib_filefunc64_32_def_fill;
        fill_zlib_filefunc64_32_def_from_filefunc32(&zlib_filefunc64_32_def_fill,pzlib_filefunc32_def);
        return zipOpen3(file, append, globalcomment, &zlib_filefunc64_32_def_fill, ZIP_DEFAULT_FLAGS);
    }
    else
        return zipOpen3(file, append, globalcomment, NULL, ZIP_DEFAULT_FLAGS);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.35 zipFile ZEXPORT zipOpen2_64 (voidpf *file*, int *append*, zipcharpc * *globalcomment*, zlib_filefunc64_def * *pzlib_filefunc_def*)

Definition at line 951 of file zip.c.

References zlib_filefunc64_32_def_s::zfile_func64, ZIP_DEFAULT_FLAGS, zipOpen3(), zlib_filefunc64_32_def_s::zseek32_file, and zlib_filefunc64_32_def_s::ztell32_file.

```
{
    if (pzlib_filefunc_def != NULL)
    {
```

```
        zlib_filefunc64_32_def zlib_filefunc64_32_def_fill;
        zlib_filefunc64_32_def_fill.zfile_func64 = *pzlib_filefunc_def;
        zlib_filefunc64_32_def_fill.ztell32_file = NULL;
        zlib_filefunc64_32_def_fill.zseek32_file = NULL;
        return zipOpen3(file, append, globalcomment, &zlib_filefunc64_32_def_fill,
    ZIP_DEFAULT_FLAGS);
    }
    else
        return zipOpen3(file, append, globalcomment, NULL,
    ZIP_DEFAULT_FLAGS);
}
```

Here is the call graph for this function:

13.162.4.36 zipFile ZEXPORT zipOpen3 (voidpf *file*, int *append*, zipcharpc * *globalcomment*, zlib_filefunc64_32_def * *pzlib_filefunc64_32_def*, unsigned *flags*)

Definition at line 862 of file zip.c.

References zip64_internal::add_position_when_writting_offset, ALLOC, APPEND_STATUS_ADDINZIP, APPEND_STATUS_CREATE, APPEND_STATUS_CREATEAFTER, zip64_internal::begin_pos, zip64_internal::central_dir, zip64_internal::ci, zip64_internal::filestream, fill_qiodevice64_filefunc(), zip64_internal::flags, zip64_internal::globalcomment, zip64_internal::in_opened_file_inzip, init_linkedlist(), LoadCentralDirectoryRecord(), zip64_internal::number_entry, SEEK_END, curfile64_info::stream_initialised, TRYFREE, zip64_internal::z_filefunc, ZCLOSE64, ZFAKECLOSE64, zlib_filefunc64_32_def_s::zfile_func64, ZIP_AUTO_CLOSE, ZIP_OK, ZLIB_FILEFUNC_MODE_CREATE, ZLIB_FILEFUNC_MODE_EXISTING, ZLIB_FILEFUNC_MODE_READ, ZLIB_FILEFUNC_MODE_WRITE, ZOPEN64, zlib_filefunc64_32_def_s::zseek32_file, ZSEEK64, zlib_filefunc64_32_def_s::ztell32_file, and ZTELL64.

Referenced by QuaZip::open(), zipOpen(), zipOpen2(), zipOpen2_64(), and zipOpen64().

```
{
    zip64_internal ziinit;
    zip64_internal* zi;
    int err=ZIP_OK;

    ziinit.flags = flags;
    ziinit.z_filefunc.zseek32_file = NULL;
    ziinit.z_filefunc.ztell32_file = NULL;
    if (pzlib_filefunc64_32_def==NULL)
        fill_qiodevice64_filefunc(&ziinit.z_filefunc.
    zfile_func64);
```

```
    else
        ziinit.z_filefunc = *pzlib_filefunc64_32_def;

    ziinit.filestream = ZOPEN64(ziinit.z_filefunc,
                    file,
                    (append == APPEND_STATUS_CREATE) ?
                    (ZLIB_FILEFUNC_MODE_READ | ZLIB_FILEFUNC_MODE_WRITE | ZLIB_FILEFUNC_MODE_CREATE) :
                      (ZLIB_FILEFUNC_MODE_READ | ZLIB_FILEFUNC_MODE_WRITE | ZLIB_FILEFUNC_MODE_EXISTING));

    if (ziinit.filestream == NULL)
        return NULL;

    if (append == APPEND_STATUS_CREATEAFTER)
        ZSEEK64(ziinit.z_filefunc,ziinit.filestream,0,SEEK_END);

    ziinit.begin_pos = ZTELL64(ziinit.z_filefunc,ziinit.filestream);
    ziinit.in_opened_file_inzip = 0;
    ziinit.ci.stream_initialised = 0;
    ziinit.number_entry = 0;
    ziinit.add_position_when_writting_offset = 0;
    init_linkedlist(&(ziinit.central_dir));



    zi = (zip64_internal*)ALLOC(sizeof(zip64_internal));
    if (zi==NULL)
    {
        if ((ziinit.flags & ZIP_AUTO_CLOSE) != 0) {
            ZCLOSE64(ziinit.z_filefunc,ziinit.filestream);
        } else {
            ZFAKECLOSE64(ziinit.z_filefunc,ziinit.filestream);
        }
        return NULL;
    }

    /* now we add file in a zipfile */
#    ifndef NO_ADDFILEINEXISTINGZIP
    ziinit.globalcomment = NULL;
    if (append == APPEND_STATUS_ADDINZIP)
    {
      /* Read and Cache Central Directory Records */
      err = LoadCentralDirectoryRecord(&ziinit);
    }

    if (globalcomment)
    {
      *globalcomment = ziinit.globalcomment;
    }
#    endif /* !NO_ADDFILEINEXISTINGZIP*/

    if (err != ZIP_OK)
    {
#    ifndef NO_ADDFILEINEXISTINGZIP
        TRYFREE(ziinit.globalcomment);
#    endif /* !NO_ADDFILEINEXISTINGZIP*/
        TRYFREE(zi);
        return NULL;
    }
    else
    {
        *zi = ziinit;
        return (zipFile)zi;
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.37 zipFile ZEXPORT zipOpen64 (voidpf *file*, int *append*)

Definition at line 972 of file zip.c.

References ZIP_DEFAULT_FLAGS, and zipOpen3().

```
973 {
974     return zipOpen3(file,append,NULL,NULL, ZIP_DEFAULT_FLAGS);
975 }
```

Here is the call graph for this function:

13.162.4.38 int ZEXPORT zipOpenNewFileInZip (zipFile *file*, const char * *filename*, const zip_fileinfo * *zipfi*, const void * *extrafield_local*, uInt *size_extrafield_local*, const void * *extrafield_global*, uInt *size_extrafield_global*, const char * *comment*, int *method*, int *level*)

Definition at line 1390 of file zip.c.

References DEF_MEM_LEVEL, VERSIONMADEBY, and zipOpenNewFileInZip4_64().

```
1394 {
1395     return zipOpenNewFileInZip4_64 (file, filename, zipfi,
1396                                     extrafield_local, size_extrafield_local,
1397                                     extrafield_global, size_extrafield_global,
1398                                     comment, method, level, 0,
1399                                     -MAX_WBITS, DEF_MEM_LEVEL, Z_DEFAULT_STRATEGY,
1400                                     NULL, 0, VERSIONMADEBY, 0, 0);
1401 }
```

Here is the call graph for this function:

13.162.4.39 int ZEXPORT zipOpenNewFileInZip2 (zipFile *file*, const char * *filename*, const zip_fileinfo * *zipfi*, const void * *extrafield_local*, uInt *size_extrafield_local*, const void * *extrafield_global*, uInt *size_extrafield_global*, const char * *comment*, int *method*, int *level*, int *raw*)

Definition at line 1351 of file zip.c.

References DEF_MEM_LEVEL, VERSIONMADEBY, and zipOpenNewFileInZip4_64().

```
{
    return zipOpenNewFileInZip4_64 (file, filename, zipfi,
                                    extrafield_local, size_extrafield_local,
                                    extrafield_global, size_extrafield_global,
                                    comment, method, level, raw,
                                    -MAX_WBITS, DEF_MEM_LEVEL, Z_DEFAULT_STRATEGY,
                                    NULL, 0, VERSIONMADEBY, 0, 0);
}
```

Here is the call graph for this function:

13.162.4.40 int ZEXPORT zipOpenNewFileInZip2_64 (zipFile *file*, const char * *filename*, const zip_fileinfo * *zipfi*, const void * *extrafield_local*, uInt *size_extrafield_local*, const void * *extrafield_global*, uInt *size_extrafield_global*, const char * *comment*, int *method*, int *level*, int *raw*, int *zip64*)

Definition at line 1364 of file zip.c.

References DEF_MEM_LEVEL, VERSIONMADEBY, and zipOpenNewFileInZip4_64().

```
{
    return zipOpenNewFileInZip4_64 (file, filename, zipfi,
                                    extrafield_local, size_extrafield_local,
                                    extrafield_global, size_extrafield_global,
                                    comment, method, level, raw,
                                    -MAX_WBITS, DEF_MEM_LEVEL, Z_DEFAULT_STRATEGY,
                                    NULL, 0, VERSIONMADEBY, 0, zip64);
}
```

Here is the call graph for this function:

13.162.4.41 int ZEXPORT zipOpenNewFileInZip3 (zipFile *file*, const char * *filename*, const zip_fileinfo * *zipfi*, const void * *extrafield_local*, uInt *size_extrafield_local*, const void * *extrafield_global*, uInt *size_extrafield_global*, const char * *comment*, int *method*, int *level*, int *raw*, int *windowBits*, int *memLevel*, int *strategy*, const char * *password*, uLong *crcForCrypting*)

Definition at line 1321 of file zip.c.

References VERSIONMADEBY, and zipOpenNewFileInZip4_64().

```
{
    return zipOpenNewFileInZip4_64 (file, filename, zipfi,
                                    extrafield_local, size_extrafield_local,
                                    extrafield_global, size_extrafield_global,
                                    comment, method, level, raw,
                                    windowBits, memLevel, strategy,
                                    password, crcForCrypting, VERSIONMADEBY, 0, 0);
}
```

Here is the call graph for this function:

13.162.4.42 int ZEXPORT zipOpenNewFileInZip3_64 (zipFile *file*, const char * *filename*, const zip_fileinfo * *zipfi*, const void * *extrafield_local*, uInt *size_extrafield_local*, const void * *extrafield_global*, uInt *size_extrafield_global*, const char * *comment*, int *method*, int *level*, int *raw*, int *windowBits*, int *memLevel*, int *strategy*, const char * *password*, uLong *crcForCrypting*, int *zip64*)

Definition at line 1336 of file zip.c.

References VERSIONMADEBY, and zipOpenNewFileInZip4_64().

Referenced by QuaZipFile::open().

```
{
    return zipOpenNewFileInZip4_64 (file, filename, zipfi,
                                    extrafield_local, size_extrafield_local,
                                    extrafield_global, size_extrafield_global,
                                    comment, method, level, raw,
                                    windowBits, memLevel, strategy,
                                    password, crcForCrypting, VERSIONMADEBY, 0, zip64);
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.43 int ZEXPORT zipOpenNewFileInZip4 (zipFile *file*, const char * *filename*, const zip_fileinfo * *zipfi*, const void * *extrafield_local*, uInt *size_extrafield_local*, const void * *extrafield_global*, uInt *size_extrafield_global*, const char * *comment*, int *method*, int *level*, int *raw*, int *windowBits*, int *memLevel*, int *strategy*, const char * *password*, uLong *crcForCrypting*, uLong *versionMadeBy*, uLong *flagBase*)

Definition at line 1305 of file zip.c.

References zipOpenNewFileInZip4_64().

```
{
    return zipOpenNewFileInZip4_64 (file, filename, zipfi,
                                    extrafield_local, size_extrafield_local,
                                    extrafield_global, size_extrafield_global,
                                    comment, method, level, raw,
                                    windowBits, memLevel, strategy,
                                    password, crcForCrypting, versionMadeBy, flagBase, 0);
}
```

Here is the call graph for this function:

13.162.4.44 int ZEXPORT zipOpenNewFileInZip4_64 (zipFile *file*, const char * *filename*, const zip_fileinfo * *zipfi*, const void * *extrafield_local*, uInt *size_extrafield_local*, const void * *extrafield_global*, uInt *size_extrafield_global*, const char * *comment*, int *method*, int *level*, int *raw*, int *windowBits*, int *memLevel*, int *strategy*, const char * *password*, uLong *crcForCrypting*, uLong *versionMadeBy*, uLong *flagBase*, int *zip64*)

Definition at line 1077 of file zip.c.

References zip64_internal::add_position_when_writting_offset, ALLOC, curfile64_info::buffered_data, curfile64_info::central_header, CENTRALHEADERMAGIC, zip64_internal::ci, curfile64_info::crc32, curfile64_info::crypt_header_size, zip_fileinfo::dosDate, curfile64_info::dosDate, curfile64_info::encrypt, zip_fileinfo::external_fa, zip64_internal::filestream, curfile64_info::flag, zip64_internal::flags, zip64_internal::in_opened_file_inzip, zip_fileinfo::internal_fa, curfile64_info::keys, curfile64_info::method, curfile64_info::pcrc_32_tab, curfile64_info::pos_in_buffered_data, curfile64_info::pos_local_header, curfile64_info::pos_zip64extrainfo, curfile64_info::raw, curfile64_info::size_centralExtra, curfile64_info::size_centralExtraFree, curfile64_info::size_centralheader, SIZECENTRALHEADER, curfile64_info::stream, curfile64_info::stream_initialised, zip_fileinfo::tmz_date, curfile64_info::totalCompressedData, curfile64_info::totalUncompressedData, Write_LocalFileHeader(), Z_BUFSIZE, Z_BZIP2ED, zip64_internal::z_filefunc, curfile64_info::zip64, zip64local_putValue_inmemory(), zip64local_TmzDateToDosDate(), ZIP_ERRNO, ZIP_INTERNALERROR, ZIP_OK, ZIP_PARAMERROR, ZIP_SEQUENTIAL, ZIP_WRITE_DATA_DESCRIPTOR, zipCloseFileInZip(), ZTELL64, and ZWRITE64.

Referenced by zipOpenNewFileInZip(), zipOpenNewFileInZip2(), zipOpenNewFileInZip2_64(), zipOpenNewFileInZip3(), zipOpenNewFileInZip3_64(), zipOpenNewFileInZip4(), and zipOpenNewFileInZip64().

```
{
    zip64_internal* zi;
    uInt size_filename;
    uInt size_comment;
    uInt i;
    int err = ZIP_OK;
    uLong version_to_extract;

#    ifdef NOCRYPT
    if (password != NULL)
        return ZIP_PARAMERROR;
#    endif

    if (file == NULL)
        return ZIP_PARAMERROR;

#ifdef HAVE_BZIP2
    if ((method!=0) && (method!=Z_DEFLATED) && (method!=Z_BZIP2ED))
      return ZIP_PARAMERROR;
#else
    if ((method!=0) && (method!=Z_DEFLATED))
      return ZIP_PARAMERROR;
#endif
```

```
    zi = (zip64_internal*)file;

    if (zi->in_opened_file_inzip == 1)
    {
        err = zipCloseFileInZip (file);
        if (err != ZIP_OK)
            return err;
    }

    if (method == 0
            && (level == 0 || (zi->flags & ZIP_WRITE_DATA_DESCRIPTOR) == 0)
            && (zi->flags & ZIP_SEQUENTIAL) == 0)
    {
        version_to_extract = 10;
    }
    else
    {
        version_to_extract = 20;
    }

    if (filename==NULL)
        filename="-";

    if (comment==NULL)
        size_comment = 0;
    else
        size_comment = (uInt)strlen(comment);

    size_filename = (uInt)strlen(filename);

    if (zipfi == NULL)
        zi->ci.dosDate = 0;
    else
    {
        if (zipfi->dosDate != 0)
            zi->ci.dosDate = zipfi->dosDate;
        else
          zi->ci.dosDate = zip64local_TmzDateToDosDate(&zipfi->tmz_date);
    }

    zi->ci.flag = flagBase;
    if ((level==8) || (level==9))
      zi->ci.flag |= 2;
    if (level==2)
      zi->ci.flag |= 4;
    if (level==1)
      zi->ci.flag |= 6;
    if (password != NULL)
      zi->ci.flag |= 1;
    if (version_to_extract >= 20
            && ((zi->flags & ZIP_WRITE_DATA_DESCRIPTOR) != 0
                || (zi->flags & ZIP_SEQUENTIAL) != 0))
      zi->ci.flag |= 8;

    zi->ci.crc32 = 0;
    zi->ci.method = method;
    zi->ci.encrypt = 0;
    zi->ci.stream_initialised = 0;
    zi->ci.pos_in_buffered_data = 0;
    zi->ci.raw = raw;
    zi->ci.pos_local_header = ZTELL64(zi->z_filefunc,zi->filestream);

    zi->ci.size_centralheader = SIZECENTRALHEADER + size_filename + size_extrafield_global + size_comment;
    zi->ci.size_centralExtraFree = 32; /* Extra space we have reserved in case we need to add ZIP64 extra info data */

    zi->ci.central_header = (char*)ALLOC((uInt)zi->ci.size_centralheader + zi->ci.size_centralExtraFree);

    zi->ci.size_centralExtra = size_extrafield_global;
    zip64local_putValue_inmemory(zi->ci.central_header,(uLong)CENTRALHEADERMAGIC,4);
    /* version info */
    zip64local_putValue_inmemory(zi->ci.central_header+4,(uLong)versionMadeBy,2);
    zip64local_putValue_inmemory(zi->ci.central_header+6,(uLong)version_to_extract,2);
    zip64local_putValue_inmemory(zi->ci.central_header+8,(uLong)zi->ci.flag,2);
    zip64local_putValue_inmemory(zi->ci.central_header+10,(uLong)zi->ci.method,2);
    zip64local_putValue_inmemory(zi->ci.central_header+12,(uLong)zi->ci.dosDate,4);
```

```
    zip64local_putValue_inmemory(zi->ci.central_header+16,(uLong)0,4); /*crc*/
    zip64local_putValue_inmemory(zi->ci.central_header+20,(uLong)0,4); /*compr size*/
    zip64local_putValue_inmemory(zi->ci.central_header+24,(uLong)0,4); /*uncompr size*/
    zip64local_putValue_inmemory(zi->ci.central_header+28,(uLong)size_filename,2);
    zip64local_putValue_inmemory(zi->ci.central_header+30,(uLong)size_extrafield_global,2);
    zip64local_putValue_inmemory(zi->ci.central_header+32,(uLong)size_comment,2);
    zip64local_putValue_inmemory(zi->ci.central_header+34,(uLong)0,2); /*disk nm start*/

    if (zipfi==NULL)
        zip64local_putValue_inmemory(zi->ci.central_header+36,(uLong)0,2);
    else
        zip64local_putValue_inmemory(zi->ci.central_header+36,(uLong)zipfi->internal_fa,2);

    if (zipfi==NULL)
        zip64local_putValue_inmemory(zi->ci.central_header+38,(uLong)0,4);
    else
        zip64local_putValue_inmemory(zi->ci.central_header+38,(uLong)zipfi->external_fa,4);

    if(zi->ci.pos_local_header >= 0xffffffff)
      zip64local_putValue_inmemory(zi->ci.central_header+42,(uLong)0xffffffff,4);
    else
      zip64local_putValue_inmemory(zi->ci.central_header+42,(uLong)zi->ci.pos_local_header - zi->add_position_when_writting_offset,4);

    for (i=0;i<size_filename;i++)
        *(zi->ci.central_header+SIZECENTRALHEADER+i) = *(filename+i);

    for (i=0;i<size_extrafield_global;i++)
        *(zi->ci.central_header+SIZECENTRALHEADER+size_filename+i) =
              *(((const char*)extrafield_global)+i);

    for (i=0;i<size_comment;i++)
        *(zi->ci.central_header+SIZECENTRALHEADER+size_filename+
              size_extrafield_global+i) = *(comment+i);
    if (zi->ci.central_header == NULL)
        return ZIP_INTERNALERROR;

    zi->ci.zip64 = zip64;
    zi->ci.totalCompressedData = 0;
    zi->ci.totalUncompressedData = 0;
    zi->ci.pos_zip64extrainfo = 0;

    err = Write_LocalFileHeader(zi, filename, size_extrafield_local,
                                extrafield_local, version_to_extract);

#ifdef HAVE_BZIP2
    zi->ci.bstream.avail_in = (uInt)0;
    zi->ci.bstream.avail_out = (uInt)Z_BUFSIZE;
    zi->ci.bstream.next_out = (char*)zi->ci.buffered_data;
    zi->ci.bstream.total_in_hi32 = 0;
    zi->ci.bstream.total_in_lo32 = 0;
    zi->ci.bstream.total_out_hi32 = 0;
    zi->ci.bstream.total_out_lo32 = 0;
#endif

    zi->ci.stream.avail_in = (uInt)0;
    zi->ci.stream.avail_out = (uInt)Z_BUFSIZE;
    zi->ci.stream.next_out = zi->ci.buffered_data;
    zi->ci.stream.total_in = 0;
    zi->ci.stream.total_out = 0;
    zi->ci.stream.data_type = Z_BINARY;

#ifdef HAVE_BZIP2
    if ((err==ZIP_OK) && (zi->ci.method == Z_DEFLATED || zi->ci.method == Z_BZIP2ED) && (!zi->ci.raw))
#else
    if ((err==ZIP_OK) && (zi->ci.method == Z_DEFLATED) && (!zi->ci.raw))
#endif
    {
        if(zi->ci.method == Z_DEFLATED)
        {
          zi->ci.stream.zalloc = (alloc_func)0;
          zi->ci.stream.zfree = (free_func)0;
```

```
            zi->ci.stream.opaque = (voidpf)0;

            if (windowBits>0)
                windowBits = -windowBits;

            err = deflateInit2(&zi->ci.stream, level, Z_DEFLATED, windowBits, memLevel, strategy);

            if (err==Z_OK)
                zi->ci.stream_initialised = Z_DEFLATED;
        }
        else if(zi->ci.method == Z_BZIP2ED)
        {
#ifdef HAVE_BZIP2
            /* Init BZip stuff here */
            zi->ci.bstream.bzalloc = 0;
            zi->ci.bstream.bzfree = 0;
            zi->ci.bstream.opaque = (voidpf)0;

            err = BZ2_bzCompressInit(&zi->ci.bstream, level, 0,35);
            if(err == BZ_OK)
              zi->ci.stream_initialised = Z_BZIP2ED;
#endif
        }

    }

#    ifndef NOCRYPT
    zi->ci.crypt_header_size = 0;
    if ((err==Z_OK) && (password != NULL))
    {
        unsigned char bufHead[RAND_HEAD_LEN];
        unsigned int sizeHead;
        zi->ci.encrypt = 1;
        zi->ci.pcrc_32_tab = get_crc_table();
        /*init_keys(password,zi->ci.keys,zi->ci.pcrc_32_tab);*/
        if (crcForCrypting == 0) {
            crcForCrypting = (uLong)zi->ci.dosDate << 16; /* ATTANTION! Without this row, you don't unpack your password protected archive in other app. */
        }
        sizeHead=crypthead(password,bufHead,RAND_HEAD_LEN,zi->ci.keys,zi->ci.pcrc_32_tab,crcForCrypting);
        zi->ci.crypt_header_size = sizeHead;

        if (ZWRITE64(zi->z_filefunc,zi->filestream,bufHead,sizeHead) != sizeHead)
                err = ZIP_ERRNO;
    }
#    endif

    if (err==Z_OK)
        zi->in_opened_file_inzip = 1;
    return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.4.45 int ZEXPORT zipOpenNewFileInZip64 (zipFile *file*, const char * *filename*, const zip_fileinfo * *zipfi*, const void * *extrafield_local*, uInt *size_extrafield_local*, const void * *extrafield_global*, uInt *size_extrafield_global*, const char * *comment*, int *method*, int *level*, int *zip64*)

Definition at line 1377 of file zip.c.

References DEF_MEM_LEVEL, VERSIONMADEBY, and zipOpenNewFileInZip4_64().

```
1381 {
1382     return zipOpenNewFileInZip4_64 (file, filename, zipfi,
1383                                     extrafield_local, size_extrafield_local,
1384                                     extrafield_global, size_extrafield_global,
1385                                     comment, method, level, 0,
1386                                     -MAX_WBITS, DEF_MEM_LEVEL, Z_DEFAULT_STRATEGY,
1387                                     NULL, 0, VERSIONMADEBY, 0, zip64);
1388 }
```

Here is the call graph for this function:

13.162.4.46 int ZEXPORT zipRemoveExtraInfoBlock (char * *pData*, int * *dataLen*, short *sHeader*)

Definition at line 2019 of file zip.c.

References ALLOC, TRYFREE, ZIP_ERRNO, ZIP_OK, and ZIP_PARAMERROR.

```
2020 {
2021   char* p = pData;
2022   int size = 0;
```

```
  char* pNewHeader;
  char* pTmp;
  short header;
  short dataSize;

  int retVal = ZIP_OK;

  if(pData == NULL || *dataLen < 4)
    return ZIP_PARAMERROR;

  pNewHeader = (char*)ALLOC(*dataLen);
  pTmp = pNewHeader;

  while(p < (pData + *dataLen))
  {
    header = *(short*)p;
    dataSize = *(((short*)p)+1);

    if( header == sHeader ) /* Header found. */
    {
      p += dataSize + 4; /* skip it. do not copy to temp buffer */
    }
    else
    {
      /* Extra Info block should not be removed, So copy it to the temp buffer. */
      memcpy(pTmp, p, dataSize + 4);
      p += dataSize + 4;
      size += dataSize + 4;
    }

  }

  if(size < *dataLen)
  {
    /* clean old extra info block. */
    memset(pData,0, *dataLen);

    /* copy the new extra info block over the old */
    if(size > 0)
      memcpy(pData, pNewHeader, size);

    /* set the new extra info size */
    *dataLen = size;

    retVal = ZIP_OK;
  }
  else
    retVal = ZIP_ERRNO;

  TRYFREE(pNewHeader);

  return retVal;
}
```

13.162.4.47 int ZEXPORT zipSetFlags (zipFile *file*, unsigned *flags*)

Definition at line 2077 of file zip.c.

References zip64_internal::flags, ZIP_OK, ZIP_PARAMERROR, ZIP_SEQUENTIAL, and ZIP_WRITE_DATA_DESCRIPTOR.

Referenced by QuaZip::open(), and QuaZipFile::open().

```
{
    zip64_internal* zi;
    if (file == NULL)
        return ZIP_PARAMERROR;
    zi = (zip64_internal*)file;
    zi->flags |= flags;
    // If the output is non-seekable, the data descriptor is needed.
    if ((zi->flags & ZIP_SEQUENTIAL) != 0) {
        zi->flags |= ZIP_WRITE_DATA_DESCRIPTOR;
    }
    return ZIP_OK;
}
```

Here is the caller graph for this function:

13.162.4.48 int ZEXPORT zipWriteInFileInZip (zipFile *file*, const void * *buf*, unsigned int *len*)

Definition at line 1442 of file zip.c.

References curfile64_info::buffered_data, zip64_internal::ci, curfile64_info::crc32, zip64_internal::in_opened_file_inzip, curfile64_info::method, curfile64_info::pos_in_buffered_data, curfile64_info::raw, curfile64_info::stream, Z_BUFSIZE, Z_BZIP2ED, zip64FlushWriteBuffer(), ZIP_ERRNO, ZIP_OK, and ZIP_PARAMERROR.

Referenced by QuaZipFile::writeData().

```
1443 {
1444     zip64_internal* zi;
1445     int err=ZIP_OK;
1446
1447     if (file == NULL)
1448         return ZIP_PARAMERROR;
1449     zi = (zip64_internal*)file;
1450
1451     if (zi->in_opened_file_inzip == 0)
1452         return ZIP_PARAMERROR;
1453
1454     zi->ci.crc32 = crc32(zi->ci.crc32,buf,(uInt)len);
1455
1456 #ifdef HAVE_BZIP2
1457     if(zi->ci.method == Z_BZIP2ED && (!zi->ci.raw))
1458     {
1459       zi->ci.bstream.next_in = (void*)buf;
1460       zi->ci.bstream.avail_in = len;
1461       err = BZ_RUN_OK;
1462
1463       while ((err==BZ_RUN_OK) && (zi->ci.bstream.avail_in>0))
1464       {
1465         if (zi->ci.bstream.avail_out == 0)
1466         {
1467           if (zip64FlushWriteBuffer(zi) == ZIP_ERRNO)
1468             err = ZIP_ERRNO;
1469           zi->ci.bstream.avail_out = (uInt)Z_BUFSIZE;
1470           zi->ci.bstream.next_out = (char*)zi->ci.buffered_data;
1471         }
1472
1473
1474         if(err != BZ_RUN_OK)
1475           break;
1476
1477         if ((zi->ci.method == Z_BZIP2ED) && (!zi->ci.raw))
1478         {
1479           uLong uTotalOutBefore_lo = zi->ci.bstream.total_out_lo32;
1480 /*          uLong uTotalOutBefore_hi = zi->ci.bstream.total_out_hi32; */
1481           err=BZ2_bzCompress(&zi->ci.bstream,  BZ_RUN);
1482
1483           zi->ci.pos_in_buffered_data += (uInt)(zi->ci.bstream.total_out_lo32 -
      uTotalOutBefore_lo) ;
1484         }
1485       }
1486
1487       if(err == BZ_RUN_OK)
1488         err = ZIP_OK;
1489     }
1490     else
1491 #endif
1492     {
1493       zi->ci.stream.next_in = (Bytef*)buf;
```

```
    zi->ci.stream.avail_in = len;

    while ((err==ZIP_OK) && (zi->ci.stream.avail_in>0))
    {
        if (zi->ci.stream.avail_out == 0)
        {
            if (zip64FlushWriteBuffer(zi) == ZIP_ERRNO)
                err = ZIP_ERRNO;
            zi->ci.stream.avail_out = (uInt)Z_BUFSIZE;
            zi->ci.stream.next_out = zi->ci.buffered_data;
        }


        if(err != ZIP_OK)
            break;

        if ((zi->ci.method == Z_DEFLATED) && (!zi->ci.raw))
        {
            uLong uTotalOutBefore = zi->ci.stream.total_out;
            err=deflate(&zi->ci.stream,  Z_NO_FLUSH);
            if(uTotalOutBefore > zi->ci.stream.total_out)
            {
              int bBreak = 0;
              bBreak++;
            }

            zi->ci.pos_in_buffered_data += (uInt)(zi->ci.stream.total_out - uTotalOutBefore) ;
        }
        else
        {
            uInt copy_this,i;
            if (zi->ci.stream.avail_in < zi->ci.stream.avail_out)
                copy_this = zi->ci.stream.avail_in;
            else
                copy_this = zi->ci.stream.avail_out;

            for (i = 0; i < copy_this; i++)
                *(((char*)zi->ci.stream.next_out)+i) =
                    *(((const char*)zi->ci.stream.next_in)+i);
            {
                zi->ci.stream.avail_in -= copy_this;
                zi->ci.stream.avail_out-= copy_this;
                zi->ci.stream.next_in+= copy_this;
                zi->ci.stream.next_out+= copy_this;
                zi->ci.stream.total_in+= copy_this;
                zi->ci.stream.total_out+= copy_this;
                zi->ci.pos_in_buffered_data += copy_this;
            }
        }
    }/* while(...) */
  }

  return err;
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.162.5 Variable Documentation

13.162.5.1 const char zip_copyright[] =" zip 1.01 Copyright 1998-2004 Gilles Vollant - http://www.winimage.com/zLibDll"

Definition at line 104 of file zip.c.

13.163 src/ckb/quazip/zip.h File Reference

```
#include "zlib.h"
#include "ioapi.h"
```

Include dependency graph for zip.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- struct tm_zip_s
- struct zip_fileinfo

Macros

- #define Z_BZIP2ED 12
- #define ZIP_OK (0)
- #define ZIP_EOF (0)
- #define ZIP_ERRNO (Z_ERRNO)
- #define ZIP_PARAMERROR (-102)
- #define ZIP_BADZIPFILE (-103)
- #define ZIP_INTERNALERROR (-104)
- #define ZIP_WRITE_DATA_DESCRIPTOR 0x8u
- #define ZIP_AUTO_CLOSE 0x1u
- #define ZIP_SEQUENTIAL 0x2u
- #define ZIP_DEFAULT_FLAGS (ZIP_AUTO_CLOSE | ZIP_WRITE_DATA_DESCRIPTOR)
- #define DEF_MEM_LEVEL MAX_MEM_LEVEL
- #define APPEND_STATUS_CREATE (0)
- #define APPEND_STATUS_CREATEAFTER (1)
- #define APPEND_STATUS_ADDINZIP (2)

Typedefs

- typedef voidp zipFile
- typedef struct tm_zip_s tm_zip
- typedef const char * zipcharpc

Functions

- zipFile ZEXPORT zipOpen _Z_OF ((voidpf file, int append))
- zipFile ZEXPORT zipOpen2 _Z_OF ((voidpf file, int append, zipcharpc *globalcomment, zlib_filefunc_def *pzlib_filefunc_def))
- zipFile ZEXPORT zipOpen2_64 _Z_OF ((voidpf file, int append, zipcharpc *globalcomment, zlib_filefunc64_def *pzlib_filefunc_def))
- zipFile ZEXPORT zipOpen3 (voidpf file, int append, zipcharpc *globalcomment, zlib_filefunc64_32_def *pzlib_filefunc64_32_def, unsigned flags)

- int ZEXPORT zipOpenNewFileInZip _Z_OF ((zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_global, const char *comment, int method, int level))
- int ZEXPORT zipOpenNewFileInZip64 _Z_OF ((zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_-global, const char *comment, int method, int level, int zip64))
- int ZEXPORT zipOpenNewFileInZip2 _Z_OF ((zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_-global, const char *comment, int method, int level, int raw))
- int ZEXPORT zipOpenNewFileInZip2_64 _Z_OF ((zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_-global, const char *comment, int method, int level, int raw, int zip64))
- int ZEXPORT zipOpenNewFileInZip3 _Z_OF ((zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_global, const char *comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char *password, uLong crcForCrypting))
- int ZEXPORT zipOpenNewFileInZip3_64 _Z_OF ((zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_-global, const char *comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char *password, uLong crcForCrypting, int zip64))
- int ZEXPORT zipOpenNewFileInZip4 _Z_OF ((zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_global, const char *comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char *password, uLong crcForCrypting, uLong versionMadeBy, uLong flagBase))
- int ZEXPORT zipOpenNewFileInZip4_64 _Z_OF ((zipFile file, const char *filename, const zip_fileinfo *zipfi, const void *extrafield_local, uInt size_extrafield_local, const void *extrafield_global, uInt size_extrafield_-global, const char *comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char *password, uLong crcForCrypting, uLong versionMadeBy, uLong flagBase, int zip64))
- int ZEXPORT zipWriteInFileInZip _Z_OF ((zipFile file, const void *buf, unsigned len))
- int ZEXPORT zipCloseFileInZip _Z_OF ((zipFile file))
- int ZEXPORT zipCloseFileInZipRaw _Z_OF ((zipFile file, uLong uncompressed_size, uLong crc32))
- int ZEXPORT zipCloseFileInZipRaw64 _Z_OF ((zipFile file, ZPOS64_T uncompressed_size, uLong crc32))
- int ZEXPORT zipClose _Z_OF ((zipFile file, const char *global_comment))
- int ZEXPORT zipRemoveExtraInfoBlock _Z_OF ((char *pData, int *dataLen, short sHeader))
- int ZEXPORT zipSetFlags (zipFile file, unsigned flags)
- int ZEXPORT zipClearFlags (zipFile file, unsigned flags)

13.163.1 Data Structure Documentation

13.163.1.1 struct tm_zip_s

Definition at line 100 of file zip.h.

Collaboration diagram for tm_zip_s:

Data Fields

uInt	tm_hour	
uInt	tm_mday	
uInt	tm_min	
uInt	tm_mon	
uInt	tm_sec	
uInt	tm_year	

13.163.1.2 struct zip_fileinfo

Definition at line 110 of file zip.h.

Collaboration diagram for zip_fileinfo:

Data Fields

uLong	dosDate	
uLong	external_fa	
uLong	internal_fa	
tm_zip	tmz_date	

13.163.2 Macro Definition Documentation

13.163.2.1 #define APPEND_STATUS_ADDINZIP (2)

Definition at line 125 of file zip.h.

Referenced by QuaZip::open(), and zipOpen3().

13.163.2.2 #define APPEND_STATUS_CREATE (0)

Definition at line 123 of file zip.h.

Referenced by QuaZip::open(), and zipOpen3().

13.163.2.3 #define APPEND_STATUS_CREATEAFTER (1)

Definition at line 124 of file zip.h.

Referenced by QuaZip::open(), and zipOpen3().

13.163.2.4 #define DEF_MEM_LEVEL MAX_MEM_LEVEL

Definition at line 94 of file zip.h.

Referenced by zipOpenNewFileInZip(), zipOpenNewFileInZip2(), zipOpenNewFileInZip2_64(), and zipOpenNewFileInZip64().

13.163.2.5 #define Z_BZIP2ED 12

Definition at line 67 of file zip.h.

13.163.2.6 #define ZIP_AUTO_CLOSE 0x1u

Definition at line 86 of file zip.h.

Referenced by LoadCentralDirectoryRecord(), QuaZip::open(), zipClose(), and zipOpen3().

13.163.2.7 #define ZIP_BADZIPFILE (-103)

Definition at line 82 of file zip.h.

Referenced by LoadCentralDirectoryRecord(), and zipCloseFileInZipRaw64().

13.163.2.8 #define ZIP_DEFAULT_FLAGS (ZIP_AUTO_CLOSE | ZIP_WRITE_DATA_DESCRIPTOR)

Definition at line 88 of file zip.h.

Referenced by zipOpen(), zipOpen2(), zipOpen2_64(), and zipOpen64().

13.163.2.9 #define ZIP_EOF (0)

Definition at line 79 of file zip.h.

Referenced by zip64local_getByte().

13.163.2.10 #define ZIP_ERRNO (Z_ERRNO)

Definition at line 80 of file zip.h.

Referenced by LoadCentralDirectoryRecord(), Write_GlobalComment(), Write_LocalFileHeader(), zip64FlushWriteBuffer(), zip64local_getByte(), zip64local_putValue(), zipClose(), zipCloseFileInZipRaw64(), zipOpenNewFileInZip4_64(), zipRemoveExtraInfoBlock(), and zipWriteInFileInZip().

13.163.2.11 #define ZIP_INTERNALERROR (-104)

Definition at line 83 of file zip.h.

Referenced by add_data_in_datablock(), and zipOpenNewFileInZip4_64().

13.163.2.12 #define ZIP_OK (0)

Definition at line 78 of file zip.h.

Referenced by add_data_in_datablock(), LoadCentralDirectoryRecord(), Write_EndOfCentralDirectoryRecord(), Write_GlobalComment(), Write_LocalFileHeader(), Write_Zip64EndOfCentralDirectoryLocator(), Write_Zip64EndOfCentralDirectoryRecord(), QuaZipFile::writeData(), zip64FlushWriteBuffer(), zip64local_getByte(), zip64local_getLong(), zip64local_getLong64(), zip64local_getShort(), zip64local_putValue(), zip64local_SearchCentralDir64(), zipClearFlags(), zipClose(), zipCloseFileInZipRaw64(), zipOpen3(), zipOpenNewFileInZip4_64(), zipRemoveExtraInfoBlock(), zipSetFlags(), and zipWriteInFileInZip().

13.163.2.13 #define ZIP_PARAMERROR (-102)

Definition at line 81 of file zip.h.

Referenced by zipClearFlags(), zipClose(), zipCloseFileInZipRaw64(), zipOpenNewFileInZip4_64(), zipRemoveExtraInfoBlock(), zipSetFlags(), and zipWriteInFileInZip().

13.163.2.14 #define ZIP_SEQUENTIAL 0x2u

Definition at line 87 of file zip.h.

Referenced by QuaZip::open(), zipClearFlags(), zipCloseFileInZipRaw64(), zipOpenNewFileInZip4_64(), and zipSetFlags().

13.163.2.15 #define ZIP_WRITE_DATA_DESCRIPTOR 0x8u

Definition at line 85 of file zip.h.

Referenced by QuaZip::open(), QuaZipFile::open(), zipClearFlags(), zipOpenNewFileInZip4_64(), and zipSetFlags().

13.163.3 Typedef Documentation

13.163.3.1 typedef struct tm_zip_s tm_zip

13.163.3.2 typedef const char* zipcharpc

Definition at line 120 of file zip.h.

13.163.3.3 typedef voidp zipFile

Definition at line 75 of file zip.h.

13.163.4 Function Documentation

13.163.4.1 zipFile ZEXPORT zipOpen _Z_OF ((voidpf file, int append))

13.163.4.2 zipFile ZEXPORT zipOpen2 _Z_OF ((voidpf file, int append, zipcharpc *globalcomment, zlib_filefunc_def *pzlib_filefunc_def))

13.163.4.3 zipFile ZEXPORT zipOpen2_64 _Z_OF ((voidpf file, int append, zipcharpc *globalcomment, zlib_filefunc64_def *pzlib_filefunc_def))

13.163.4.4 int ZEXPORT **zipOpenNewFileInZip _Z_OF** ((**zipFile** file, const char ∗filename, const **zip_fileinfo** ∗zipfi, const void ∗extrafield_local, uInt size_extrafield_local, const void ∗extrafield_global, uInt size_extrafield_global, const char ∗comment, int method, int level))

13.163.4.5 int ZEXPORT **zipOpenNewFileInZip64 _Z_OF** ((**zipFile** file, const char ∗filename, const **zip_fileinfo** ∗zipfi, const void ∗extrafield_local, uInt size_extrafield_local, const void ∗extrafield_global, uInt size_extrafield_global, const char ∗comment, int method, int level, int zip64))

13.163.4.6 int ZEXPORT **zipOpenNewFileInZip2 _Z_OF** ((**zipFile** file, const char ∗filename, const **zip_fileinfo** ∗zipfi, const void ∗extrafield_local, uInt size_extrafield_local, const void ∗extrafield_global, uInt size_extrafield_global, const char ∗comment, int method, int level, int raw))

13.163.4.7 int ZEXPORT **zipOpenNewFileInZip2_64 _Z_OF** ((**zipFile** file, const char ∗filename, const **zip_fileinfo** ∗zipfi, const void ∗extrafield_local, uInt size_extrafield_local, const void ∗extrafield_global, uInt size_extrafield_global, const char ∗comment, int method, int level, int raw, int zip64))

13.163.4.8 int ZEXPORT **zipOpenNewFileInZip3 _Z_OF** ((**zipFile** file, const char ∗filename, const **zip_fileinfo** ∗zipfi, const void ∗extrafield_local, uInt size_extrafield_local, const void ∗extrafield_global, uInt size_extrafield_global, const char ∗comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char ∗password, uLong crcForCrypting))

13.163.4.9 int ZEXPORT **zipOpenNewFileInZip3_64 _Z_OF** ((**zipFile** file, const char ∗filename, const **zip_fileinfo** ∗zipfi, const void ∗extrafield_local, uInt size_extrafield_local, const void ∗extrafield_global, uInt size_extrafield_global, const char ∗comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char ∗password, uLong crcForCrypting, int zip64))

13.163.4.10 int ZEXPORT **zipOpenNewFileInZip4 _Z_OF** ((**zipFile** file, const char ∗filename, const **zip_fileinfo** ∗zipfi, const void ∗extrafield_local, uInt size_extrafield_local, const void ∗extrafield_global, uInt size_extrafield_global, const char ∗comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char ∗password, uLong crcForCrypting, uLong versionMadeBy, uLong flagBase))

13.163.4.11 int ZEXPORT **zipOpenNewFileInZip4_64 _Z_OF** ((**zipFile** file, const char ∗filename, const **zip_fileinfo** ∗zipfi, const void ∗extrafield_local, uInt size_extrafield_local, const void ∗extrafield_global, uInt size_extrafield_global, const char ∗comment, int method, int level, int raw, int windowBits, int memLevel, int strategy, const char ∗password, uLong crcForCrypting, uLong versionMadeBy, uLong flagBase, int zip64))

13.163.4.12 int ZEXPORT **zipWriteInFileInZip _Z_OF** ((**zipFile** file, const void ∗buf, unsigned len))

13.163.4.13 int ZEXPORT **zipCloseFileInZip _Z_OF** ((**zipFile** file))

13.163.4.14 int ZEXPORT **zipCloseFileInZipRaw _Z_OF** ((**zipFile** file, uLong uncompressed_size, uLong crc32))

13.163.4.15 int ZEXPORT **zipCloseFileInZipRaw64 _Z_OF** ((**zipFile** file, **ZPOS64_T** uncompressed_size, uLong crc32))

13.163.4.16 int ZEXPORT **zipClose _Z_OF** ((**zipFile** file, const char ∗global_comment))

13.163.4.17 int ZEXPORT **zipRemoveExtraInfoBlock _Z_OF** ((char ∗pData, int ∗dataLen, short sHeader))

13.163.4.18 int ZEXPORT zipClearFlags (**zipFile** *file,* unsigned *flags*)

Definition at line 2091 of file zip.c.

References zip64_internal::flags, ZIP_OK, ZIP_PARAMERROR, ZIP_SEQUENTIAL, and ZIP_WRITE_DATA_DESCRIPTOR.

Referenced by QuaZipFile::open().

```
2092 {
2093     zip64_internal* zi;
```

```
    if (file == NULL)
        return ZIP_PARAMERROR;
    zi = (zip64_internal*)file;
    zi->flags &= ~flags;
    // If the data descriptor is not written, we can't use a non-seekable output.
    if ((zi->flags & ZIP_WRITE_DATA_DESCRIPTOR) == 0) {
        zi->flags &= ~ZIP_SEQUENTIAL;
    }
    return ZIP_OK;
}
```

Here is the caller graph for this function:

13.163.4.19 zipFile ZEXPORT zipOpen3 (voidpf *file*, int *append*, zipcharpc * *globalcomment*, zlib_filefunc64_32_def * *pzlib_filefunc64_32_def*, unsigned *flags*)

Definition at line 862 of file zip.c.

References zip64_internal::add_position_when_writting_offset, ALLOC, APPEND_STATUS_ADDINZIP, APPEND_STATUS_CREATE, APPEND_STATUS_CREATEAFTER, zip64_internal::begin_pos, zip64_internal::central_dir, zip64_internal::ci, zip64_internal::filestream, fill_qiodevice64_filefunc(), zip64_internal::flags, zip64_internal::globalcomment, zip64_internal::in_opened_file_inzip, init_linkedlist(), LoadCentralDirectoryRecord(), zip64_internal::number_entry, SEEK_END, curfile64_info::stream_initialised, TRYFREE, zip64_internal::z_filefunc, ZCLOSE64, ZFAKECLOSE64, zlib_filefunc64_32_def_s::zfile_func64, ZIP_AUTO_CLOSE, ZIP_OK, ZLIB_FILEFUNC_MODE_CREATE, ZLIB_FILEFUNC_MODE_EXISTING, ZLIB_FILEFUNC_MODE_READ, ZLIB_FILEFUNC_MODE_WRITE, ZOPEN64, zlib_filefunc64_32_def_s::zseek32_file, ZSEEK64, zlib_filefunc64_32_def_s::ztell32_file, and ZTELL64.

Referenced by QuaZip::open(), zipOpen(), zipOpen2(), zipOpen2_64(), and zipOpen64().

```
{
    zip64_internal ziinit;
    zip64_internal* zi;
    int err=ZIP_OK;

    ziinit.flags = flags;
    ziinit.z_filefunc.zseek32_file = NULL;
    ziinit.z_filefunc.ztell32_file = NULL;
    if (pzlib_filefunc64_32_def==NULL)
        fill_qiodevice64_filefunc(&ziinit.z_filefunc.zfile_func64);
    else
        ziinit.z_filefunc = *pzlib_filefunc64_32_def;

    ziinit.filestream = ZOPEN64(ziinit.z_filefunc,
                    file,
                    (append == APPEND_STATUS_CREATE) ?
                    (ZLIB_FILEFUNC_MODE_READ | ZLIB_FILEFUNC_MODE_WRITE | ZLIB_FILEFUNC_MODE_CREATE) :
                      (ZLIB_FILEFUNC_MODE_READ | ZLIB_FILEFUNC_MODE_WRITE | ZLIB_FILEFUNC_MODE_EXISTING))
    ;

    if (ziinit.filestream == NULL)
        return NULL;

    if (append == APPEND_STATUS_CREATEAFTER)
        ZSEEK64(ziinit.z_filefunc,ziinit.filestream,0,SEEK_END);

```

```
    ziinit.begin_pos = ZTELL64(ziinit.z_filefunc,ziinit.filestream);
    ziinit.in_opened_file_inzip = 0;
    ziinit.ci.stream_initialised = 0;
    ziinit.number_entry = 0;
    ziinit.add_position_when_writting_offset = 0;
    init_linkedlist(&(ziinit.central_dir));



    zi = (zip64_internal*)ALLOC(sizeof(zip64_internal));
    if (zi==NULL)
    {
        if ((ziinit.flags & ZIP_AUTO_CLOSE) != 0) {
            ZCLOSE64(ziinit.z_filefunc,ziinit.filestream);
        } else {
            ZFAKECLOSE64(ziinit.z_filefunc,ziinit.filestream);
        }
        return NULL;
    }

    /* now we add file in a zipfile */
#    ifndef NO_ADDFILEINEXISTINGZIP
    ziinit.globalcomment = NULL;
    if (append == APPEND_STATUS_ADDINZIP)
    {
      /* Read and Cache Central Directory Records */
      err = LoadCentralDirectoryRecord(&ziinit);
    }

    if (globalcomment)
    {
      *globalcomment = ziinit.globalcomment;
    }
#    endif /* !NO_ADDFILEINEXISTINGZIP*/

    if (err != ZIP_OK)
    {
#    ifndef NO_ADDFILEINEXISTINGZIP
        TRYFREE(ziinit.globalcomment);
#    endif /* !NO_ADDFILEINEXISTINGZIP*/
        TRYFREE(zi);
        return NULL;
    }
    else
    {
        *zi = ziinit;
        return (zipFile)zi;
    }
}
```

Here is the call graph for this function:

Here is the caller graph for this function:

13.163.4.20 int ZEXPORT zipSetFlags (zipFile *file*, unsigned *flags*)

Definition at line 2077 of file zip.c.

References zip64_internal::flags, ZIP_OK, ZIP_PARAMERROR, ZIP_SEQUENTIAL, and ZIP_WRITE_DATA_DESCRIPTOR.

Referenced by QuaZip::open(), and QuaZipFile::open().

```
{
    zip64_internal* zi;
    if (file == NULL)
        return ZIP_PARAMERROR;
    zi = (zip64_internal*)file;
    zi->flags |= flags;
    // If the output is non-seekable, the data descriptor is needed.
    if ((zi->flags & ZIP_SEQUENTIAL) != 0) {
        zi->flags |= ZIP_WRITE_DATA_DESCRIPTOR;
    }
    return ZIP_OK;
}
```

Here is the caller graph for this function:

13.164 src/ckb/rebindwidget.cpp File Reference

```
#include <QStandardPaths>
#include "rebindwidget.h"
#include "ui_rebindwidget.h"
#include <qdebug.h>
```

Include dependency graph for rebindwidget.cpp:

Variables

- static const int DPI_OFFSET = -KeyAction::DPI_UP + 1
- static const int DPI_CUST_IDX = KeyAction::DPI_CUSTOM + DPI_OFFSET

13.164.1 Variable Documentation

13.164.1.1 const int DPI_CUST_IDX = KeyAction::DPI_CUSTOM + DPI_OFFSET [static]

Definition at line 7 of file rebindwidget.cpp.

Referenced by RebindWidget::on_dpiBox_currentIndexChanged().

13.164.1.2 const int DPI_OFFSET = -KeyAction::DPI_UP + 1 [static]

Definition at line 6 of file rebindwidget.cpp.

Referenced by RebindWidget::applyChanges(), and RebindWidget::setSelection().

13.165 src/ckb/rebindwidget.h File Reference

```
#include <QWidget>
#include "kbbind.h"
#include "kbprofile.h"
#include "macroreader.h"
```

Include dependency graph for rebindwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class RebindWidget

Namespaces

- Ui

13.166 src/ckb/release/moc_animadddialog.cpp File Reference

```
#include "../animadddialog.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_animadddialog.cpp:

Data Structures

- struct qt_meta_stringdata_AnimAddDialog_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_AnimAddDialog_t qt_meta_stringdata_AnimAddDialog
- static const uint qt_meta_data_AnimAddDialog []

13.166.1 Data Structure Documentation

13.166.1.1 struct qt_meta_stringdata_AnimAddDialog_t

Definition at line 21 of file moc_animadddialog.cpp.

Collaboration diagram for qt_meta_stringdata_AnimAddDialog_t:

Data Fields

QByteArrayData	data[7]	
char	stringdata0[95]	

13.166.2 Macro Definition Documentation

13.166.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_AnimAddDialog_t, stringdata0) +
      ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_animadddialog.cpp.

13.166.3 Variable Documentation

13.166.3.1 const uint qt_meta_data_AnimAddDialog[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        3,   14,
        0,    0,
        0,    0,
        0,    0,
```

```
        0,
        0,


        1,    1,   29,    2, 0x08 ,
        4,    1,   32,    2, 0x08 ,
        5,    1,   35,    2, 0x08 ,


    QMetaType::Void, QMetaType::Int,    3,
    QMetaType::Void, QMetaType::Int,    3,
    QMetaType::Void, QMetaType::Bool,    6,

        0
}
```

Definition at line 47 of file moc_animadddialog.cpp.

13.166.3.2 const qt_meta_stringdata_AnimAddDialog_t qt_meta_stringdata_AnimAddDialog [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 13 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimAddDialog_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 20 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimAddDialog_t, stringdata0) +  14    -  1  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimAddDialog_t, stringdata0) +  35    -  2  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 5 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimAddDialog_t, stringdata0) +  36    -  3  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 22 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimAddDialog_t, stringdata0) +  42    -  4  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 21 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimAddDialog_t, stringdata0) +  65    -  5  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimAddDialog_t, stringdata0) +  87    -  6  * sizeof(
      QByteArrayData))   )

    },
    "AnimAddDialog\0on_animBox_activated\0\0"
    "index\0on_presetBox_activated\0"
    "on_previewBox_clicked\0checked"
}
```

Definition at line 30 of file moc_animadddialog.cpp.

13.167 src/ckb/release/moc_animscript.cpp File Reference

```
#include "../animscript.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_animscript.cpp:

Data Structures

- struct qt_meta_stringdata_AnimScript_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_AnimScript_t qt_meta_stringdata_AnimScript
- static const uint qt_meta_data_AnimScript [ ]

13.167.1 Data Structure Documentation

13.167.1.1 struct qt_meta_stringdata_AnimScript_t

Definition at line 21 of file moc_animscript.cpp.

Collaboration diagram for qt_meta_stringdata_AnimScript_t:

Data Fields

QByteArrayData	data[3]	
char	stringdata0[24]	

13.167.2 Macro Definition Documentation

13.167.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_AnimScript_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_animscript.cpp.

13.167.3 Variable Documentation

13.167.3.1 const uint qt_meta_data_AnimScript[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        1,   14,
        0,    0,
        0,    0,
        0,    0,
        0,
```

```
        0,

        1,    0,   19,    2, 0x08 ,

    QMetaType::Void,

        0
}
```

Definition at line 41 of file moc_animscript.cpp.

13.167.3.2 const qt_meta_stringdata_AnimScript_t qt_meta_stringdata_AnimScript [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 10 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimScript_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimScript_t, stringdata0) +  11    -  1  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimScript_t, stringdata0) +  23    -  2  * sizeof(
      QByteArrayData))   )

    },
    "AnimScript\0readProcess\0"
}
```

Definition at line 30 of file moc_animscript.cpp.

13.168 src/ckb/release/moc_animsettingdialog.cpp File Reference

```
#include "../animsettingdialog.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_animsettingdialog.cpp:

Data Structures

- struct qt_meta_stringdata_AnimSettingDialog_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_AnimSettingDialog_t qt_meta_stringdata_AnimSettingDialog
- static const uint qt_meta_data_AnimSettingDialog [ ]

13.168.1 Data Structure Documentation

13.168.1.1 struct qt_meta_stringdata_AnimSettingDialog_t

Definition at line 21 of file moc_animsettingdialog.cpp.

Collaboration diagram for qt_meta_stringdata_AnimSettingDialog_t:

Data Fields

QByteArrayData	data[15]	
char	stringdata0[246]	

13.168.2 Macro Definition Documentation

13.168.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_AnimSettingDialog_t,
      stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_animsettingdialog.cpp.

13.168.3 Variable Documentation

13.168.3.1 const uint qt_meta_data_AnimSettingDialog[] [static]

Definition at line 60 of file moc_animsettingdialog.cpp.

13.168.3.2 const qt_meta_stringdata_AnimSettingDialog_t qt_meta_stringdata_AnimSettingDialog [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 17 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  0    -  0  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  18    -  1  *
       sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  30    -  2  *
       sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  31    -  3  *
       sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  40    -  4  *
       sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  52    -  5  *
       sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 4 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  69    -  6  *
       sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 19 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  74    -  7  *
       sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  94    -  8  *
       sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 24 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  106    -  9
      * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 4 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  131    -  10
       * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 25 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  136    -  11
       * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 26 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  162    -  12
       * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 27 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  189    -  13
       * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 28 ,   qptrdiff(offsetof(
      qt_meta_stringdata_AnimSettingDialog_t, stringdata0) +  217    -  14
       * sizeof(QByteArrayData))   )

    },
    "AnimSettingDialog\0newDuration\0\0duration\0"
    "updateStops\0angleDialChanged\0name\0"
    "angleSpinnerChanged\0updateParam\0"
    "on_delayBox_valueChanged\0arg1\0"
    "on_repeatBox_valueChanged\0"
    "on_kpDelayBox_valueChanged\0"
    "on_kpRepeatBox_valueChanged\0"
    "on_kpReleaseBox_stateChanged"
}
```

Definition at line 30 of file moc_animsettingdialog.cpp.

13.169 src/ckb/release/moc_ckbsettingswriter.cpp File Reference

```
#include "../ckbsettingswriter.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_ckbsettingswriter.cpp:

Data Structures

- struct qt_meta_stringdata_CkbSettingsWriter_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_CkbSettingsWriter_t qt_meta_stringdata_CkbSettingsWriter
- static const uint qt_meta_data_CkbSettingsWriter []

13.169.1 Data Structure Documentation

13.169.1.1 struct qt_meta_stringdata_CkbSettingsWriter_t

Definition at line 21 of file moc_ckbsettingswriter.cpp.

Collaboration diagram for qt_meta_stringdata_CkbSettingsWriter_t:

Data Fields

QByteArrayData	data[3]	
char	stringdata0[23]	

13.169.2 Macro Definition Documentation

13.169.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_CkbSettingsWriter_t,
      stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_ckbsettingswriter.cpp.

13.169.3 Variable Documentation

13.169.3.1 const uint qt_meta_data_CkbSettingsWriter[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        1,   14,
        0,    0,
        0,    0,
        0,    0,
```

```
        0,
        0,


        1,    0,   19,    2, 0x0a ,


    QMetaType::Void,

        0
}
```

Definition at line 41 of file moc_ckbsettingswriter.cpp.

13.169.3.2 const qt_meta_stringdata_CkbSettingsWriter_t qt_meta_stringdata_CkbSettingsWriter [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 17 ,   qptrdiff(offsetof(
      qt_meta_stringdata_CkbSettingsWriter_t, stringdata0) +  0    -  0  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 3 ,   qptrdiff(offsetof(
      qt_meta_stringdata_CkbSettingsWriter_t, stringdata0) +  18    -  1  *
       sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_CkbSettingsWriter_t, stringdata0) +  22    -  2  *
       sizeof(QByteArrayData))   )

    },
    "CkbSettingsWriter\0run\0"
}
```

Definition at line 30 of file moc_ckbsettingswriter.cpp.

13.170 src/ckb/release/moc_colorbutton.cpp File Reference

```
#include "../colorbutton.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_colorbutton.cpp:

Data Structures

- struct qt_meta_stringdata_ColorButton_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_ColorButton_t qt_meta_stringdata_ColorButton
- static const uint qt_meta_data_ColorButton []

13.170.1 Data Structure Documentation

13.170.1.1 struct qt_meta_stringdata_ColorButton_t

Definition at line 21 of file moc_colorbutton.cpp.

Collaboration diagram for qt_meta_stringdata_ColorButton_t:

Data Fields

QByteArrayData	data[5]	
char	stringdata0[45]	

13.170.2 Macro Definition Documentation

13.170.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_ColorButton_t, stringdata0) + ofs
      \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_colorbutton.cpp.

13.170.3 Variable Documentation

13.170.3.1 const uint qt_meta_data_ColorButton[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        2,   14,
        0,    0,
        0,    0,
        0,    0,
        0,
        1,


        1,    1,   24,    2, 0x06 ,


        4,    0,   27,    2, 0x08 ,


    QMetaType::Void, QMetaType::QColor,    3,


    QMetaType::Void,

        0
}
```

Definition at line 44 of file moc_colorbutton.cpp.

13.170.3.2 const qt_meta_stringdata_ColorButton_t qt_meta_stringdata_ColorButton [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ColorButton_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ColorButton_t, stringdata0) +  12    -  1  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ColorButton_t, stringdata0) +  25    -  2  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ColorButton_t, stringdata0) +  26    -  3  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ColorButton_t, stringdata0) +  35    -  4  * sizeof(
      QByteArrayData))   )

    },
    "ColorButton\0colorChanged\0\0newColor\0"
    "pickColor"
}
```

Definition at line 30 of file moc_colorbutton.cpp.

13.171 src/ckb/release/moc_extrasettingswidget.cpp File Reference

```
#include "../extrasettingswidget.h"
```

```
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_extrasettingswidget.cpp:

Data Structures

- struct qt_meta_stringdata_ExtraSettingsWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_ExtraSettingsWidget_t qt_meta_stringdata_ExtraSettingsWidget
- static const uint qt_meta_data_ExtraSettingsWidget []

13.171.1 Data Structure Documentation

13.171.1.1 struct qt_meta_stringdata_ExtraSettingsWidget_t

Definition at line 21 of file moc_extrasettingswidget.cpp.

Collaboration diagram for qt_meta_stringdata_ExtraSettingsWidget_t:

Data Fields

QByteArrayData	data[13]	
char	stringdata0[236]	

13.171.2 Macro Definition Documentation

13.171.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_ExtraSettingsWidget_t,
      stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_extrasettingswidget.cpp.

13.171.3 Variable Documentation

13.171.3.1 const uint qt_meta_data_ExtraSettingsWidget[] [static]

Definition at line 57 of file moc_extrasettingswidget.cpp.

13.171.3.2 const qt_meta_stringdata_ExtraSettingsWidget_t qt_meta_stringdata_ExtraSettingsWidget [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 19 ,   qptrdiff(offsetof(
```

```
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  0    -  0
        * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 18 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  20    -
      1  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  39    -
      2  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  40    -
      3  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 24 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  48    -
      4  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 25 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  73    -
      5  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 22 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  99    -
      6  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 4 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  122    -
       7  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 20 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  127    -
       8  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 20 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  148    -
       9  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 20 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  169    -
       10  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 25 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  190    -
       11  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 19 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ExtraSettingsWidget_t, stringdata0) +  216    -
       12  * sizeof(QByteArrayData))   )

    },
    "ExtraSettingsWidget\0on_trayBox_clicked\0"
    "\0checked\0on_brightnessBox_clicked\0"
    "on_animScanButton_clicked\0"
    "on_fpsBox_valueChanged\0arg1\0"
    "on_ditherBox_clicked\0on_mAccelBox_clicked\0"
    "on_sAccelBox_clicked\0on_sSpeedBox_valueChanged\0"
    "on_delayBox_clicked"
}
```

Definition at line 30 of file moc_extrasettingswidget.cpp.

13.172 src/ckb/release/moc_fwupgradedialog.cpp File Reference

```
#include "../fwupgradedialog.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_fwupgradedialog.cpp:

Data Structures

- struct qt_meta_stringdata_FwUpgradeDialog_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_FwUpgradeDialog_t qt_meta_stringdata_FwUpgradeDialog
- static const uint qt_meta_data_FwUpgradeDialog [ ]

13.172.1 Data Structure Documentation

13.172.1.1 struct qt_meta_stringdata_FwUpgradeDialog_t

Definition at line 21 of file moc_fwupgradedialog.cpp.

Collaboration diagram for qt_meta_stringdata_FwUpgradeDialog_t:

Data Fields

QByteArrayData	data[10]	
char	stringdata0[133]	

13.172.2 Macro Definition Documentation

13.172.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_FwUpgradeDialog_t, stringdata0
      ) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_fwupgradedialog.cpp.

13.172.3 Variable Documentation

13.172.3.1 const uint qt_meta_data_FwUpgradeDialog[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        5,   14,
        0,    0,
        0,    0,
        0,    0,
```

```
        0,
        0,


        1,    2,   39,    2, 0x08 ,
        5,    1,   44,    2, 0x08 ,
        7,    0,   47,    2, 0x08 ,
        8,    0,   48,    2, 0x08 ,
        9,    0,   49,    2, 0x08 ,


    QMetaType::Void, QMetaType::Int, QMetaType::Int,    3,    4,
    QMetaType::Void, QMetaType::Bool,    6,
    QMetaType::Void,
    QMetaType::Void,
    QMetaType::Void,

        0
}
```

Definition at line 51 of file moc_fwupgradedialog.cpp.

13.172.3.2 const qt_meta_stringdata_FwUpgradeDialog_t qt_meta_stringdata_FwUpgradeDialog [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 15 ,   qptrdiff(offsetof(
      qt_meta_stringdata_FwUpgradeDialog_t, stringdata0) +  0    -  0  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_FwUpgradeDialog_t, stringdata0) +  16    -  1  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_FwUpgradeDialog_t, stringdata0) +  33    -  2  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_FwUpgradeDialog_t, stringdata0) +  34    -  3  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 5 ,   qptrdiff(offsetof(
      qt_meta_stringdata_FwUpgradeDialog_t, stringdata0) +  42    -  4  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_FwUpgradeDialog_t, stringdata0) +  48    -  5  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_FwUpgradeDialog_t, stringdata0) +  65    -  6  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_FwUpgradeDialog_t, stringdata0) +  75    -  7  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 23 ,   qptrdiff(offsetof(
      qt_meta_stringdata_FwUpgradeDialog_t, stringdata0) +  85    -  8  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 23 ,   qptrdiff(offsetof(
      qt_meta_stringdata_FwUpgradeDialog_t, stringdata0) +  109    -  9  *
      sizeof(QByteArrayData))   )

    },
    "FwUpgradeDialog\0fwUpdateProgress\0\0"
    "current\0total\0fwUpdateFinished\0succeeded\0"
    "removeDev\0on_cancelButton_clicked\0"
    "on_actionButton_clicked"
}
```

Definition at line 30 of file moc_fwupgradedialog.cpp.

13.173 src/ckb/release/moc_gradientbutton.cpp File Reference

```
#include "../gradientbutton.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_gradientbutton.cpp:

Data Structures

- struct qt_meta_stringdata_GradientButton_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_GradientButton_t qt_meta_stringdata_GradientButton
- static const uint qt_meta_data_GradientButton []

13.173.1 Data Structure Documentation

13.173.1.1 struct qt_meta_stringdata_GradientButton_t

Definition at line 21 of file moc_gradientbutton.cpp.

Collaboration diagram for qt_meta_stringdata_GradientButton_t:

Data Fields

QByteArrayData	data[4]	
char	stringdata0[45]	

13.173.2 Macro Definition Documentation

13.173.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_GradientButton_t, stringdata0)
      + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_gradientbutton.cpp.

13.173.3 Variable Documentation

13.173.3.1 const uint qt_meta_data_GradientButton[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        2,   14,
        0,    0,
        0,    0,
        0,    0,
```

```
        0,
        1,

        1,    0,   24,    2, 0x06 ,

        3,    0,   25,    2, 0x08 ,

    QMetaType::Void,

    QMetaType::Void,

        0
}
```

Definition at line 43 of file moc_gradientbutton.cpp.

13.173.3.2 const qt_meta_stringdata_GradientButton_t qt_meta_stringdata_GradientButton [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 14 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientButton_t, stringdata0) +  0    -  0  * sizeof
      (QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 15 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientButton_t, stringdata0) +  15    -  1  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientButton_t, stringdata0) +  31    -  2  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientButton_t, stringdata0) +  32    -  3  *
      sizeof(QByteArrayData))   )

    },
    "GradientButton\0gradientChanged\0\0"
    "pickGradient"
}
```

Definition at line 30 of file moc_gradientbutton.cpp.

13.174 src/ckb/release/moc_gradientdialog.cpp File Reference

```
#include "../gradientdialog.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_gradientdialog.cpp:

Data Structures

- struct qt_meta_stringdata_GradientDialog_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_GradientDialog_t qt_meta_stringdata_GradientDialog
- static const uint qt_meta_data_GradientDialog []

13.174.1 Data Structure Documentation

13.174.1.1 struct qt_meta_stringdata_GradientDialog_t

Definition at line 21 of file moc_gradientdialog.cpp.

Collaboration diagram for qt_meta_stringdata_GradientDialog_t:

Data Fields

QByteArrayData	data[17]	
char	stringdata0[266]	

13.174.2 Macro Definition Documentation

13.174.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_GradientDialog_t, stringdata0)
      + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_gradientdialog.cpp.

13.174.3 Variable Documentation

13.174.3.1 const uint qt_meta_data_GradientDialog[] [static]

Definition at line 62 of file moc_gradientdialog.cpp.

13.174.3.2 const qt_meta_stringdata_GradientDialog_t qt_meta_stringdata_GradientDialog [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 14 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  0    -  0  * sizeof
      (QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 14 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  15    -  1  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  30    -  2  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 5 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  31    -  3  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  37    -  4  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  49    -  5  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  58    -  6  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 32 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  71    -  7  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  104    -  8  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  121    -  9  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  129    -  10  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 24 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  138    -  11  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 4 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  163    -  12  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 21 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  168    -  13  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 23 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  190    -  14  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 23 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  214    -  15  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 27 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialog_t, stringdata0) +  238    -  16  *
      sizeof(QByteArrayData))   )

    },
    "GradientDialog\0currentChanged\0\0color\0"
    "spontaneous\0position\0colorChanged\0"
    "on_presetList_currentItemChanged\0"
    "QListWidgetItem*\0current\0previous\0"
```

```
    "on_presetName_textEdited\0arg1\0"
    "on_presetSave_clicked\0on_presetDelete_clicked\0"
    "on_stopPos_valueChanged\0"
    "on_stopOpacity_valueChanged"
}
```

Definition at line 30 of file moc_gradientdialog.cpp.

13.175 src/ckb/release/moc_gradientdialogwidget.cpp File Reference

```
#include "../gradientdialogwidget.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_gradientdialogwidget.cpp:

Data Structures

- struct qt_meta_stringdata_GradientDialogWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_GradientDialogWidget_t qt_meta_stringdata_GradientDialogWidget
- static const uint qt_meta_data_GradientDialogWidget []

13.175.1 Data Structure Documentation

13.175.1.1 struct qt_meta_stringdata_GradientDialogWidget_t

Definition at line 21 of file moc_gradientdialogwidget.cpp.

Collaboration diagram for qt_meta_stringdata_GradientDialogWidget_t:

Data Fields

QByteArrayData	data[6]	
char	stringdata0[64]	

13.175.2 Macro Definition Documentation

13.175.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_GradientDialogWidget_t,
      stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_gradientdialogwidget.cpp.

13.175.3 Variable Documentation

13.175.3.1 const uint qt_meta_data_GradientDialogWidget[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        1,   14,
        0,    0,
        0,    0,
        0,    0,
```

```
        0,
        1,


        1,    3,   19,    2, 0x06 ,


    QMetaType::Void, QMetaType::QColor, QMetaType::Bool, QMetaType::Int,    3,    4,    5,

        0
}
```

Definition at line 45 of file moc_gradientdialogwidget.cpp.

13.175.3.2 const qt_meta_stringdata_GradientDialogWidget_t qt_meta_stringdata_GradientDialogWidget [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 20 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialogWidget_t, stringdata0) +  0    -
       0  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 14 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialogWidget_t, stringdata0) +  21    -
        1  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialogWidget_t, stringdata0) +  36    -
        2  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 5 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialogWidget_t, stringdata0) +  37    -
        3  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialogWidget_t, stringdata0) +  43    -
        4  * sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_GradientDialogWidget_t, stringdata0) +  55    -
        5  * sizeof(QByteArrayData))   )

    },
    "GradientDialogWidget\0currentChanged\0"
    "\0color\0spontaneous\0position"
}
```

Definition at line 30 of file moc_gradientdialogwidget.cpp.

13.176 src/ckb/release/moc_kb.cpp File Reference

```
#include "../kb.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kb.cpp:

Data Structures

- struct qt_meta_stringdata_Kb_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_Kb_t qt_meta_stringdata_Kb
- static const uint qt_meta_data_Kb [ ]

13.176.1 Data Structure Documentation

13.176.1.1 struct qt_meta_stringdata_Kb_t

Definition at line 21 of file moc_kb.cpp.

Collaboration diagram for qt_meta_stringdata_Kb_t:

Data Fields

QByteArrayData	data[20]	
char	stringdata0[214]	

13.176.2 Macro Definition Documentation

13.176.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_Kb_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kb.cpp.

13.176.3 Variable Documentation

13.176.3.1 const uint qt_meta_data_Kb[] [static]

Definition at line 63 of file moc_kb.cpp.

13.176.3.2 const qt_meta_stringdata_Kb_t qt_meta_stringdata_Kb [static]

Definition at line 30 of file moc_kb.cpp.

13.177 src/ckb/release/moc_kbanim.cpp File Reference

```
#include "../kbanim.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kbanim.cpp:

Data Structures

- struct qt_meta_stringdata_KbAnim_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbAnim_t qt_meta_stringdata_KbAnim
- static const uint qt_meta_data_KbAnim [ ]

13.177.1 Data Structure Documentation

13.177.1.1 struct qt_meta_stringdata_KbAnim_t

Definition at line 21 of file moc_kbanim.cpp.

Collaboration diagram for qt_meta_stringdata_KbAnim_t:

Data Fields

QByteArrayData	data[7]	
char	stringdata0[48]	

13.177.2 Macro Definition Documentation

13.177.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbAnim_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kbanim.cpp.

13.177.3 Variable Documentation

13.177.3.1 const uint qt_meta_data_KbAnim[] [static]

Initial value:

```
= {

        7,
        0,
        0,     0,
        0,     0,
        0,     0,
        1,    14,
        0,     0,
        0,
```

```
        0,

        1, 0x0,    5,   18,

        2, uint(KbAnim::Normal),
        3, uint(KbAnim::Add),
        4, uint(KbAnim::Subtract),
        5, uint(KbAnim::Multiply),
        6, uint(KbAnim::Divide),

        0
}
```

Definition at line 46 of file moc_kbanim.cpp.

13.177.3.2 const qt_meta_stringdata_KbAnim_t qt_meta_stringdata_KbAnim [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 6 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbAnim_t, stringdata0) +  0    -  0  * sizeof(QByteArrayData)
      )   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 4 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbAnim_t, stringdata0) +  7    -  1  * sizeof(QByteArrayData)
      )   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 6 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbAnim_t, stringdata0) +  12    -  2  * sizeof(QByteArrayData
      ))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 3 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbAnim_t, stringdata0) +  19    -  3  * sizeof(QByteArrayData
      ))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbAnim_t, stringdata0) +  23    -  4  * sizeof(QByteArrayData
      ))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbAnim_t, stringdata0) +  32    -  5  * sizeof(QByteArrayData
      ))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 6 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbAnim_t, stringdata0) +  41    -  6  * sizeof(QByteArrayData
      ))   )

    },
    "KbAnim\0Mode\0Normal\0Add\0Subtract\0"
    "Multiply\0Divide"
}
```

Definition at line 30 of file moc_kbanim.cpp.

13.178 src/ckb/release/moc_kbanimwidget.cpp File Reference

```
#include "../kbanimwidget.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kbanimwidget.cpp:

Data Structures

- struct qt_meta_stringdata_KbAnimWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbAnimWidget_t qt_meta_stringdata_KbAnimWidget
- static const uint qt_meta_data_KbAnimWidget []

13.178.1 Data Structure Documentation

13.178.1.1 struct qt_meta_stringdata_KbAnimWidget_t

Definition at line 21 of file moc_kbanimwidget.cpp.

Collaboration diagram for qt_meta_stringdata_KbAnimWidget_t:

Data Fields

QByteArrayData	data[25]	
char	stringdata0[383]	

13.178.2 Macro Definition Documentation

13.178.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbAnimWidget_t, stringdata0) +
      ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kbanimwidget.cpp.

13.178.3 Variable Documentation

13.178.3.1 const uint qt_meta_data_KbAnimWidget[] [static]

Definition at line 74 of file moc_kbanimwidget.cpp.

13.178.3.2 const qt_meta_stringdata_KbAnimWidget_t qt_meta_stringdata_KbAnimWidget [static]

Definition at line 30 of file moc_kbanimwidget.cpp.

13.179 src/ckb/release/moc_kbbind.cpp File Reference

```
#include "../kbbind.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kbbind.cpp:

Data Structures

- struct qt_meta_stringdata_KbBind_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbBind_t qt_meta_stringdata_KbBind
- static const uint qt_meta_data_KbBind []

13.179.1 Data Structure Documentation

13.179.1.1 struct qt_meta_stringdata_KbBind_t

Definition at line 21 of file moc_kbbind.cpp.

Collaboration diagram for qt_meta_stringdata_KbBind_t:

Data Fields

QByteArrayData	data[8]	
char	stringdata0[56]	

13.179.2 Macro Definition Documentation

13.179.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbBind_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kbbind.cpp.

13.179.3 Variable Documentation

13.179.3.1 const uint qt_meta_data_KbBind[] [static]

Definition at line 47 of file moc_kbbind.cpp.

13.179.3.2 const qt_meta_stringdata_KbBind_t qt_meta_stringdata_KbBind [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 6 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBind_t, stringdata0) +  0    -  0  * sizeof(QByteArrayData)
```

```
      )   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBind_t, stringdata0) +  7    -  1  * sizeof(QByteArrayData)
      )   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBind_t, stringdata0) +  15    -  2  * sizeof(QByteArrayData
      ))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 13 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBind_t, stringdata0) +  16    -  3  * sizeof(QByteArrayData
      ))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBind_t, stringdata0) +  30    -  4  * sizeof(QByteArrayData
      ))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBind_t, stringdata0) +  38    -  5  * sizeof(QByteArrayData
      ))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 3 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBind_t, stringdata0) +  47    -  6  * sizeof(QByteArrayData
      ))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 4 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBind_t, stringdata0) +  51    -  7  * sizeof(QByteArrayData
      ))   )

    },
    "KbBind\0didLoad\0\0layoutChanged\0updated\0"
    "keyEvent\0key\0down"
}
```

Definition at line 30 of file moc_kbbind.cpp.

13.180 src/ckb/release/moc_kbbindwidget.cpp File Reference

```
#include "../kbbindwidget.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kbbindwidget.cpp:

Data Structures

- struct qt_meta_stringdata_KbBindWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbBindWidget_t qt_meta_stringdata_KbBindWidget
- static const uint qt_meta_data_KbBindWidget []

13.180.1 Data Structure Documentation

13.180.1.1 struct qt_meta_stringdata_KbBindWidget_t

Definition at line 21 of file moc_kbbindwidget.cpp.

Collaboration diagram for qt_meta_stringdata_KbBindWidget_t:

Data Fields

QByteArrayData	data[9]	
char	stringdata0[120]	

13.180.2 Macro Definition Documentation

13.180.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbBindWidget_t, stringdata0) +
      ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kbbindwidget.cpp.

13.180.3 Variable Documentation

13.180.3.1 const uint qt_meta_data_KbBindWidget[] [static]

Definition at line 49 of file moc_kbbindwidget.cpp.

13.180.3.2 const qt_meta_stringdata_KbBindWidget_t qt_meta_stringdata_KbBindWidget [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBindWidget_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 10 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBindWidget_t, stringdata0) +  13    -  1  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBindWidget_t, stringdata0) +  24    -  2  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBindWidget_t, stringdata0) +  25    -  3  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBindWidget_t, stringdata0) +  35    -  4  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBindWidget_t, stringdata0) +  48    -  5  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBindWidget_t, stringdata0) +  58    -  6  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 22 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBindWidget_t, stringdata0) +  75    -  7  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 21 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbBindWidget_t, stringdata0) +  98    -  8  * sizeof(
      QByteArrayData))   )

    },
    "KbBindWidget\0updateBind\0\0newLayout\0"
    "newSelection\0selection\0updateSelDisplay\0"
    "on_resetButton_clicked\0on_copyButton_clicked"
}
```

Definition at line 30 of file moc_kbbindwidget.cpp.

13.181 src/ckb/release/moc_kbfirmware.cpp File Reference

```
#include "../kbfirmware.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kbfirmware.cpp:

Data Structures

- struct qt_meta_stringdata_KbFirmware_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbFirmware_t qt_meta_stringdata_KbFirmware
- static const uint qt_meta_data_KbFirmware [ ]

13.181.1 Data Structure Documentation

13.181.1.1 struct qt_meta_stringdata_KbFirmware_t

Definition at line 21 of file moc_kbfirmware.cpp.

Collaboration diagram for qt_meta_stringdata_KbFirmware_t:

Data Fields

QByteArrayData	data[7]	
char	stringdata0[77]	

13.181.2 Macro Definition Documentation

13.181.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbFirmware_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kbfirmware.cpp.

13.181.3 Variable Documentation

13.181.3.1 const uint qt_meta_data_KbFirmware[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        3,   14,
        0,    0,
        0,    0,
        0,    0,
        0,
```

```
        1,

        1,    0,   29,    2, 0x06 ,

        3,    1,   30,    2, 0x08 ,
        6,    0,   33,    2, 0x08 ,

    QMetaType::Void,

    QMetaType::Void, 0x80000000 | 4,    5,
    QMetaType::Void,

        0
}
```

Definition at line 46 of file moc_kbfirmware.cpp.

13.181.3.2 const qt_meta_stringdata_KbFirmware_t qt_meta_stringdata_KbFirmware [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 10 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbFirmware_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 10 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbFirmware_t, stringdata0) +  11    -  1  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbFirmware_t, stringdata0) +  22    -  2  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 15 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbFirmware_t, stringdata0) +  23    -  3  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 14 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbFirmware_t, stringdata0) +  39    -  4  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 5 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbFirmware_t, stringdata0) +  54    -  5  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbFirmware_t, stringdata0) +  60    -  6  * sizeof(
      QByteArrayData))   )

    },
    "KbFirmware\0downloaded\0\0processDownload\0"
    "QNetworkReply*\0reply\0downloadFinished"
}
```

Definition at line 30 of file moc_kbfirmware.cpp.

13.182 src/ckb/release/moc_kblight.cpp File Reference

```
#include "../kblight.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
#include <QtCore/QSet>
```

Include dependency graph for moc_kblight.cpp:

Data Structures

- struct qt_meta_stringdata_KbLight_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbLight_t qt_meta_stringdata_KbLight
- static const uint qt_meta_data_KbLight [ ]

13.182.1 Data Structure Documentation

13.182.1.1 struct qt_meta_stringdata_KbLight_t

Definition at line 22 of file moc_kblight.cpp.

Collaboration diagram for qt_meta_stringdata_KbLight_t:

Data Fields

QByteArrayData	data[9]	
char	stringdata0[92]	

13.182.2 Macro Definition Documentation

13.182.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbLight_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 26 of file moc_kblight.cpp.

13.182.3 Variable Documentation

13.182.3.1 const uint qt_meta_data_KbLight[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        3,   14,
        0,    0,
        0,    0,
        0,    0,
        0,
```

```
        3,


        1,    0,   29,    2, 0x06 ,
        3,    0,   30,    2, 0x06 ,
        4,    2,   31,    2, 0x06 ,


    QMetaType::Void,
    QMetaType::Void,
    QMetaType::Void, 0x80000000 | 5, 0x80000000 | 7,    6,    8,

        0
}
```

Definition at line 50 of file moc_kblight.cpp.

13.182.3.2 const qt_meta_stringdata_KbLight_t qt_meta_stringdata_KbLight [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbLight_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbLight_t, stringdata0) +  8    -  1  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbLight_t, stringdata0) +  16    -  2  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbLight_t, stringdata0) +  17    -  3  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 14 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbLight_t, stringdata0) +  25    -  4  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbLight_t, stringdata0) +  40    -  5  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 14 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbLight_t, stringdata0) +  49    -  6  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 13 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbLight_t, stringdata0) +  64    -  7  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 13 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbLight_t, stringdata0) +  78    -  8  * sizeof(
      QByteArrayData))   )

    },
    "KbLight\0didLoad\0\0updated\0frameDisplayed\0"
    "ColorMap\0animatedColors\0QSet<QString>\0"
    "indicatorList"
}
```

Definition at line 31 of file moc_kblight.cpp.

13.183 src/ckb/release/moc_kblightwidget.cpp File Reference

```
#include "../kblightwidget.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kblightwidget.cpp:

Data Structures

- struct qt_meta_stringdata_KbLightWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbLightWidget_t qt_meta_stringdata_KbLightWidget
- static const uint qt_meta_data_KbLightWidget [ ]

13.183.1 Data Structure Documentation

13.183.1.1 struct qt_meta_stringdata_KbLightWidget_t

Definition at line 21 of file moc_kblightwidget.cpp.

Collaboration diagram for qt_meta_stringdata_KbLightWidget_t:

Data Fields

QByteArrayData	data[19]	
char	stringdata0[240]	

13.183.2 Macro Definition Documentation

13.183.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbLightWidget_t, stringdata0) +
      ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kblightwidget.cpp.

13.183.3 Variable Documentation

13.183.3.1 const uint qt_meta_data_KbLightWidget[] [static]

Definition at line 63 of file moc_kblightwidget.cpp.

13.183.3.2 const qt_meta_stringdata_KbLightWidget_t qt_meta_stringdata_KbLightWidget [static]

Definition at line 30 of file moc_kblightwidget.cpp.

13.184 src/ckb/release/moc_kbmanager.cpp File Reference

```
#include "../kbmanager.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kbmanager.cpp:

Data Structures

- struct qt_meta_stringdata_KbManager_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbManager_t qt_meta_stringdata_KbManager
- static const uint qt_meta_data_KbManager []

13.184.1 Data Structure Documentation

13.184.1.1 struct qt_meta_stringdata_KbManager_t

Definition at line 21 of file moc_kbmanager.cpp.

Collaboration diagram for qt_meta_stringdata_KbManager_t:

Data Fields

QByteArrayData	data[8]	
char	stringdata0[78]	

13.184.2 Macro Definition Documentation

13.184.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbManager_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kbmanager.cpp.

13.184.3 Variable Documentation

13.184.3.1 const uint qt_meta_data_KbManager[] [static]

Definition at line 48 of file moc_kbmanager.cpp.

13.184.3.2 const qt_meta_stringdata_KbManager_t qt_meta_stringdata_KbManager [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbManager_t, stringdata0) +  0    -  0  * sizeof(
```

```
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbManager_t, stringdata0) +  10    -  1  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbManager_t, stringdata0) +  22    -  2  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 3 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbManager_t, stringdata0) +  23    -  3  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 6 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbManager_t, stringdata0) +  27    -  4  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 14 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbManager_t, stringdata0) +  34    -  5  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 14 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbManager_t, stringdata0) +  49    -  6  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 13 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbManager_t, stringdata0) +  64    -  7  * sizeof(
      QByteArrayData))   )

    },
    "KbManager\0kbConnected\0\0Kb*\0device\0"
    "kbDisconnected\0versionUpdated\0"
    "scanKeyboards"
}
```

Definition at line 30 of file moc_kbmanager.cpp.

13.185 src/ckb/release/moc_kbmode.cpp File Reference

```
#include "../kbmode.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kbmode.cpp:

Data Structures

- struct qt_meta_stringdata_KbMode_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbMode_t qt_meta_stringdata_KbMode
- static const uint qt_meta_data_KbMode []

13.185.1 Data Structure Documentation

13.185.1.1 struct qt_meta_stringdata_KbMode_t

Definition at line 21 of file moc_kbmode.cpp.

Collaboration diagram for qt_meta_stringdata_KbMode_t:

Data Fields

QByteArrayData	data[4]	
char	stringdata0[25]	

13.185.2 Macro Definition Documentation

13.185.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbMode_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kbmode.cpp.

13.185.3 Variable Documentation

13.185.3.1 const uint qt_meta_data_KbMode[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        2,   14,
        0,    0,
        0,    0,
        0,    0,
        0,
        1,


        1,    0,   24,    2, 0x06 ,


        3,    0,   25,    2, 0x08 ,


    QMetaType::Void,


    QMetaType::Void,

        0
}
```

Definition at line 42 of file moc_kbmode.cpp.

13.185.3.2 const qt_meta_stringdata_KbMode_t qt_meta_stringdata_KbMode [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 6 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbMode_t, stringdata0) +  0    -  0  * sizeof(QByteArrayData)
      )   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbMode_t, stringdata0) +  7    -  1  * sizeof(QByteArrayData)
      )   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbMode_t, stringdata0) +  15    -  2  * sizeof(QByteArrayData
      ))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbMode_t, stringdata0) +  16    -  3  * sizeof(QByteArrayData
      ))   )

    },
    "KbMode\0updated\0\0doUpdate"
}
```

Definition at line 30 of file moc_kbmode.cpp.

13.186 src/ckb/release/moc_kbperf.cpp File Reference

```
#include "../kbperf.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kbperf.cpp:

Data Structures

- struct qt_meta_stringdata_KbPerf_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbPerf_t qt_meta_stringdata_KbPerf
- static const uint qt_meta_data_KbPerf [ ]

13.186.1 Data Structure Documentation

13.186.1.1 struct qt_meta_stringdata_KbPerf_t

Definition at line 21 of file moc_kbperf.cpp.

Collaboration diagram for qt_meta_stringdata_KbPerf_t:

Data Fields

QByteArrayData	data[4]	
char	stringdata0[32]	

13.186.2 Macro Definition Documentation

13.186.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbPerf_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kbperf.cpp.

13.186.3 Variable Documentation

13.186.3.1 const uint qt_meta_data_KbPerf[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        2,   14,
        0,    0,
        0,    0,
        0,    0,
        0,
```

```
        2,


        1,    0,   24,    2, 0x06 ,
        3,    0,   25,    2, 0x06 ,


    QMetaType::Void,
    QMetaType::Void,

        0
}
```

Definition at line 42 of file moc_kbperf.cpp.

13.186.3.2 const qt_meta_stringdata_KbPerf_t qt_meta_stringdata_KbPerf [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 6 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbPerf_t, stringdata0) +  0    -  0  * sizeof(QByteArrayData)
      )   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbPerf_t, stringdata0) +  7    -  1  * sizeof(QByteArrayData)
      )   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbPerf_t, stringdata0) +  15    -  2  * sizeof(QByteArrayData
      ))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 15 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbPerf_t, stringdata0) +  16    -  3  * sizeof(QByteArrayData
      ))   )

    },
    "KbPerf\0didLoad\0\0settingsUpdated"
}
```

Definition at line 30 of file moc_kbperf.cpp.

13.187 src/ckb/release/moc_kbprofile.cpp File Reference

```
#include "../kbprofile.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kbprofile.cpp:

Data Structures

- struct qt_meta_stringdata_KbProfile_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbProfile_t qt_meta_stringdata_KbProfile
- static const uint qt_meta_data_KbProfile [ ]

13.187.1 Data Structure Documentation

13.187.1.1 struct qt_meta_stringdata_KbProfile_t

Definition at line 21 of file moc_kbprofile.cpp.

Collaboration diagram for qt_meta_stringdata_KbProfile_t:

Data Fields

QByteArrayData	data[1]	
char	stringdata0[10]	

13.187.2 Macro Definition Documentation

13.187.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbProfile_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kbprofile.cpp.

13.187.3 Variable Documentation

13.187.3.1 const uint qt_meta_data_KbProfile[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,
        0,

        0
}
```

Definition at line 39 of file moc_kbprofile.cpp.

13.187.3.2 const qt_meta_stringdata_KbProfile_t qt_meta_stringdata_KbProfile [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfile_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   )

    },
    "KbProfile"
}
```

Definition at line 30 of file moc_kbprofile.cpp.

13.188 src/ckb/release/moc_kbprofiledialog.cpp File Reference

```
#include "../kbprofiledialog.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kbprofiledialog.cpp:

Data Structures

- struct qt_meta_stringdata_KbProfileDialog_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbProfileDialog_t qt_meta_stringdata_KbProfileDialog
- static const uint qt_meta_data_KbProfileDialog []

13.188.1 Data Structure Documentation

13.188.1.1 struct qt_meta_stringdata_KbProfileDialog_t

Definition at line 21 of file moc_kbprofiledialog.cpp.

Collaboration diagram for qt_meta_stringdata_KbProfileDialog_t:

Data Fields

QByteArrayData	data[12]	
char	stringdata0[212]	

13.188.2 Macro Definition Documentation

13.188.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbProfileDialog_t, stringdata0
      ) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kbprofiledialog.cpp.

13.188.3 Variable Documentation

13.188.3.1 const uint qt_meta_data_KbProfileDialog[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        5,   14,
        0,    0,
        0,    0,
        0,    0,
```

```
        0,
        0,


        1,    0,   39,    2, 0x08 ,
        3,    2,   40,    2, 0x08 ,
        7,    1,   45,    2, 0x08 ,
        9,    1,   48,    2, 0x08 ,
       10,    1,   51,    2, 0x08 ,


    QMetaType::Void,
    QMetaType::Void, 0x80000000 | 4, 0x80000000 | 4,    5,    6,
    QMetaType::Void, 0x80000000 | 4,    8,
    QMetaType::Void, 0x80000000 | 4,    8,
    QMetaType::Void, QMetaType::QPoint,   11,

        0
}
```

Definition at line 56 of file moc_kbprofiledialog.cpp.

13.188.3.2 const qt_meta_stringdata_KbProfileDialog_t qt_meta_stringdata_KbProfileDialog [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 15 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  0    -  0  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 21 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  16    -  1  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  38    -  2  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 33 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  39    -  3  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  73    -  4  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  90    -  5  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  98    -  6  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 26 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  107    -  7  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 4 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  134    -  8  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 26 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  139    -  9  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 41 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  166    -  10  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 3 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KbProfileDialog_t, stringdata0) +  208    -  11  *
      sizeof(QByteArrayData))   )

    },
    "KbProfileDialog\0profileList_reordered\0"
    "\0on_profileList_currentItemChanged\0"
    "QListWidgetItem*\0current\0previous\0"
    "on_profileList_itemClicked\0item\0"
    "on_profileList_itemChanged\0"
    "on_profileList_customContextMenuRequested\0"
    "pos"
}
```

Definition at line 30 of file moc_kbprofiledialog.cpp.

13.189 src/ckb/release/moc_kbwidget.cpp File Reference

```
#include "../kbwidget.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kbwidget.cpp:

Data Structures

- struct qt_meta_stringdata_KbWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KbWidget_t qt_meta_stringdata_KbWidget
- static const uint qt_meta_data_KbWidget []

13.189.1 Data Structure Documentation

13.189.1.1 struct qt_meta_stringdata_KbWidget_t

Definition at line 21 of file moc_kbwidget.cpp.

Collaboration diagram for qt_meta_stringdata_KbWidget_t:

Data Fields

QByteArrayData	data[29]	
char	stringdata0[442]	

13.189.2 Macro Definition Documentation

13.189.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KbWidget_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kbwidget.cpp.

13.189.3 Variable Documentation

13.189.3.1 const uint qt_meta_data_KbWidget[] [static]

Definition at line 80 of file moc_kbwidget.cpp.

13.189.3.2 const qt_meta_stringdata_KbWidget_t qt_meta_stringdata_KbWidget [static]

Definition at line 30 of file moc_kbwidget.cpp.

13.190 src/ckb/release/moc_keyaction.cpp File Reference

```
#include "../keyaction.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_keyaction.cpp:

Data Structures

- struct qt_meta_stringdata_KeyAction_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KeyAction_t qt_meta_stringdata_KeyAction
- static const uint qt_meta_data_KeyAction [ ]

13.190.1 Data Structure Documentation

13.190.1.1 struct qt_meta_stringdata_KeyAction_t

Definition at line 21 of file moc_keyaction.cpp.

Collaboration diagram for qt_meta_stringdata_KeyAction_t:

Data Fields

QByteArrayData	data[1]	
char	stringdata0[10]	

13.190.2 Macro Definition Documentation

13.190.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KeyAction_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_keyaction.cpp.

13.190.3 Variable Documentation

13.190.3.1 const uint qt_meta_data_KeyAction[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,
```

```
        0,

        0
}
```

Definition at line 39 of file moc_keyaction.cpp.

13.190.3.2 const qt_meta_stringdata_KeyAction_t qt_meta_stringdata_KeyAction [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KeyAction_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   )

    },
    "KeyAction"
}
```

Definition at line 30 of file moc_keyaction.cpp.

13.191 src/ckb/release/moc_keywidget.cpp File Reference

```
#include "../keywidget.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
#include <QtCore/QSet>
```

Include dependency graph for moc_keywidget.cpp:

Data Structures

- struct qt_meta_stringdata_KeyWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KeyWidget_t qt_meta_stringdata_KeyWidget
- static const uint qt_meta_data_KeyWidget [ ]

13.191.1 Data Structure Documentation

13.191.1.1 struct qt_meta_stringdata_KeyWidget_t

Definition at line 22 of file moc_keywidget.cpp.

Collaboration diagram for qt_meta_stringdata_KeyWidget_t:

Data Fields

QByteArrayData	data[10]	
char	stringdata0[118]	

13.191.2 Macro Definition Documentation

13.191.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KeyWidget_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 26 of file moc_keywidget.cpp.

13.191.3 Variable Documentation

13.191.3.1 const uint qt_meta_data_KeyWidget[] [static]

Definition at line 52 of file moc_keywidget.cpp.

13.191.3.2 const qt_meta_stringdata_KeyWidget_t qt_meta_stringdata_KeyWidget [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KeyWidget_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KeyWidget_t, stringdata0) +  10    -  1  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KeyWidget_t, stringdata0) +  27    -  2  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KeyWidget_t, stringdata0) +  28    -  3  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KeyWidget_t, stringdata0) +  37    -  4  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 15 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KeyWidget_t, stringdata0) +  54    -  5  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 8 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KeyWidget_t, stringdata0) +  70    -  6  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 13 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KeyWidget_t, stringdata0) +  79    -  7  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 13 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KeyWidget_t, stringdata0) +  93    -  8  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 10 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KeyWidget_t, stringdata0) +  107    -  9  * sizeof(
      QByteArrayData))   )

    },
    "KeyWidget\0selectionChanged\0\0selected\0"
    "sidelightToggled\0displayColorMap\0"
    "ColorMap\0newDisplayMap\0QSet<QString>\0"
    "indicators"
}
```

Definition at line 31 of file moc_keywidget.cpp.

13.192 src/ckb/release/moc_kperfwidget.cpp File Reference

```
#include "../kperfwidget.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_kperfwidget.cpp:

Data Structures

- struct qt_meta_stringdata_KPerfWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_KPerfWidget_t qt_meta_stringdata_KPerfWidget
- static const uint qt_meta_data_KPerfWidget []

13.192.1 Data Structure Documentation

13.192.1.1 struct qt_meta_stringdata_KPerfWidget_t

Definition at line 21 of file moc_kperfwidget.cpp.

Collaboration diagram for qt_meta_stringdata_KPerfWidget_t:

Data Fields

QByteArrayData	data[7]	
char	stringdata0[85]	

13.192.2 Macro Definition Documentation

13.192.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_KPerfWidget_t, stringdata0) + ofs
      \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_kperfwidget.cpp.

13.192.3 Variable Documentation

13.192.3.1 const uint qt_meta_data_KPerfWidget[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        3,   14,
        0,    0,
        0,    0,
        0,    0,
```

```
        0,
        0,


        1,    1,   29,    2, 0x08 ,
        4,    1,   32,    2, 0x08 ,
        6,    0,   35,    2, 0x08 ,


    QMetaType::Void, QMetaType::Int,    3,
    QMetaType::Void, QMetaType::Int,    5,
    QMetaType::Void,

        0
}
```

Definition at line 47 of file moc_kperfwidget.cpp.

13.192.3.2 const qt_meta_stringdata_KPerfWidget_t qt_meta_stringdata_KPerfWidget [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KPerfWidget_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KPerfWidget_t, stringdata0) +  12    -  1  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KPerfWidget_t, stringdata0) +  22    -  2  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 5 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KPerfWidget_t, stringdata0) +  23    -  3  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 28 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KPerfWidget_t, stringdata0) +  29    -  4  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 4 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KPerfWidget_t, stringdata0) +  58    -  5  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 21 ,   qptrdiff(offsetof(
      qt_meta_stringdata_KPerfWidget_t, stringdata0) +  63    -  6  * sizeof(
      QByteArrayData))   )

    },
    "KPerfWidget\0uiUpdated\0\0index\0"
    "on_intensityBox_valueChanged\0arg1\0"
    "on_copyButton_clicked"
}
```

Definition at line 30 of file moc_kperfwidget.cpp.

13.193 src/ckb/release/moc_layoutdialog.cpp File Reference

```
#include "../layoutdialog.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_layoutdialog.cpp:

Data Structures

- struct qt_meta_stringdata_LayoutDialog_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_LayoutDialog_t qt_meta_stringdata_LayoutDialog
- static const uint qt_meta_data_LayoutDialog []

13.193.1 Data Structure Documentation

13.193.1.1 struct qt_meta_stringdata_LayoutDialog_t

Definition at line 21 of file moc_layoutdialog.cpp.

Collaboration diagram for qt_meta_stringdata_LayoutDialog_t:

Data Fields

QByteArrayData	data[1]	
char	stringdata0[13]	

13.193.2 Macro Definition Documentation

13.193.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_LayoutDialog_t, stringdata0) +
      ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_layoutdialog.cpp.

13.193.3 Variable Documentation

13.193.3.1 const uint qt_meta_data_LayoutDialog[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
```

```
        0,
        0,

        0
}
```

Definition at line 39 of file moc_layoutdialog.cpp.

13.193.3.2 const qt_meta_stringdata_LayoutDialog_t qt_meta_stringdata_LayoutDialog [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_LayoutDialog_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   )

    },
    "LayoutDialog"
}
```

Definition at line 30 of file moc_layoutdialog.cpp.

13.194 src/ckb/release/moc_macroreader.cpp File Reference

```
#include "../macroreader.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_macroreader.cpp:

Data Structures

- struct qt_meta_stringdata_MacroReaderThread_t
- struct qt_meta_stringdata_MacroReader_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)
- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_MacroReaderThread_t qt_meta_stringdata_MacroReaderThread
- static const uint qt_meta_data_MacroReaderThread []
- static const qt_meta_stringdata_MacroReader_t qt_meta_stringdata_MacroReader
- static const uint qt_meta_data_MacroReader []

13.194.1 Data Structure Documentation

13.194.1.1 struct qt_meta_stringdata_MacroReaderThread_t

Definition at line 21 of file moc_macroreader.cpp.

Collaboration diagram for qt_meta_stringdata_MacroReaderThread_t:

Data Fields

QByteArrayData	data[4]	
char	stringdata0[34]	

13.194.1.2 struct qt_meta_stringdata_MacroReader_t

Definition at line 111 of file moc_macroreader.cpp.

Collaboration diagram for qt_meta_stringdata_MacroReader_t:

Data Fields

QByteArrayData	data[1]	
char	stringdata0[12]	

13.194.2 Macro Definition Documentation

13.194.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_MacroReaderThread_t,
      stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 115 of file moc_macroreader.cpp.

13.194.2.2 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_MacroReader_t, stringdata0) + ofs
      \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 115 of file moc_macroreader.cpp.

13.194.3 Variable Documentation

13.194.3.1 const uint qt_meta_data_MacroReader[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,
        0,

        0
}
```

Definition at line 129 of file moc_macroreader.cpp.

13.194.3.2 const uint qt_meta_data_MacroReaderThread[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        1,   14,
        0,    0,
        0,    0,
        0,    0,
        0,
        0,


        1,    1,   19,    2, 0x08 ,


    QMetaType::Void, QMetaType::QString,    3,

        0
}
```

Definition at line 42 of file moc_macroreader.cpp.

13.194.3.3 const qt_meta_stringdata_MacroReader_t qt_meta_stringdata_MacroReader [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MacroReader_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   )

    },
    "MacroReader"
}
```

Definition at line 120 of file moc_macroreader.cpp.

13.194.3.4 const qt_meta_stringdata_MacroReaderThread_t qt_meta_stringdata_MacroReaderThread [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 17 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MacroReaderThread_t, stringdata0) +  0    -  0  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MacroReaderThread_t, stringdata0) +  18    -  1  *
       sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MacroReaderThread_t, stringdata0) +  28    -  2  *
       sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 4 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MacroReaderThread_t, stringdata0) +  29    -  3  *
       sizeof(QByteArrayData))   )

    },
    "MacroReaderThread\0readMacro\0\0line"
}
```

Definition at line 30 of file moc_macroreader.cpp.

13.195 src/ckb/release/moc_mainwindow.cpp File Reference

```
#include "../mainwindow.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_mainwindow.cpp:

Data Structures

- struct qt_meta_stringdata_MainWindow_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_MainWindow_t qt_meta_stringdata_MainWindow
- static const uint qt_meta_data_MainWindow []

13.195.1 Data Structure Documentation

13.195.1.1 struct qt_meta_stringdata_MainWindow_t

Definition at line 21 of file moc_mainwindow.cpp.

Collaboration diagram for qt_meta_stringdata_MainWindow_t:

Data Fields

QByteArrayData	data[22]	
char	stringdata0[253]	

13.195.2 Macro Definition Documentation

13.195.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_MainWindow_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_mainwindow.cpp.

13.195.3 Variable Documentation

13.195.3.1 const uint qt_meta_data_MainWindow[] [static]

Definition at line 66 of file moc_mainwindow.cpp.

13.195.3.2 const qt_meta_stringdata_MainWindow_t qt_meta_stringdata_MainWindow [static]

Definition at line 30 of file moc_mainwindow.cpp.

13.196 src/ckb/release/moc_modeselectdialog.cpp File Reference

```
#include "../modeselectdialog.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_modeselectdialog.cpp:

Data Structures

- struct qt_meta_stringdata_ModeSelectDialog_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_ModeSelectDialog_t qt_meta_stringdata_ModeSelectDialog
- static const uint qt_meta_data_ModeSelectDialog [ ]

13.196.1 Data Structure Documentation

13.196.1.1 struct qt_meta_stringdata_ModeSelectDialog_t

Definition at line 21 of file moc_modeselectdialog.cpp.

Collaboration diagram for qt_meta_stringdata_ModeSelectDialog_t:

Data Fields

QByteArrayData	data[4]	
char	stringdata0[67]	

13.196.2 Macro Definition Documentation

13.196.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_ModeSelectDialog_t,
      stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_modeselectdialog.cpp.

13.196.3 Variable Documentation

13.196.3.1 const uint qt_meta_data_ModeSelectDialog[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        2,   14,
        0,    0,
        0,    0,
        0,    0,
```

```
        0,
        0,


        1,    0,   24,    2, 0x08 ,
        3,    0,   25,    2, 0x08 ,


    QMetaType::Void,
    QMetaType::Void,

        0
}
```

Definition at line 43 of file moc_modeselectdialog.cpp.

13.196.3.2 const qt_meta_stringdata_ModeSelectDialog_t qt_meta_stringdata_ModeSelectDialog [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ModeSelectDialog_t, stringdata0) +  0    -  0  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 23 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ModeSelectDialog_t, stringdata0) +  17    -  1  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ModeSelectDialog_t, stringdata0) +  41    -  2  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 24 ,   qptrdiff(offsetof(
      qt_meta_stringdata_ModeSelectDialog_t, stringdata0) +  42    -  3  *
      sizeof(QByteArrayData))   )

    },
    "ModeSelectDialog\0on_selAllButton_clicked\0"
    "\0on_selNoneButton_clicked"
}
```

Definition at line 30 of file moc_modeselectdialog.cpp.

13.197 src/ckb/release/moc_mperfwidget.cpp File Reference

```
#include "../mperfwidget.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_mperfwidget.cpp:

Data Structures

- struct qt_meta_stringdata_MPerfWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_MPerfWidget_t qt_meta_stringdata_MPerfWidget
- static const uint qt_meta_data_MPerfWidget []

13.197.1 Data Structure Documentation

13.197.1.1 struct qt_meta_stringdata_MPerfWidget_t

Definition at line 21 of file moc_mperfwidget.cpp.

Collaboration diagram for qt_meta_stringdata_MPerfWidget_t:

Data Fields

QByteArrayData	data[18]	
char	stringdata0[249]	

13.197.2 Macro Definition Documentation

13.197.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_MPerfWidget_t, stringdata0) + ofs
      \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_mperfwidget.cpp.

13.197.3 Variable Documentation

13.197.3.1 const uint qt_meta_data_MPerfWidget[] [static]

Definition at line 62 of file moc_mperfwidget.cpp.

13.197.3.2 const qt_meta_stringdata_MPerfWidget_t qt_meta_stringdata_MPerfWidget [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  12    -  1  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  25    -  2  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 5 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  26    -  3  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  32    -  4  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  45    -  5  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  58    -  6  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  71    -  7  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  83    -  8  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 13 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  95    -  9  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  109    -  10  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  126    -  11  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 19 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  134    -  12  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 19 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  154    -  13  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 23 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  174    -  14  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 21 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  198    -  15  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 23 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  220    -  16  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 4 ,   qptrdiff(offsetof(
      qt_meta_stringdata_MPerfWidget_t, stringdata0) +  244    -  17  * sizeof(
      QByteArrayData))   )

    },
    "MPerfWidget\0colorClicked\0\0index\0"
    "colorChanged\0sliderXMoved\0sliderYMoved\0"
    "boxXChanged\0boxYChanged\0enableChanged\0"
    "on_xyBox_clicked\0checked\0on_indicBox_clicked\0"
    "on_aSnapBox_clicked\0on_lHeightBox_activated\0"
    "on_copyButton_clicked\0on_spinBox_valueChanged\0"
    "arg1"
}
```

Definition at line 30 of file moc_mperfwidget.cpp.

13.198 src/ckb/release/moc_quagzipfile.cpp File Reference

```
#include "../quazip/quagzipfile.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_quagzipfile.cpp:

Data Structures

- struct qt_meta_stringdata_QuaGzipFile_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_QuaGzipFile_t qt_meta_stringdata_QuaGzipFile
- static const uint qt_meta_data_QuaGzipFile []

13.198.1 Data Structure Documentation

13.198.1.1 struct qt_meta_stringdata_QuaGzipFile_t

Definition at line 21 of file moc_quagzipfile.cpp.

Collaboration diagram for qt_meta_stringdata_QuaGzipFile_t:

Data Fields

QByteArrayData	data[1]	
char	stringdata0[12]	

13.198.2 Macro Definition Documentation

13.198.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_QuaGzipFile_t, stringdata0) + ofs
      \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_quagzipfile.cpp.

13.198.3 Variable Documentation

13.198.3.1 const uint qt_meta_data_QuaGzipFile[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
```

```
        0,
        0,

        0
}
```

Definition at line 39 of file moc_quagzipfile.cpp.

13.198.3.2 const qt_meta_stringdata_QuaGzipFile_t qt_meta_stringdata_QuaGzipFile [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
      qt_meta_stringdata_QuaGzipFile_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   )

    },
    "QuaGzipFile"
}
```

Definition at line 30 of file moc_quagzipfile.cpp.

13.199 src/ckb/release/moc_quaziodevice.cpp File Reference

```
#include "../quazip/quaziodevice.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_quaziodevice.cpp:

Data Structures

- struct qt_meta_stringdata_QuaZIODevice_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_QuaZIODevice_t qt_meta_stringdata_QuaZIODevice
- static const uint qt_meta_data_QuaZIODevice []

13.199.1 Data Structure Documentation

13.199.1.1 struct qt_meta_stringdata_QuaZIODevice_t

Definition at line 21 of file moc_quaziodevice.cpp.

Collaboration diagram for qt_meta_stringdata_QuaZIODevice_t:

Data Fields

QByteArrayData	data[1]	
char	stringdata0[13]	

13.199.2 Macro Definition Documentation

13.199.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_QuaZIODevice_t, stringdata0) +
      ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_quaziodevice.cpp.

13.199.3 Variable Documentation

13.199.3.1 const uint qt_meta_data_QuaZIODevice[] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,
        0,

        0
}
```

Definition at line 39 of file moc_quaziodevice.cpp.

13.199.3.2 const qt_meta_stringdata_QuaZIODevice_t qt_meta_stringdata_QuaZIODevice [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_QuaZIODevice_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   )

    },
    "QuaZIODevice"
}
```

Definition at line 30 of file moc_quaziodevice.cpp.

13.200 src/ckb/release/moc_quazipfile.cpp File Reference

```
#include "../quazip/quazipfile.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_quazipfile.cpp:

Data Structures

- struct qt_meta_stringdata_QuaZipFile_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_QuaZipFile_t qt_meta_stringdata_QuaZipFile
- static const uint qt_meta_data_QuaZipFile []

13.200.1 Data Structure Documentation

13.200.1.1 struct qt_meta_stringdata_QuaZipFile_t

Definition at line 21 of file moc_quazipfile.cpp.

Collaboration diagram for qt_meta_stringdata_QuaZipFile_t:

Data Fields

QByteArrayData	data[1]	
char	stringdata0[11]	

13.200.2 Macro Definition Documentation

13.200.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_QuaZipFile_t, stringdata0) + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_quazipfile.cpp.

13.200.3 Variable Documentation

13.200.3.1 const uint qt_meta_data_QuaZipFile[ ] [static]

Initial value:

```
= {

        7,
        0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,    0,
        0,
        0,

        0
}
```

Definition at line 39 of file moc_quazipfile.cpp.

13.200.3.2 const qt_meta_stringdata_QuaZipFile_t qt_meta_stringdata_QuaZipFile [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 10 ,   qptrdiff(offsetof(
      qt_meta_stringdata_QuaZipFile_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   )

    },
    "QuaZipFile"
}
```

Definition at line 30 of file moc_quazipfile.cpp.

13.201 src/ckb/release/moc_rebindwidget.cpp File Reference

```
#include "../rebindwidget.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_rebindwidget.cpp:

Data Structures

- struct qt_meta_stringdata_RebindWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_RebindWidget_t qt_meta_stringdata_RebindWidget
- static const uint qt_meta_data_RebindWidget []

13.201.1 Data Structure Documentation

13.201.1.1 struct qt_meta_stringdata_RebindWidget_t

Definition at line 21 of file moc_rebindwidget.cpp.

Collaboration diagram for qt_meta_stringdata_RebindWidget_t:

Data Fields

QByteArrayData	data[48]	
char	stringdata0[1100]	

13.201.2 Macro Definition Documentation

13.201.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_RebindWidget_t, stringdata0) +
      ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_rebindwidget.cpp.

13.201.3 Variable Documentation

13.201.3.1 const uint qt_meta_data_RebindWidget[] [static]

Definition at line 118 of file moc_rebindwidget.cpp.

13.201.3.2 const qt_meta_stringdata_RebindWidget_t qt_meta_stringdata_RebindWidget [static]

Definition at line 30 of file moc_rebindwidget.cpp.

13.202 src/ckb/release/moc_rlistwidget.cpp File Reference

```
#include "../rlistwidget.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_rlistwidget.cpp:

Data Structures

- struct qt_meta_stringdata_RListWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_RListWidget_t qt_meta_stringdata_RListWidget
- static const uint qt_meta_data_RListWidget []

13.202.1 Data Structure Documentation

13.202.1.1 struct qt_meta_stringdata_RListWidget_t

Definition at line 21 of file moc_rlistwidget.cpp.

Collaboration diagram for qt_meta_stringdata_RListWidget_t:

Data Fields

QByteArrayData	data[8]	
char	stringdata0[71]	

13.202.2 Macro Definition Documentation

13.202.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_RListWidget_t, stringdata0) + ofs
      \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_rlistwidget.cpp.

13.202.3 Variable Documentation

13.202.3.1 const uint qt_meta_data_RListWidget[] [static]

Definition at line 47 of file moc_rlistwidget.cpp.

13.202.3.2 const qt_meta_stringdata_RListWidget_t qt_meta_stringdata_RListWidget [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 11 ,   qptrdiff(offsetof(
```

```
      qt_meta_stringdata_RListWidget_t, stringdata0) +  0    -  0  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 12 ,   qptrdiff(offsetof(
      qt_meta_stringdata_RListWidget_t, stringdata0) +  12    -  1  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_RListWidget_t, stringdata0) +  25    -  2  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 9 ,   qptrdiff(offsetof(
      qt_meta_stringdata_RListWidget_t, stringdata0) +  26    -  3  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 5 ,   qptrdiff(offsetof(
      qt_meta_stringdata_RListWidget_t, stringdata0) +  36    -  4  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_RListWidget_t, stringdata0) +  42    -  5  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 4 ,   qptrdiff(offsetof(
      qt_meta_stringdata_RListWidget_t, stringdata0) +  59    -  6  * sizeof(
      QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 6 ,   qptrdiff(offsetof(
      qt_meta_stringdata_RListWidget_t, stringdata0) +  64    -  7  * sizeof(
      QByteArrayData))   )

    },
    "RListWidget\0orderChanged\0\0timerTick\0"
    "enter\0QListWidgetItem*\0item\0change"
}
```

Definition at line 30 of file moc_rlistwidget.cpp.

13.203 src/ckb/release/moc_settingswidget.cpp File Reference

```
#include "../settingswidget.h"
#include <QtCore/qbytearray.h>
#include <QtCore/qmetatype.h>
```

Include dependency graph for moc_settingswidget.cpp:

Data Structures

- struct qt_meta_stringdata_SettingsWidget_t

Macros

- #define QT_MOC_LITERAL(idx, ofs, len)

Variables

- static const qt_meta_stringdata_SettingsWidget_t qt_meta_stringdata_SettingsWidget
- static const uint qt_meta_data_SettingsWidget []

13.203.1 Data Structure Documentation

13.203.1.1 struct qt_meta_stringdata_SettingsWidget_t

Definition at line 21 of file moc_settingswidget.cpp.

Collaboration diagram for qt_meta_stringdata_SettingsWidget_t:

Data Fields

QByteArrayData	data[15]	
char	stringdata0[264]	

13.203.2 Macro Definition Documentation

13.203.2.1 #define QT_MOC_LITERAL(*idx, ofs, len*)

Value:

```
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET(len, \
    qptrdiff(offsetof(qt_meta_stringdata_SettingsWidget_t, stringdata0)
      + ofs \
        - idx * sizeof(QByteArrayData)) \
    )
```

Definition at line 25 of file moc_settingswidget.cpp.

13.203.3 Variable Documentation

13.203.3.1 const uint qt_meta_data_SettingsWidget[] [static]

Definition at line 59 of file moc_settingswidget.cpp.

13.203.3.2 const qt_meta_stringdata_SettingsWidget_t qt_meta_stringdata_SettingsWidget [static]

Initial value:

```
= {
    {
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 14 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  0    -  0  * sizeof
      (QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 21 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  15    -  1  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 0 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  37    -  2  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 20 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  38    -  3  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 5 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  59    -  4  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 21 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  65    -  5  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 20 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  87    -  6  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 19 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  108    -  7  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 19 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  128    -  8  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 20 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  148    -  9  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 7 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  169    -  10  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 23 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  177    -  11  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 22 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  201    -  12  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 16 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  224    -  13  *
      sizeof(QByteArrayData))   ),
Q_STATIC_BYTE_ARRAY_DATA_HEADER_INITIALIZER_WITH_OFFSET( 22 ,   qptrdiff(offsetof(
      qt_meta_stringdata_SettingsWidget_t, stringdata0) +  241    -  14  *
      sizeof(QByteArrayData))   )

    },
    "SettingsWidget\0on_pushButton_clicked\0"
    "\0on_capsBox_activated\0index\0"
    "on_shiftBox_activated\0on_ctrlBox_activated\0"
    "on_altBox_activated\0on_winBox_activated\0"
    "on_autoFWBox_clicked\0checked\0"
    "on_loginItemBox_clicked\0on_layoutBox_activated\0"
    "showLayoutDialog\0on_extraButton_clicked"
}
```

Definition at line 30 of file moc_settingswidget.cpp.

13.204 src/ckb/release/qrc_binary.cpp File Reference

Macros

- #define QT_RCC_PREPEND_NAMESPACE(name) name
- #define QT_RCC_MANGLE_NAMESPACE(name) name

Functions

- bool qRegisterResourceData (int, const unsigned char ∗, const unsigned char ∗, const unsigned char ∗)
- bool qUnregisterResourceData (int, const unsigned char ∗, const unsigned char ∗, const unsigned char ∗)
- int qInitResources_binary ()
- int qCleanupResources_binary ()

Variables

- static const unsigned char qt_resource_data []
- static const unsigned char qt_resource_name []
- static const unsigned char qt_resource_struct []

13.204.1 Macro Definition Documentation

13.204.1.1 #define QT_RCC_MANGLE_NAMESPACE(*name*) name

Definition at line 147 of file qrc_binary.cpp.

13.204.1.2 #define QT_RCC_PREPEND_NAMESPACE(*name*) name

Definition at line 146 of file qrc_binary.cpp.

Referenced by qCleanupResources_binary(), and qInitResources_binary().

13.204.2 Function Documentation

13.204.2.1 int qCleanupResources_binary ( )

Definition at line 171 of file qrc_binary.cpp.

References QT_RCC_PREPEND_NAMESPACE, qt_resource_data, qt_resource_name, qt_resource_struct, and qUnregisterResourceData().

```
{
    QT_RCC_PREPEND_NAMESPACE(qUnregisterResourceData)
        (0x01, qt_resource_struct, qt_resource_name,
    qt_resource_data);
    return 1;
}
```

Here is the call graph for this function:

13.204.2.2 int qInitResources_binary ( )

Definition at line 163 of file qrc_binary.cpp.

References qRegisterResourceData(), QT_RCC_PREPEND_NAMESPACE, qt_resource_data, qt_resource_name, and qt_resource_struct.

```
{
    QT_RCC_PREPEND_NAMESPACE(qRegisterResourceData)
        (0x01, qt_resource_struct, qt_resource_name, qt_resource_data);
    return 1;
}
```

Here is the call graph for this function:

13.204.2.3 bool qRegisterResourceData (int , const unsigned char * , const unsigned char * , const unsigned char *)

Referenced by qInitResources_binary().

Here is the caller graph for this function:

13.204.2.4 bool qUnregisterResourceData (int , const unsigned char * , const unsigned char * , const unsigned char *)

Referenced by qCleanupResources_binary().

Here is the caller graph for this function:

13.204.3 Variable Documentation

13.204.3.1 const unsigned char qt_resource_data[] [static]

Definition at line 9 of file qrc_binary.cpp.

Referenced by qCleanupResources_binary(), and qInitResources_binary().

13.204.3.2 const unsigned char qt_resource_name[] [static]

Initial value:

```
= {

  0x0,0x3,
  0x0,0x0,0x68,0xfe,
  0x0,0x62,
  0x0,0x69,0x0,0x6e,

  0x0,0x10,
  0x9,0x4b,0x25,0x27,
  0x0,0x63,
  0x0,0x6b,0x0,0x62,0x0,0x2d,0x0,0x6e,0x0,0x65,0x0,0x78,0x0,0x74,0x0,0x2d,0x0,0x6b,0x0,0x65,0x0,0x79,0x0,
      0x2e,0x0,0x67,0x0,0x70,0x0,0x67,

}
```

Definition at line 114 of file qrc_binary.cpp.

Referenced by qCleanupResources_binary(), and qInitResources_binary().

13.204.3.3 const unsigned char qt_resource_struct[] [static]

Initial value:

```
= {

  0x0,0x0,0x0,0x0,0x0,0x2,0x0,0x0,0x0,0x1,0x0,0x0,0x0,0x1,

  0x0,0x0,0x0,0x0,0x0,0x2,0x0,0x0,0x0,0x1,0x0,0x0,0x0,0x2,

  0x0,0x0,0x0,0xc,0x0,0x0,0x0,0x0,0x0,0x1,0x0,0x0,0x0,0x0,

}
```

Definition at line 128 of file qrc_binary.cpp.

Referenced by qCleanupResources_binary(), and qInitResources_binary().

13.205 src/ckb/release/qrc_image.cpp File Reference

Macros

- #define QT_RCC_PREPEND_NAMESPACE(name) name
- #define QT_RCC_MANGLE_NAMESPACE(name) name

Functions

- bool qRegisterResourceData (int, const unsigned char ∗, const unsigned char ∗, const unsigned char ∗)
- bool qUnregisterResourceData (int, const unsigned char ∗, const unsigned char ∗, const unsigned char ∗)
- int qInitResources_image ()
- int qCleanupResources_image ()

Variables

- static const unsigned char qt_resource_data []
- static const unsigned char qt_resource_name []
- static const unsigned char qt_resource_struct []

13.205.1 Macro Definition Documentation

13.205.1.1 #define QT_RCC_MANGLE_NAMESPACE(*name*) name

Definition at line 9796 of file qrc_image.cpp.

13.205.1.2 #define QT_RCC_PREPEND_NAMESPACE(*name*) name

Definition at line 9795 of file qrc_image.cpp.

Referenced by qCleanupResources_image(), and qInitResources_image().

13.205.2 Function Documentation

13.205.2.1 int qCleanupResources_image ( )

Definition at line 9820 of file qrc_image.cpp.

References QT_RCC_PREPEND_NAMESPACE, qt_resource_data, qt_resource_name, qt_resource_struct, and qUnregisterResourceData().

```
{
    QT_RCC_PREPEND_NAMESPACE(qUnregisterResourceData)
        (0x01, qt_resource_struct, qt_resource_name,
    qt_resource_data);
    return 1;
}
```

Here is the call graph for this function:

13.205.2.2 int qInitResources_image ( )

Definition at line 9812 of file qrc_image.cpp.

References qRegisterResourceData(), QT_RCC_PREPEND_NAMESPACE, qt_resource_data, qt_resource_name, and qt_resource_struct.

```
{
    QT_RCC_PREPEND_NAMESPACE(qRegisterResourceData)
        (0x01, qt_resource_struct, qt_resource_name,
    qt_resource_data);
    return 1;
}
```

Here is the call graph for this function:

13.205.2.3 bool qRegisterResourceData (int , const unsigned char * , const unsigned char * , const unsigned char *)

Referenced by qInitResources_image().

Here is the caller graph for this function:

13.205.2.4 bool qUnregisterResourceData (int , const unsigned char * , const unsigned char * , const unsigned char *)

Referenced by qCleanupResources_image().

Here is the caller graph for this function:

13.205.3 Variable Documentation

13.205.3.1 const unsigned char qt_resource_data[] [static]

Definition at line 9 of file qrc_image.cpp.

Referenced by qCleanupResources_image(), and qInitResources_image().

13.205.3.2 const unsigned char qt_resource_name[] [static]

Definition at line 9659 of file qrc_image.cpp.

Referenced by qCleanupResources_image(), and qInitResources_image().

13.205.3.3 const unsigned char qt_resource_struct[] [static]

Definition at line 9749 of file qrc_image.cpp.

Referenced by qCleanupResources_image(), and qInitResources_image().

13.206 src/ckb/release/qrc_text.cpp File Reference

Macros

- #define QT_RCC_PREPEND_NAMESPACE(name) name
- #define QT_RCC_MANGLE_NAMESPACE(name) name

Functions

- bool qRegisterResourceData (int, const unsigned char ∗, const unsigned char ∗, const unsigned char ∗)
- bool qUnregisterResourceData (int, const unsigned char ∗, const unsigned char ∗, const unsigned char ∗)
- int qInitResources_text ()
- int qCleanupResources_text ()

Variables

- static const unsigned char qt_resource_data []
- static const unsigned char qt_resource_name []
- static const unsigned char qt_resource_struct []

13.206.1 Macro Definition Documentation

13.206.1.1 #define QT_RCC_MANGLE_NAMESPACE(*name*) name

Definition at line 350 of file qrc_text.cpp.

13.206.1.2 #define QT_RCC_PREPEND_NAMESPACE(*name*) name

Definition at line 349 of file qrc_text.cpp.

Referenced by qCleanupResources_text(), and qInitResources_text().

13.206.2 Function Documentation

13.206.2.1 int qCleanupResources_text ( )

Definition at line 374 of file qrc_text.cpp.

References QT_RCC_PREPEND_NAMESPACE, qt_resource_data, qt_resource_name, qt_resource_struct, and qUnregisterResourceData().

```
{
    QT_RCC_PREPEND_NAMESPACE(qUnregisterResourceData)
        (0x01, qt_resource_struct, qt_resource_name,
    qt_resource_data);
    return 1;
}
```

Here is the call graph for this function:

13.206.2.2 int qInitResources_text ( )

Definition at line 366 of file qrc_text.cpp.

References qRegisterResourceData(), QT_RCC_PREPEND_NAMESPACE, qt_resource_data, qt_resource_name, and qt_resource_struct.

```
{
    QT_RCC_PREPEND_NAMESPACE(qRegisterResourceData)
        (0x01, qt_resource_struct, qt_resource_name,
    qt_resource_data);
    return 1;
}
```

Here is the call graph for this function:

13.206.2.3 bool qRegisterResourceData (int , const unsigned char * , const unsigned char * , const unsigned char *)

Referenced by qInitResources_text().

Here is the caller graph for this function:

13.206.2.4 bool qUnregisterResourceData (int , const unsigned char * , const unsigned char * , const unsigned char *)

Referenced by qCleanupResources_text().

Here is the caller graph for this function:

13.206.3 Variable Documentation

13.206.3.1 const unsigned char qt_resource_data[] [static]

Definition at line 9 of file qrc_text.cpp.

Referenced by qCleanupResources_text(), and qInitResources_text().

13.206.3.2 const unsigned char qt_resource_name[] [static]

Initial value:

```
= {

  0x0,0x3,
  0x0,0x0,0x7b,0xf4,
  0x0,0x74,
  0x0,0x78,0x0,0x74,

  0x0,0xb,
  0xa,0x1e,0x1,0xe0,
  0x0,0x63,
  0x0,0x6b,0x0,0x62,0x0,0x2e,0x0,0x64,0x0,0x65,0x0,0x73,0x0,0x6b,0x0,0x74,0x0,0x6f,0x0,0x70,

  0x0,0x10,
  0xe,0xac,0xaf,0x46,
  0x0,0x64,
  0x0,0x65,0x0,0x6d,0x0,0x6f,0x0,0x70,0x0,0x72,0x0,0x6f,0x0,0x66,0x0,0x69,0x0,0x6c,0x0,0x65,0x0,0x2e,0x0,
      0x63,0x0,0x6f,0x0,0x6e,0x0,0x66,

  0x0,0x11,
  0x0,0xd4,0x25,0xa4,
  0x0,0x63,
  0x0,0x6f,0x0,0x6d,0x0,0x2e,0x0,0x63,0x0,0x6b,0x0,0x62,0x0,0x2e,0x0,0x63,0x0,0x6b,0x0,0x62,0x0,0x2e,0x0,
      0x70,0x0,0x6c,0x0,0x69,0x0,0x73,0x0,0x74,


}
```

Definition at line 302 of file qrc_text.cpp.

Referenced by qCleanupResources_text(), and qInitResources_text().

13.206.3.3 const unsigned char qt_resource_struct[] [static]

Initial value:

```
= {

  0x0,0x0,0x0,0x0,0x0,0x2,0x0,0x0,0x0,0x1,0x0,0x0,0x0,0x1,
```

```
  0x0,0x0,0x0,0x0,0x0,0x2,0x0,0x0,0x0,0x3,0x0,0x0,0x0,0x2,
  0x0,0x0,0x0,0x4e,0x0,0x0,0x0,0x0,0x0,0x1,0x0,0x0,0xf,0x74,
  0x0,0x0,0x0,0xc,0x0,0x0,0x0,0x0,0x0,0x1,0x0,0x0,0x0,0x0,
  0x0,0x0,0x0,0x28,0x0,0x1,0x0,0x0,0x0,0x1,0x0,0x0,0x0,0xc6,
}
```

Definition at line 327 of file qrc_text.cpp.

Referenced by qCleanupResources_text(), and qInitResources_text().

13.207 src/ckb/rlistwidget.cpp File Reference

```
#include <QUuid>
#include "rlistwidget.h"
```

Include dependency graph for rlistwidget.cpp:

13.208 src/ckb/rlistwidget.h File Reference

```
#include <QListWidget>
#include <QTimer>
```

Include dependency graph for rlistwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class RListWidget

13.209 src/ckb/settingswidget.cpp File Reference

```
#include <QTimer>
#include "animscript.h"
#include "autorun.h"
#include "ckbsettings.h"
#include "kb.h"
#include "layoutdialog.h"
#include "settingswidget.h"
#include "ui_settingswidget.h"
```

Include dependency graph for settingswidget.cpp:

Functions

- static QString right (const QString &left)

Variables

- QString devpath
- static QStringList modKeys
- static QStringList modNames

13.209.1 Function Documentation

13.209.1.1 static QString right (const QString & *left*) [inline], [static]

Definition at line 118 of file settingswidget.cpp.

References left.

Referenced by _cmd_macro(), GradientDialogWidget::mouseMoveEvent(), readcmd(), and SettingsWidget::updateModifiers().

```
118                                                 {
119     if(left[0] != 'l')
120         return left;
121     return "r" + left.mid(1);
122 }
```

Here is the caller graph for this function:

13.209.2 Variable Documentation

13.209.2.1 QString devpath

Definition at line 4 of file kbmanager.cpp.

Referenced by _mkdevpath(), _mknotifynode(), _rmnotifynode(), _setupusb(), _updateconnected(), closeusb(), main(), mkfwnode(), os_inputmain(), os_setupusb(), rmdevpath(), and KbManager::scanKeyboards().

13.209.2.2 QStringList modKeys [static]

Definition at line 13 of file settingswidget.cpp.

Referenced by SettingsWidget::SettingsWidget(), and SettingsWidget::updateModifiers().

13.209.2.3 QStringList modNames [static]

Definition at line 13 of file settingswidget.cpp.

Referenced by SettingsWidget::SettingsWidget().

13.210 src/ckb/settingswidget.h File Reference

```
#include <QWidget>
#include "extrasettingswidget.h"
```

Include dependency graph for settingswidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class SettingsWidget

Namespaces

- Ui

13.211 src/ckb/ui_animadddialog.h File Reference

```
#include <QtCore/QVariant>
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QCheckBox>
#include <QtWidgets/QComboBox>
#include <QtWidgets/QDialog>
#include <QtWidgets/QDialogButtonBox>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHBoxLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QSpacerItem>
```

Include dependency graph for ui_animadddialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_AnimAddDialog
- class Ui::AnimAddDialog

Namespaces

- Ui

13.212 src/ckb/ui_animsettingdialog.h File Reference

```
#include <QtCore/QVariant>
```

```
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QCheckBox>
#include <QtWidgets/QDialog>
#include <QtWidgets/QDialogButtonBox>
#include <QtWidgets/QDoubleSpinBox>
#include <QtWidgets/QFrame>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QLineEdit>
#include <QtWidgets/QSpacerItem>
#include <QtWidgets/QTabWidget>
#include <QtWidgets/QWidget>
```

Include dependency graph for ui_animsettingdialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_AnimSettingDialog
- class Ui::AnimSettingDialog

Namespaces

- Ui

13.213 src/ckb/ui_extrasettingswidget.h File Reference

```
#include <QtCore/QVariant>
```

```
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QCheckBox>
#include <QtWidgets/QDialog>
#include <QtWidgets/QDialogButtonBox>
#include <QtWidgets/QFrame>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHBoxLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QPushButton>
#include <QtWidgets/QSpacerItem>
#include <QtWidgets/QSpinBox>
#include <QtWidgets/QWidget>
```

Include dependency graph for ui_extrasettingswidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_ExtraSettingsWidget
- class Ui::ExtraSettingsWidget

Namespaces

- Ui

13.214 src/ckb/ui_fwupgradedialog.h File Reference

```
#include <QtCore/QVariant>
```

```
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QDialog>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QProgressBar>
#include <QtWidgets/QPushButton>
#include <QtWidgets/QSpacerItem>
```

Include dependency graph for ui_fwupgradedialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_FwUpgradeDialog
- class Ui::FwUpgradeDialog

Namespaces

- Ui

13.215 src/ckb/ui_gradientdialog.h File Reference

```
#include <QtCore/QVariant>
```

```
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QDialog>
#include <QtWidgets/QDialogButtonBox>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QGroupBox>
#include <QtWidgets/QHBoxLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QLineEdit>
#include <QtWidgets/QListWidget>
#include <QtWidgets/QPushButton>
#include <QtWidgets/QSpacerItem>
#include <QtWidgets/QSpinBox>
#include "colorbutton.h"
#include "gradientdialogwidget.h"
```

Include dependency graph for ui_gradientdialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_GradientDialog
- class Ui::GradientDialog

Namespaces

- Ui

13.216 src/ckb/ui_kbanimwidget.h File Reference

```
#include <QtCore/QVariant>
```

```
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QComboBox>
#include <QtWidgets/QDoubleSpinBox>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHBoxLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QLineEdit>
#include <QtWidgets/QPushButton>
#include <QtWidgets/QSpacerItem>
#include <QtWidgets/QStackedWidget>
#include <QtWidgets/QVBoxLayout>
#include <QtWidgets/QWidget>
#include "rlistwidget.h"
```

Include dependency graph for ui_kbanimwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_KbAnimWidget
- class Ui::KbAnimWidget

Namespaces

- Ui

13.217 src/ckb/ui_kbbindwidget.h File Reference

```
#include <QtCore/QVariant>
```

```
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QFrame>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHBoxLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QPushButton>
#include <QtWidgets/QSpacerItem>
#include <QtWidgets/QVBoxLayout>
#include <QtWidgets/QWidget>
#include "keywidget.h"
#include "rebindwidget.h"
```

Include dependency graph for ui_kbbindwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_KbBindWidget
- class Ui::KbBindWidget

Namespaces

- Ui

13.218 src/ckb/ui_kblightwidget.h File Reference

```
#include <QtCore/QVariant>
```

```
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QCheckBox>
#include <QtWidgets/QComboBox>
#include <QtWidgets/QFrame>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHBoxLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QPushButton>
#include <QtWidgets/QSpacerItem>
#include <QtWidgets/QVBoxLayout>
#include <QtWidgets/QWidget>
#include "colorbutton.h"
#include "kbanimwidget.h"
#include "keywidget.h"
```

Include dependency graph for ui_kblightwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_KbLightWidget
- class Ui::KbLightWidget

Namespaces

- Ui

13.219 src/ckb/ui_kbprofiledialog.h File Reference

```
#include <QtCore/QVariant>
```

```
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QDialog>
#include <QtWidgets/QDialogButtonBox>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QSpacerItem>
#include "rlistwidget.h"
```

Include dependency graph for ui_kbprofiledialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_KbProfileDialog
- class Ui::KbProfileDialog

Namespaces

- Ui

13.220 src/ckb/ui_kbwidget.h File Reference

```
#include <QtCore/QVariant>
```

```
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QComboBox>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHBoxLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QPushButton>
#include <QtWidgets/QSpacerItem>
#include <QtWidgets/QTabWidget>
#include <QtWidgets/QWidget>
#include <kblightwidget.h>
#include "kbbindwidget.h"
#include "kperfwidget.h"
#include "mperfwidget.h"
#include "rlistwidget.h"
```

Include dependency graph for ui_kbwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_KbWidget
- class Ui::KbWidget

Namespaces

- Ui

13.221 src/ckb/ui_kperfwidget.h File Reference

```
#include <QtCore/QVariant>
```

```
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QCheckBox>
#include <QtWidgets/QComboBox>
#include <QtWidgets/QFrame>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHBoxLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QPushButton>
#include <QtWidgets/QSpacerItem>
#include <QtWidgets/QSpinBox>
#include <QtWidgets/QWidget>
#include <colorbutton.h>
```

Include dependency graph for ui_kperfwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_KPerfWidget
- class Ui::KPerfWidget

Namespaces

- Ui

13.222 src/ckb/ui_layoutdialog.h File Reference

```
#include <QtCore/QVariant>
```

```
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QComboBox>
#include <QtWidgets/QDialog>
#include <QtWidgets/QDialogButtonBox>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QSpacerItem>
```

Include dependency graph for ui_layoutdialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_LayoutDialog
- class Ui::LayoutDialog

Namespaces

- Ui

13.223 src/ckb/ui_mainwindow.h File Reference

```
#include <QtCore/QVariant>
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QMainWindow>
#include <QtWidgets/QTabWidget>
#include <QtWidgets/QWidget>
```

Include dependency graph for ui_mainwindow.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_MainWindow
- class Ui::MainWindow

Namespaces

- Ui

13.224 src/ckb/ui_modeselectdialog.h File Reference

```
#include <QtCore/QVariant>
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QDialog>
#include <QtWidgets/QDialogButtonBox>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QListWidget>
#include <QtWidgets/QPushButton>
```

Include dependency graph for ui_modeselectdialog.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_ModeSelectDialog
- class Ui::ModeSelectDialog

Namespaces

- Ui

13.225 src/ckb/ui_mperfwidget.h File Reference

```
#include <QtCore/QVariant>
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QCheckBox>
#include <QtWidgets/QComboBox>
#include <QtWidgets/QFrame>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHBoxLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QPushButton>
#include <QtWidgets/QSlider>
#include <QtWidgets/QSpacerItem>
#include <QtWidgets/QSpinBox>
#include <QtWidgets/QVBoxLayout>
#include <QtWidgets/QWidget>
#include <colorbutton.h>
```

Include dependency graph for ui_mperfwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_MPerfWidget
- class Ui::MPerfWidget

Namespaces

- Ui

13.226 src/ckb/ui_rebindwidget.h File Reference

```
#include <QtCore/QVariant>
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QCheckBox>
#include <QtWidgets/QComboBox>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QGroupBox>
#include <QtWidgets/QHBoxLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QLineEdit>
#include <QtWidgets/QPlainTextEdit>
#include <QtWidgets/QPushButton>
#include <QtWidgets/QRadioButton>
#include <QtWidgets/QSpacerItem>
#include <QtWidgets/QSpinBox>
#include <QtWidgets/QTabWidget>
#include <QtWidgets/QVBoxLayout>
#include <QtWidgets/QWidget>
```

Include dependency graph for ui_rebindwidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_RebindWidget
- class Ui::RebindWidget

Namespaces

- Ui

13.227 src/ckb/ui_settingswidget.h File Reference

```
#include <QtCore/QVariant>
#include <QtWidgets/QAction>
#include <QtWidgets/QApplication>
#include <QtWidgets/QButtonGroup>
#include <QtWidgets/QCheckBox>
#include <QtWidgets/QComboBox>
#include <QtWidgets/QFrame>
#include <QtWidgets/QGridLayout>
#include <QtWidgets/QHBoxLayout>
#include <QtWidgets/QHeaderView>
#include <QtWidgets/QLabel>
#include <QtWidgets/QPushButton>
#include <QtWidgets/QSpacerItem>
#include <QtWidgets/QWidget>
```

Include dependency graph for ui_settingswidget.h:

This graph shows which files directly or indirectly include this file:

Data Structures

- class Ui_SettingsWidget
- class Ui::SettingsWidget

Namespaces

- Ui

Index

~AnimAddDialog
AnimAddDialog, 50
~AnimScript
AnimScript, 59
~AnimSettingDialog
AnimSettingDialog, 107
~CkbSettings
CkbSettings, 127
~CkbSettingsWriter
CkbSettingsWriter, 140
~ColorMap
ColorMap, 152
~ExtraSettingsWidget
ExtraSettingsWidget, 178
~FwUpgradeDialog
FwUpgradeDialog, 187
~GradientDialog
GradientDialog, 218
~KPerfWidget
KPerfWidget, 706
~Kb
Kb, 266
~KbAnimWidget
KbAnimWidget, 351
~KbBindWidget
KbBindWidget, 405
~KbFirmware
KbFirmware, 416
~KbLight
KbLight, 430
~KbLightWidget
KbLightWidget, 465
~KbMode
KbMode, 493
~KbProfileDialog
KbProfileDialog, 556
~KbWidget
KbWidget, 572
~KeyAction
KeyAction, 608
~LayoutDialog
LayoutDialog, 719
~MPerfWidget
MPerfWidget, 781
~MacroReader
MacroReader, 723
~MainWindow
MainWindow, 736
~ModeSelectDialog
ModeSelectDialog, 753
~QuaGzipFile
QuaGzipFile, 816
~QuaZIODevice
QuaZIODevice, 822
~QuaZip
QuaZip, 831
~QuaZipDir
QuaZipDir, 862
~QuaZipFile
QuaZipFile, 882
~QuaZipFilePrivate
QuaZipFilePrivate, 913
~RebindWidget
RebindWidget, 939
~SGroup
SGroup, 1028
~SettingsWidget
SettingsWidget, 1006
_LAYOUT_MAX
KeyMap, 636
_MODEL_MAX
KeyMap, 637
_model, 1531
_readlines_ctx, 1243
_DEFAULT_SOURCE
os.h, 1438
_FILE_OFFSET_BIT
ioapi.h, 1712
_GNU_SOURCE
os.h, 1438
_LARGEFILE64_SOURCE
ioapi.h, 1713
_Z_OF
ioapi.h, 1715
unzip.c, 1763
unzip.h, 1817, 1818
zip.c, 1836
zip.h, 1889, 1890
__FILE_NOPATH__
includes.h, 1282
__USE_FILE_OFFSET64
ioapi.h, 1712
__USE_LARGEFILE64
ioapi.h, 1712
_alpha
ColorButton, 150
GradientButton, 206
_angleSnap

KbPerf, 533
_anim
AnimSettingDialog, 118
_animList
KbLight, 452
_animMap
KbLight, 452
_backing
CkbSettingsWriter, 141
_bigIcons
ColorButton, 150
_bind
KbBind, 394
KbMode, 501
_bindMap
KeyWidget, 677
_checkUpdates
KbFirmware, 416
_cmd_get
notify.c, 1426
_cmd_macro
input.c, 1285
_color
ColorButton, 150
_colorBuffer
AnimScript, 83
_colorMap
KbLight, 453
KeyWidget, 677
_colors
AnimScript, 83
ColorMap, 159
GradientDialogWidget, 242
_count
ColorMap, 159
_curDpi
KbPerf, 508
_current
GradientDialogWidget, 242
_currentMode
Kb, 307
KbProfile, 553
_currentProfile
Kb, 307
_daemonVersion
KbManager, 487
_delay
Kb, 307
_devParent
KbBind, 394
_devices
KbManager, 487
_dimming
KbLight, 453
_displayColorMap
KeyWidget, 678
_dither
Kb, 307
_dpiIndicator
KbPerf, 533
_eventTimer
KbManager, 487
_fileForBoard
KbFirmware, 417
_frameRate
Kb, 307
_freeprofile
profile.c, 1440
_friendlyName
Key, 602
_globalRemap
KbBind, 394
_globalSettings
ckbsettings.cpp, 1614
_guiVersion
KbManager, 487
_guid
KbAnim, 336
_hwProfile
Kb, 307
_iOpacity
KbPerf, 533
_id
KbMode, 501
KbProfile, 553
_indicatorList
KbLight, 453
_indicatorMap
KbLight, 453
_indicators
KeyWidget, 678
_info
AnimScript, 83
_isActive
KbAnim, 336
_isActiveKp
KbAnim, 336
_kbManager
KbManager, 488
_keyMap
KbProfile, 553
_keyNames
ColorMap, 159
_keys
AnimAddDialog, 53
AnimScript, 83
KbAnim, 336
KeyMap, 656
_kiss_fft_guts.h
C_ADD, 1550
C_ADDTO, 1550
C_FIXDIV, 1551
C_MUL, 1551
C_MULBYSCALAR, 1551
C_SUB, 1551
C_SUBFROM, 1551

HALF_OF, 1552
KISS_FFT_COS, 1552
KISS_FFT_SIN, 1552
kf_cexp, 1552
MAXFACTORS, 1552
pcpx, 1553
S_MUL, 1553
_latestForBoard
KbFirmware, 418
_layout
Kb, 308
_ledthread
input_linux.c, 1303
_liftHeight
KbPerf, 533
_light
AnimAddDialog, 53
KbMode, 501
_map
AnimScript, 83
KbAnim, 336
KbBind, 394
KbLight, 453
_mapCount
ColorMap, 159
_mkdevpath
devnode.c, 1244
_mknotifynode
devnode.c, 1246
_mode
KbAnim, 336
_modeList
ModeSelectDialog, 755
_model
Kb, 308
_modes
KbProfile, 553
_monochrome
KeyWidget, 678
_mouseAccel
Kb, 308
_name
KbAnim, 336
KbMode, 501
KbProfile, 553
_needsMapRefresh
KbLight, 453
_needsSave
Kb, 308
KbAnim, 336
KbBind, 394
KbLight, 453
KbMode, 501
KbPerf, 533
KbProfile, 553
_needsUpdate
KbBind, 394
KbPerf, 534
_nk95cmd
usb.h, 1515
usb_linux.c, 1532
_opacity
KbAnim, 337
_paramValues
AnimScript, 83
_parameters
KbAnim, 337
_patch
keymap.cpp, 1661
_path
AnimScript, 83
_perf
KbMode, 501
_presetValues
AnimScript, 84
_presets
AnimScript, 83
_previewAnim
KbLight, 453
_profiles
Kb, 308
_qColorMap
KbLight, 453
_removals
CkbSettingsWriter, 141
_resetusb
usb.c, 1495
usb.h, 1515
_rgbMode
KeyWidget, 678
_rmnotifynode
devnode.c, 1247
_scanTimer
KbManager, 488
_script
KbAnim, 337
_scriptGuid
KbAnim, 337
_scriptName
KbAnim, 337
_scrollSpeed
Kb, 308
_setLabel
ColorButton, 150
_settings
SGroup, 1028
_setupusb
usb.c, 1495
_shareDimming
kblight.cpp, 1644
_start
KbLight, 454
_start_dev
device.c, 1222
_stops
GradientButton, 206

GradientDialogWidget, 242
_storageName
Key, 602
_tempParameters
KbAnim, 337
_updateconnected
devnode.c, 1247
_updates
CkbSettingsWriter, 141
_usbrecv
usb.c, 1497
usb.h, 1516
_usbsend
usb.c, 1498
usb.h, 1517
_value
KeyAction, 630
_winLock
KbBind, 394
_xyLink
MPerfWidget, 791

ACCEL
command.h, 1215
ACTIVE
command.h, 1215
ADD
KeyWidget, 660
ALWAYS_OFF
KPerfWidget, 704
ALWAYS_ON
KPerfWidget, 704
ACT_LIGHT
device.h, 1225
ACT_LOCK
device.h, 1225
ACT_M1
device.h, 1225
ACT_M2
device.h, 1225
ACT_M3
device.h, 1226
ACT_MR_RING
device.h, 1226
ACT_NEXT
device.h, 1226
ACT_NEXT_NOWRAP
device.h, 1226
aCopyLabel
Ui::KbAnimWidget, 344
Ui_KbAnimWidget, 1077
ALLOC
unzip.c, 1761
zip.c, 1833
aMissingLabel
Ui::KbAnimWidget, 344
Ui_KbAnimWidget, 1077
aMissingPage
Ui::KbAnimWidget, 344
Ui_KbAnimWidget, 1077
ANGLE
ckb-pinwheel/main.c, 1395
ANIM_KRSTOP
keyaction.cpp, 1655
ANIM_MAX
ckb-ripple/main.c, 1412
ckb-wave/main.c, 1418
ANIM_ONCE
keyaction.cpp, 1655
ANSI_ENTER_H
keymap.cpp, 1658
ANSI_ENTER_W
keymap.cpp, 1658
ANSI_ENTER_X
keymap.cpp, 1658
ANSI_ENTER_Y
keymap.cpp, 1658
ANSI_LSHIFT_W
keymap.cpp, 1658
ANSI_LSHIFT_X
keymap.cpp, 1659
aNameLabel
Ui::KbAnimWidget, 344
Ui_KbAnimWidget, 1077
APPEND_STATUS_CREATE
zip.h, 1887
aSnapBox
Ui::MPerfWidget, 767
Ui_MPerfWidget, 1152
AUTO_CHECK_TIME
kbfirmware.cpp, 1640
aVerLabel
Ui::KbAnimWidget, 345
Ui_KbAnimWidget, 1078
aa
ckb-rain/main.c, 1404
ab
ckb-rain/main.c, 1404
action
KbBind, 370
actionAbout
Ui::MainWindow, 731
Ui_MainWindow, 1136
actionButton
Ui::FwUpgradeDialog, 198
Ui_FwUpgradeDialog, 1062
actionExit
Ui::MainWindow, 731
Ui_MainWindow, 1136
actionTab
Ui::RebindWidget, 982
Ui_RebindWidget, 1175
active
devcmd.__unnamed__, 161
activeDevices
kb.cpp, 1631
activeLights

kblight.cpp, 1644
Add
KbAnim, 314
add_data_in_datablock
zip.c, 1836
addAnim
KbAnimWidget, 351
KbLight, 430
addCurrentFileToDirectoryMap
QuaZipPrivate, 927
addDevice
MainWindow, 737
addNewModeItem
KbWidget, 572
addNewProfileItem
KbProfileDialog, 556
addPreset
GradientDialog, 218
adjustDisplay
KeyAction, 608
advance
AnimScript, 60
ag
ckb-rain/main.c, 1404
alloc
ColorMap, 153
allocate_new_datablock
zip.c, 1837
allocprofile
devcmd.__unnamed__, 161
profile.c, 1440
profile.h, 1456
allowAlpha
ColorButton, 144, 145
altBox
Ui::SettingsWidget, 1021
Ui_SettingsWidget, 1196
altLabel
Ui::SettingsWidget, 1021
Ui_SettingsWidget, 1196
angle
ckb-wave/main.c, 1424
angleDialChanged
AnimSettingDialog, 107
angleDialMapper
AnimSettingDialog, 118
angleFlip
animsettingdialog.cpp, 1585
angleSnap
KbPerf, 508, 509
angleSpinnerChanged
AnimSettingDialog, 108
angleSpinnerMapper
AnimSettingDialog, 118
angleSpinners
AnimSettingDialog, 118
anim
ckb-gradient/main.c, 1382
ckb-ripple/main.c, 1415
ckb-wave/main.c, 1424
AnimScript::Param, 58, 1583
anim_add
ckb-heat/main.c, 1384
ckb-mviz/main.c, 1389
ckb-ripple/main.c, 1412
ckb-wave/main.c, 1418
anim_remove
ckb-heat/main.c, 1385
ckb-mviz/main.c, 1389
ckb-ripple/main.c, 1412
ckb-wave/main.c, 1418
animAction
KeyAction, 609
AnimAddDialog, 48
~AnimAddDialog, 50
_keys, 53
_light, 53
AnimAddDialog, 49
AnimAddDialog, 49
chosenPreset, 50
chosenScript, 51
on_animBox_activated, 51
on_presetBox_activated, 52
on_previewBox_clicked, 53
scripts, 53
showPreview, 53
ui, 54
animBox
Ui::AnimAddDialog, 46
Ui::RebindWidget, 982
Ui_AnimAddDialog, 1032
Ui_RebindWidget, 1175
animButton
Ui::KbLightWidget, 460
Ui::RebindWidget, 982
Ui_KbLightWidget, 1092
Ui_RebindWidget, 1175
animChanged
KbAnimWidget, 352
animCountLabel
Ui::ExtraSettingsWidget, 170
Ui_ExtraSettingsWidget, 1053
animInfo
KeyAction, 610
animKeypress
KbLight, 430
animKrBox
Ui::RebindWidget, 982
Ui_RebindWidget, 1175
AnimList
KbLight, 429
animList
KbLight, 431, 432
Ui::KbAnimWidget, 344
Ui_KbAnimWidget, 1077
animName

Ui::AnimSettingDialog, 93
Ui_AnimSettingDialog, 1040
animOnceBox
Ui::RebindWidget, 982
Ui_RebindWidget, 1175
animPage
Ui::KbAnimWidget, 344
Ui_KbAnimWidget, 1078
animPathLabel
Ui::ExtraSettingsWidget, 170
Ui_ExtraSettingsWidget, 1053
animScanButton
Ui::ExtraSettingsWidget, 170
Ui_ExtraSettingsWidget, 1054
AnimScript, 54
~AnimScript, 59
_colorBuffer, 83
_colors, 83
_info, 83
_keys, 83
_map, 83
_paramValues, 83
_path, 83
_presetValues, 84
_presets, 83
advance, 60
AnimScript, 59
AnimScript, 59
author, 60
begin, 61
colors, 62
copy, 62
copyright, 63
count, 63
description, 64
durationMsec, 84
end, 64
firstFrame, 84
frame, 65
guid, 66
hasFrame, 66
hasKeypress, 67
hasParam, 67
inFrame, 84
init, 68
initialized, 84
KP_NAME, 84
KP_NONE, 84
KP_POSITION, 84
keypress, 69
lastFrame, 84
license, 70
list, 70
load, 71
minX, 85
minY, 85
name, 74
param, 74
paramIterator, 76
parameters, 75
path, 76
preset, 76
PresetValue, 59
presets, 77
printParams, 77
process, 85
readAnyFrame, 85
readFrame, 85
readProcess, 78
repeatMsec, 85
retrigger, 79
scan, 80
scripts, 85
setDuration, 80
stop, 81
stopped, 85
version, 82
year, 82
AnimSettingDialog, 99
~AnimSettingDialog, 107
_anim, 118
angleDialChanged, 107
angleDialMapper, 118
angleSpinnerChanged, 108
angleSpinnerMapper, 118
angleSpinners, 118
AnimSettingDialog, 102
AnimSettingDialog, 102
hLine, 109
hasRepeat, 119
kpStopCheck, 119
lastDuration, 119
name, 110
newDuration, 110
on_delayBox_valueChanged, 111
on_kpDelayBox_valueChanged, 112
on_kpReleaseBox_stateChanged, 112
on_kpRepeatBox_valueChanged, 113
on_repeatBox_valueChanged, 113
settingWidgets, 119
stopCheck, 119
ui, 119
updateMapper, 119
updateParam, 114
updateStops, 117
animTab
Ui::RebindWidget, 982
Ui_RebindWidget, 1176
animWidget
Ui::KbLightWidget, 460
Ui_KbLightWidget, 1093
animation
KeyWidget, 678
animations
KbAnimWidget, 365
animcolor

ckb-gradient/main.c, 1382
ckb-heat/main.c, 1388
ckb-mviz/main.c, 1394
ckb-pinwheel/main.c, 1398
ckb-ripple/main.c, 1416
ckb-wave/main.c, 1424
animlength
ckb-pinwheel/main.c, 1398
ckb-ripple/main.c, 1416
ckb-wave/main.c, 1424
anims
ckb-heat/main.c, 1388
animscript.cpp
ONE_DAY, 1582
urlParam, 1582
animsettingdialog.cpp
angleFlip, 1585
appShare
main.cpp, 1689
mainwindow.cpp, 1694
append
KbProfile, 541
appendProfile
Kb, 269
applyButton
Ui::RebindWidget, 982
Ui_RebindWidget, 1176
applyChanges
RebindWidget, 939
applyIndicators
KbPerf, 509
ar
ckb-rain/main.c, 1404
atEnd
QuaZipFile, 882
author
AnimScript, 60
autoClose
QuaZipPrivate, 931
autoFWBox
Ui::SettingsWidget, 1021
Ui_SettingsWidget, 1196
AutoRun, 120
available, 120
disable, 121
enable, 121
isEnabled, 122
once, 123
autoSave
Kb, 269
autorun.cpp
settingPath, 1587
available
AutoRun, 120

BIND
command.h, 1216
BOTH
KPerfWidget, 704
BR1
led_keyboard.c, 1355
BR2
led_keyboard.c, 1355
BR4
led_keyboard.c, 1355
BTN_WHEELDOWN
daemon/keymap.h, 1673
BTN_WHEELUP
daemon/keymap.h, 1673
BUFREADCOMMENT
unzip.c, 1762
zip.c, 1834
BUILD.md, 1207
BUTTON_HID_COUNT
keymap.c, 1311
backing
CkbSettings, 138
base
KbLight, 432
begin
AnimScript, 61
beginGroup
CkbSettings, 127
bgButton
Ui::KbLightWidget, 460
Ui_KbLightWidget, 1093
bigIcons
ColorButton, 145, 146
bind
devcmd.__unnamed__, 161
KbBindWidget, 412
KbMode, 493
KbPerf, 510
RebindWidget, 964
bindAction
KbBind, 370
BindMap
KeyWidget, 659
bindMap
KeyWidget, 660
bindTab
Ui::KbWidget, 596
Ui_KbWidget, 1105
bindWidget
Ui::KbWidget, 596
Ui_KbWidget, 1105
binding, 1480
bit_reverse_table
led_keyboard.c, 1362
blend
KbAnim, 317
blendAdd
kbanim.cpp, 1633
blendBox
Ui::KbAnimWidget, 345
Ui_KbAnimWidget, 1078
blendDivide

kbanim.cpp, 1633
blendFunc
kbanim.cpp, 1633
blendMultiply
kbanim.cpp, 1633
blendNormal
kbanim.cpp, 1633
blendSubtract
kbanim.cpp, 1634
blob
FwUpgradeDialog, 192
boxXChanged
MPerfWidget, 781
boxXMapper
MPerfWidget, 791
boxYChanged
MPerfWidget, 782
boxYMapper
MPerfWidget, 791
brightnessBox
Ui::ExtraSettingsWidget, 170
Ui::KbLightWidget, 460
Ui_ExtraSettingsWidget, 1054
Ui_KbLightWidget, 1093
btnClearMacro
Ui::RebindWidget, 983
Ui_RebindWidget, 1176
btnStartMacro
Ui::RebindWidget, 983
Ui_RebindWidget, 1176
btnStopMacro
Ui::RebindWidget, 983
Ui_RebindWidget, 1176
builtIn
GradientDialog::Preset, 794
buttonBox
Ui::AnimAddDialog, 47
Ui::AnimSettingDialog, 93
Ui::ExtraSettingsWidget, 170
Ui::GradientDialog, 211
Ui::KbProfileDialog, 567
Ui::LayoutDialog, 716
Ui::ModeSelectDialog, 750
Ui_AnimAddDialog, 1032
Ui_AnimSettingDialog, 1040
Ui_ExtraSettingsWidget, 1054
Ui_GradientDialog, 1069
Ui_KbProfileDialog, 1098
Ui_LayoutDialog, 1132
Ui_ModeSelectDialog, 1140
buttonMapper1
MPerfWidget, 791
buttonMapper2
MPerfWidget, 791
byPosition
KeyMap, 638
bytesAvailable
QuaZipFile, 883
CAPS
KbPerf, 506
CMD_FIRST
command.h, 1215
CMD_LAST
command.h, 1216
CMD_VT_FIRST
command.h, 1215
C_ADD
_kiss_fft_guts.h, 1550
C_ADDTO
_kiss_fft_guts.h, 1550
C_FIXDIV
_kiss_fft_guts.h, 1551
C_MUL
_kiss_fft_guts.h, 1551
C_MULBYSCALAR
_kiss_fft_guts.h, 1551
C_SUB
_kiss_fft_guts.h, 1551
C_SUBFROM
_kiss_fft_guts.h, 1551
CENTRALHEADERMAGIC
zip.c, 1834
CKB_CONTAINER
ckb-anim.h, 1593
CKB_COPYRIGHT
ckb-anim.h, 1593
CKB_DESCRIPTION
ckb-anim.h, 1593
CKB_DOWN
ckb-anim.h, 1594
CKB_GRAD_MAX
ckb-anim.h, 1594
CKB_GUID
ckb-anim.h, 1594
CKB_KEYCLEAR
ckb-anim.h, 1594
CKB_KEYNAME_MAX
ckb-anim.h, 1594
CKB_KP_NAME
ckb-anim.h, 1594
CKB_KP_NONE
ckb-anim.h, 1594
CKB_KP_POSITION
ckb-anim.h, 1594
CKB_KPMODE
ckb-anim.h, 1594
CKB_LICENSE
ckb-anim.h, 1595
CKB_LIVEPARAMS
ckb-anim.h, 1595
CKB_MAX_WORD
ckb-anim.h, 1595
CKB_NAME
ckb-anim.h, 1595
CKB_PARAM
ckb-anim.h, 1595

CKB_PARAM_AGRADIENT
ckb-anim.h, 1595
CKB_PARAM_ANGLE
ckb-anim.h, 1595
CKB_PARAM_ARGB
ckb-anim.h, 1595
CKB_PARAM_BOOL
ckb-anim.h, 1595
CKB_PARAM_DOUBLE
ckb-anim.h, 1596
CKB_PARAM_GRADIENT
ckb-anim.h, 1596
CKB_PARAM_LABEL
ckb-anim.h, 1596
CKB_PARAM_LONG
ckb-anim.h, 1596
CKB_PARAM_RGB
ckb-anim.h, 1596
CKB_PARAM_STRING
ckb-anim.h, 1596
CKB_PARSE_AGRADIENT
ckb-anim.h, 1596
CKB_PARSE_ANGLE
ckb-anim.h, 1596
CKB_PARSE_ARGB
ckb-anim.h, 1596
CKB_PARSE_BOOL
ckb-anim.h, 1597
CKB_PARSE_DOUBLE
ckb-anim.h, 1597
CKB_PARSE_GRADIENT
ckb-anim.h, 1597
CKB_PARSE_LONG
ckb-anim.h, 1597
CKB_PARSE_RGB
ckb-anim.h, 1597
CKB_PARSE_STRING
ckb-anim.h, 1597
CKB_PREEMPT
ckb-anim.h, 1597
CKB_PRESET_END
ckb-anim.h, 1597
CKB_PRESET_PARAM
ckb-anim.h, 1597
CKB_PRESET_START
ckb-anim.h, 1598
CKB_REAL_ANGLE
ckb-anim.h, 1598
CKB_REPEAT
ckb-anim.h, 1598
CKB_TIME_ABSOLUTE
ckb-anim.h, 1598
CKB_TIME_DURATION
ckb-anim.h, 1598
CKB_TIMEMODE
ckb-anim.h, 1598
CKB_UP
ckb-anim.h, 1598
CKB_VERSION
ckb-anim.h, 1598
CLEAR_KEYBIT
structures.h, 1489
CMD_COUNT
command.h, 1214
CMD_DEV_COUNT
command.h, 1214
CRC32
crypt.h, 1707
cacheWritesInProgress
ckbsettings.cpp, 1613
ckbsettingswriter.cpp, 1617
calculate
QuaAdler32, 805
QuaChecksum32, 808
QuaCrc32, 811
call_zopen64
qioapi.cpp, 1720
call_zseek64
qioapi.cpp, 1720
call_ztell64
qioapi.cpp, 1720
cancelButton
Ui::FwUpgradeDialog, 198
Ui::RebindWidget, 983
Ui_FwUpgradeDialog, 1063
Ui_RebindWidget, 1176
capsBox
Ui::KPerfWidget, 691
Ui::SettingsWidget, 1021
Ui_KPerfWidget, 1119
Ui_SettingsWidget, 1196
capsColorOff
Ui::KPerfWidget, 691
Ui_KPerfWidget, 1119
capsColorOn
Ui::KPerfWidget, 691
Ui_KPerfWidget, 1120
capsLabel
Ui::SettingsWidget, 1021
Ui_SettingsWidget, 1196
CaseSensitivity
QuaZip, 830
caseSensitivity
QuaZipDir, 863
QuaZipFilePrivate, 914
catchUp
KbAnim, 318
cd
QuaZipDir, 863
cdUp
QuaZipDir, 865
centralWidget
Ui::MainWindow, 731
Ui_MainWindow, 1136
change
RListWidget, 999

changeAnim
KbLightWidget, 466
changeAnimKeys
KbLightWidget, 466
changeColor
KbLightWidget, 467
checkFwUpdates
MainWindow, 737
checkUpdates
KbFirmware, 419
checksum
QuaAdler32, 806
QuaCrc32, 812
childGroups
CkbSettings, 127
childKeys
CkbSettings, 128
chosenPreset
AnimAddDialog, 50
chosenScript
AnimAddDialog, 51
ckb-anim.h
CKB_CONTAINER, 1593
CKB_COPYRIGHT, 1593
CKB_DESCRIPTION, 1593
CKB_DOWN, 1594
CKB_GRAD_MAX, 1594
CKB_GUID, 1594
CKB_KEYCLEAR, 1594
CKB_KEYNAME_MAX, 1594
CKB_KP_NAME, 1594
CKB_KP_NONE, 1594
CKB_KP_POSITION, 1594
CKB_KPMODE, 1594
CKB_LICENSE, 1595
CKB_LIVEPARAMS, 1595
CKB_MAX_WORD, 1595
CKB_NAME, 1595
CKB_PARAM, 1595
CKB_PARAM_AGRADIENT, 1595
CKB_PARAM_ANGLE, 1595
CKB_PARAM_ARGB, 1595
CKB_PARAM_BOOL, 1595
CKB_PARAM_DOUBLE, 1596
CKB_PARAM_GRADIENT, 1596
CKB_PARAM_LABEL, 1596
CKB_PARAM_LONG, 1596
CKB_PARAM_RGB, 1596
CKB_PARAM_STRING, 1596
CKB_PARSE_AGRADIENT, 1596
CKB_PARSE_ANGLE, 1596
CKB_PARSE_ARGB, 1596
CKB_PARSE_BOOL, 1597
CKB_PARSE_DOUBLE, 1597
CKB_PARSE_GRADIENT, 1597
CKB_PARSE_LONG, 1597
CKB_PARSE_RGB, 1597
CKB_PARSE_STRING, 1597
CKB_PREEMPT, 1597
CKB_PRESET_END, 1597
CKB_PRESET_PARAM, 1597
CKB_PRESET_START, 1598
CKB_REAL_ANGLE, 1598
CKB_REPEAT, 1598
CKB_TIME_ABSOLUTE, 1598
CKB_TIME_DURATION, 1598
CKB_TIMEMODE, 1598
CKB_UP, 1598
CKB_VERSION, 1598
ckb_alpha_blend, 1599
ckb_frame, 1599
ckb_getline, 1600
ckb_grad_color, 1601
ckb_info, 1602
ckb_init, 1603
ckb_keypress, 1603
ckb_parameter, 1605
ckb_read_params, 1605
ckb_scan_grad, 1606
ckb_start, 1607
ckb_time, 1608
FALSE, 1598
M_PI, 1599
main, 1608
printurl, 1610
TRUE, 1599
urldecode, 1611
ckb-daemon/main.c
features_mask, 1376
hwload_mode, 1376
localecase, 1368
main, 1368
main_ac, 1376
main_av, 1376
quit, 1371
quitWithLock, 1372
reset_stop, 1376
restart, 1373
sighandler, 1374
sighandler2, 1375
timespec_add, 1375
ckb-gradient/main.c
anim, 1382
animcolor, 1382
ckb_frame, 1378
ckb_info, 1379
ckb_init, 1380
ckb_keypress, 1380
ckb_parameter, 1381
ckb_start, 1381
ckb_time, 1382
HOLD, 1378
kphold, 1382
kprelease, 1382
NONE, 1378
randomize, 1382

ckb-heat/main.c
anim_add, 1384
anim_remove, 1385
animcolor, 1388
anims, 1388
ckb_frame, 1385
ckb_info, 1386
ckb_init, 1386
ckb_keypress, 1387
ckb_parameter, 1387
ckb_start, 1387
ckb_time, 1387
ffade, 1388
pressestofull, 1388
randomBright, 1388
ckb-mviz/main.c
anim_add, 1389
anim_remove, 1389
animcolor, 1394
ckb_frame, 1390
ckb_info, 1390
ckb_init, 1391
ckb_keypress, 1391
ckb_parameter, 1391
ckb_start, 1391
ckb_time, 1392
gcounter, 1394
getFreqDec, 1392
inbuf, 1394
max, 1393
min, 1393
outbuf, 1394
pas, 1394
power, 1394
powers, 1394
ckb-pinwheel/main.c
ANGLE, 1395
animcolor, 1398
animlength, 1398
ckb_frame, 1396
ckb_info, 1396
ckb_init, 1397
ckb_keypress, 1397
ckb_parameter, 1397
ckb_start, 1397
ckb_time, 1398
counter_clock, 1398
frame, 1398
symmetric, 1398
x, 1398
x_offset, 1399
y, 1399
y_offset, 1399
ckb-rain/main.c
aa, 1404
ab, 1404
ag, 1404
ar, 1404
ckb_frame, 1400
ckb_info, 1401
ckb_init, 1402
ckb_keypress, 1402
ckb_parameter, 1402
ckb_start, 1403
ckb_time, 1403
DROP_MAX, 1400
drop, 1404
drop_add, 1403
maxsize, 1404
period, 1405
spawn, 1405
speed, 1405
tick, 1405
ckb-random/main.c
ckb_frame, 1407
ckb_info, 1407
ckb_init, 1407
ckb_keypress, 1408
ckb_parameter, 1408
ckb_start, 1408
ckb_time, 1409
current, 1410
fadein, 1410
newtarget, 1409
phase, 1410
target, 1410
useopacity, 1410
ckb-ripple/main.c
ANIM_MAX, 1412
anim, 1415
anim_add, 1412
anim_remove, 1412
animcolor, 1416
animlength, 1416
ckb_frame, 1412
ckb_info, 1413
ckb_init, 1414
ckb_keypress, 1414
ckb_parameter, 1414
ckb_start, 1415
ckb_time, 1415
kbsize, 1416
kprelease, 1416
randomize, 1416
symmetric, 1416
x_offset, 1416
y_offset, 1416
ckb-wave/main.c
ANIM_MAX, 1418
angle, 1424
anim, 1424
anim_add, 1418
anim_remove, 1418
animcolor, 1424
animlength, 1424
ckb_frame, 1418

ckb_info, 1419
ckb_init, 1420
ckb_keypress, 1420
ckb_parameter, 1421
ckb_start, 1422
ckb_time, 1423
kprelease, 1424
left, 1424
symmetric, 1424
top, 1424
width, 1424
ckb_gradient, 1593
ckb_key, 1591
ckb_runctx, 1592
ckb_alpha_blend
ckb-anim.h, 1599
ckb_err
includes.h, 1282
ckb_err_fn
includes.h, 1282
ckb_err_nofile
includes.h, 1282
ckb_fatal
includes.h, 1282
ckb_fatal_fn
includes.h, 1282
ckb_fatal_nofile
includes.h, 1282
ckb_frame
ckb-anim.h, 1599
ckb-gradient/main.c, 1378
ckb-heat/main.c, 1385
ckb-mviz/main.c, 1390
ckb-pinwheel/main.c, 1396
ckb-rain/main.c, 1400
ckb-random/main.c, 1407
ckb-ripple/main.c, 1412
ckb-wave/main.c, 1418
ckb_getline
ckb-anim.h, 1600
ckb_grad_color
ckb-anim.h, 1601
ckb_info
ckb-anim.h, 1602
ckb-gradient/main.c, 1379
ckb-heat/main.c, 1386
ckb-mviz/main.c, 1390
ckb-pinwheel/main.c, 1396
ckb-rain/main.c, 1401
ckb-random/main.c, 1407
ckb-ripple/main.c, 1413
ckb-wave/main.c, 1419
includes.h, 1282
ckb_info_fn
includes.h, 1282
ckb_info_nofile
includes.h, 1283
ckb_init
ckb-anim.h, 1603
ckb-gradient/main.c, 1380
ckb-heat/main.c, 1386
ckb-mviz/main.c, 1391
ckb-pinwheel/main.c, 1397
ckb-rain/main.c, 1402
ckb-random/main.c, 1407
ckb-ripple/main.c, 1414
ckb-wave/main.c, 1420
ckb_keypress
ckb-anim.h, 1603
ckb-gradient/main.c, 1380
ckb-heat/main.c, 1387
ckb-mviz/main.c, 1391
ckb-pinwheel/main.c, 1397
ckb-rain/main.c, 1402
ckb-random/main.c, 1408
ckb-ripple/main.c, 1414
ckb-wave/main.c, 1420
ckb_parameter
ckb-anim.h, 1605
ckb-gradient/main.c, 1381
ckb-heat/main.c, 1387
ckb-mviz/main.c, 1391
ckb-pinwheel/main.c, 1397
ckb-rain/main.c, 1402
ckb-random/main.c, 1408
ckb-ripple/main.c, 1414
ckb-wave/main.c, 1421
ckb_read_params
ckb-anim.h, 1605
ckb_s_err
includes.h, 1283
ckb_s_out
includes.h, 1283
ckb_scan_grad
ckb-anim.h, 1606
ckb_start
ckb-anim.h, 1607
ckb-gradient/main.c, 1381
ckb-heat/main.c, 1387
ckb-mviz/main.c, 1391
ckb-pinwheel/main.c, 1397
ckb-rain/main.c, 1403
ckb-random/main.c, 1408
ckb-ripple/main.c, 1415
ckb-wave/main.c, 1422
ckb_time
ckb-anim.h, 1608
ckb-gradient/main.c, 1382
ckb-heat/main.c, 1387
ckb-mviz/main.c, 1392
ckb-pinwheel/main.c, 1398
ckb-rain/main.c, 1403
ckb-random/main.c, 1409
ckb-ripple/main.c, 1415
ckb-wave/main.c, 1423
ckb_warn

includes.h, 1283
ckb_warn_fn
includes.h, 1283
ckb_warn_nofile
includes.h, 1283
ckbDaemonVersion
KbManager, 479
ckbDaemonVersionF
KbManager, 479
ckbGuiVersion
KbManager, 480
ckbGuiVersionF
KbManager, 480
CkbSettings, 124
~CkbSettings, 127
backing, 138
beginGroup, 127
childGroups, 127
childKeys, 128
CkbSettings, 126, 127
CkbSettings, 126, 127
cleanUp, 129
contains, 130
containsGroup, 130
endGroup, 131
get, 131
groups, 138
isBusy, 132
pwd, 133, 134
remove, 135
removeCache, 139
set, 135
setValue, 136
value, 137
writeCache, 139
CkbSettingsWriter, 139
~CkbSettingsWriter, 140
_backing, 141
_removals, 141
_updates, 141
CkbSettingsWriter, 140
CkbSettingsWriter, 140
run, 141
ckbVersion
KbFirmware::FW, 184
ckbsettings.cpp
_globalSettings, 1614
cacheWritesInProgress, 1613
globalCache, 1614
globalSettings, 1613
globalThread, 1614
lockMutex, 1613
lockMutexCache, 1613
lockMutexStatic, 1613
lockMutexStatic2, 1613
settingsCacheMutex, 1614
settingsMutex, 1614
ckbsettingswriter.cpp
cacheWritesInProgress, 1617
lockMutex, 1616
lockMutexCache, 1616
lockMutexStatic, 1616
lockMutexStatic2, 1616
settingsCacheMutex, 1617
settingsMutex, 1617
cleanBlob
FwUpgradeDialog, 187
cleanUp
CkbSettings, 129
cleanup
MainWindow, 738
clear
ColorMap, 153
clearAnimation
KeyWidget, 661
clearDirectoryMap
QuaZipPrivate, 928
clearSelection
KbAnimWidget, 353
KeyWidget, 661
close
KbLight, 433
QuaGzipFile, 816
QuaZIODevice, 822
QuaZip, 832
QuaZipFile, 883
closeAction
MainWindow, 746
closeEvent
FwUpgradeDialog, 187
MainWindow, 739
closeusb
usb.c, 1499
usb.h, 1517
cmd
command.h, 1215
Kb, 308
cmd_active_kb
device.h, 1227
device_keyboard.c, 1233
cmd_active_mouse
device.h, 1227
device_mouse.c, 1237
cmd_bind
input.c, 1287
input.h, 1295
cmd_dpi
dpi.c, 1263
dpi.h, 1268
cmd_dpisel
dpi.c, 1264
dpi.h, 1269
cmd_erase
profile.c, 1441
profile.h, 1457
cmd_eraseprofile

profile.c, 1442
profile.h, 1458
cmd_fwupdate
firmware.c, 1274
firmware.h, 1278
cmd_get
notify.c, 1428
notify.h, 1434
cmd_hwload_kb
profile.h, 1458
profile_keyboard.c, 1470
cmd_hwload_mouse
profile.h, 1459
profile_mouse.c, 1473
cmd_hwsave_kb
profile.h, 1460
profile_keyboard.c, 1471
cmd_hwsave_mouse
profile.h, 1461
profile_mouse.c, 1474
cmd_iauto
led.c, 1316
led.h, 1321
cmd_id
profile.c, 1442
profile.h, 1462
cmd_idle_kb
device.h, 1227
device_keyboard.c, 1234
cmd_idle_mouse
device.h, 1228
device_mouse.c, 1238
cmd_inotify
led.c, 1316
led.h, 1322
cmd_io_none
device_vtable.c, 1240
cmd_ioff
led.c, 1316
led.h, 1322
cmd_ion
led.c, 1317
led.h, 1323
cmd_lift
dpi.c, 1264
dpi.h, 1269
cmd_macro
input.c, 1288
input.h, 1295
cmd_macro_none
device_vtable.c, 1240
cmd_name
profile.c, 1443
profile.h, 1462
cmd_none
device_vtable.c, 1241
cmd_notify
notify.c, 1429
notify.h, 1434
cmd_pollrate
device.h, 1228
device_mouse.c, 1238
cmd_profileid
profile.c, 1443
profile.h, 1463
cmd_profilename
profile.c, 1444
profile.h, 1463
cmd_rebind
input.c, 1288
input.h, 1296
cmd_restart
notify.c, 1429
notify.h, 1435
cmd_rgb
led.c, 1317
led.h, 1323
cmd_snap
dpi.c, 1264
dpi.h, 1269
cmd_strings
command.c, 1212
cmd_unbind
input.c, 1288
input.h, 1296
cmdhandler
command.h, 1215
cmdhandler_io
command.h, 1215
cmdhandler_mac
command.h, 1215
cmdpath
Kb, 308
color
ColorButton, 146, 147
KbLight, 434
colorAt
GradientDialogWidget, 230
ColorButton, 141
_alpha, 150
_bigIcons, 150
_color, 150
_setLabel, 150
allowAlpha, 144, 145
bigIcons, 145, 146
color, 146, 147
ColorButton, 144
colorChanged, 148
ColorButton, 144
pickColor, 148
setLabel, 148, 149
updateImage, 149
colorChanged
ColorButton, 148
GradientDialog, 219
MPerfWidget, 783

colorClicked
MPerfWidget, 784
colorForName
ColorMap, 154, 155
colorLink
MPerfWidget, 792
ColorMap, 151
~ColorMap, 152
_colors, 159
_count, 159
_keyNames, 159
_mapCount, 159
alloc, 153
clear, 153
colorForName, 154, 155
ColorMap, 152
ColorMap, 152
colors, 155, 156
count, 156
deAlloc, 156
init, 157
keyNames, 158
operator=, 158
colorMap
KbLight, 435
KeyWidget, 661, 662
colormap.cpp
qs_strcmp, 1619
colormap.h
QColorMap, 1621
QColorMapIterator, 1621
QMutableColorMapIterator, 1621
colors
AnimScript, 62
ColorMap, 155, 156
comboBox
Ui::LayoutDialog, 716
Ui_LayoutDialog, 1132
command.h
ACCEL, 1215
ACTIVE, 1215
BIND, 1216
CMD_FIRST, 1215
CMD_LAST, 1216
CMD_VT_FIRST, 1215
DELAY, 1215
DITHER, 1215
DPI, 1216
DPISEL, 1216
ERASE, 1215
ERASEPROFILE, 1215
FPS, 1215
FWUPDATE, 1215
GET, 1216
HWLOAD, 1215
HWSAVE, 1215
IAUTO, 1216
ID, 1216
IDLE, 1215
INOTIFY, 1216
IOFF, 1216
ION, 1216
LAYOUT, 1215
LIFT, 1216
MACRO, 1216
MODE, 1215
NAME, 1215
NONE, 1215
NOTIFY, 1216
NOTIFYOFF, 1215
NOTIFYON, 1215
POLLRATE, 1215
PROFILEID, 1216
PROFILENAME, 1216
REBIND, 1216
RESTART, 1216
RGB, 1216
SCROLLSPEED, 1215
SNAP, 1216
SWITCH, 1215
UNBIND, 1216
command.c
cmd_strings, 1212
readcmd, 1208
TRY_WITH_RESET, 1208
command.h
CMD_COUNT, 1214
CMD_DEV_COUNT, 1214
cmd, 1215
cmdhandler, 1215
cmdhandler_io, 1215
cmdhandler_mac, 1215
devcmd, 1215
readcmd, 1217
CommandLineBackground
main.cpp, 1688
CommandLineClose
main.cpp, 1688
CommandLineError
main.cpp, 1688
CommandLineHelpRequested
main.cpp, 1688
CommandLineOK
main.cpp, 1688
CommandLineVersionRequested
main.cpp, 1688
CommandLineParseResults
main.cpp, 1688
comment
QuaZipFileInfo, 902
QuaZipFileInfo64, 909
QuaZipNewInfo, 923
QuaZipPrivate, 931
commentCodec
QuaZipPrivate, 931
commitParams

KbAnim, 320
compressDir
JlCompress, 244
compressFile
JlCompress, 245, 246
compressFiles
JlCompress, 247
compressSubDir
JlCompress, 249
compressedSize
QuaZipFileInfo, 902
QuaZipFileInfo64, 909
configLabel
mainwindow.cpp, 1694
Constants
QuaZip, 830
contains
CkbSettings, 130
KeyMap, 638
containsGroup
CkbSettings, 130
convertCaseSensitivity
QuaZip, 833
convertMacroBox
RebindWidget, 941
copy
AnimScript, 62
copyButton
Ui::KbBindWidget, 400
Ui::KPerfWidget, 691
Ui::MPerfWidget, 767
Ui_KbBindWidget, 1085
Ui_KPerfWidget, 1120
Ui_MPerfWidget, 1152
copyData
JlCompress.cpp, 1717
copyright
AnimScript, 63
corsair_kbcopy
daemon/keymap.h, 1675
keymap.c, 1311
corsair_mousecopy
daemon/keymap.h, 1676
keymap.c, 1311
count
AnimScript, 63
ColorMap, 156
KeyMap, 638
QuaZipDir, 865
counter_clock
ckb-pinwheel/main.c, 1398
crc
QuaZipFileInfo, 902
QuaZipFileInfo64, 909
QuaZipFilePrivate, 914
crypt.h
CRC32, 1707
decrypt_byte, 1707
init_keys, 1707
update_keys, 1708
zdecode, 1707
zencode, 1707
csDefault
QuaZip, 830
csInsensitive
QuaZip, 830
csSensitive
QuaZip, 830
csize
QuaZipFile, 884
ctrlBox
Ui::SettingsWidget, 1022
Ui_SettingsWidget, 1196
ctrlLabel
Ui::SettingsWidget, 1022
Ui_SettingsWidget, 1196
curDpi
KbPerf, 511, 512
curDpiIdx
KbPerf, 512, 513
curLabel
Ui::FwUpgradeDialog, 198
Ui_FwUpgradeDialog, 1063
curfile64_info, 1832
current
ckb-random/main.c, 1410
GradientDialogWidget, 231
KbAnimWidget, 365
currentBind
Kb, 269
currentChanged
GradientDialog, 219
GradientDialogWidget, 231
currentData
RListWidget, 1002
currentLight
Kb, 270
currentMode
Kb, 271
KbProfile, 541, 542
KbWidget, 589
currentPerf
Kb, 271
currentPreset
GradientDialog, 226
currentProfile
Kb, 272
currentSelection
KbBindWidget, 412
KbLightWidget, 475

d
QuaGzipFile, 819
QuaZIODevice, 826
QuaZipDir, 876
DE
KeyMap, 636

DELAY
command.h, 1215
DITHER
command.h, 1215
DK
KeyMap, 636
DPI
command.h, 1216
DPISEL
command.h, 1216
DAEMON.md, 1207
DATA_ROLE
RListWidget, 1002
DEF_MEM_LEVEL
zip.h, 1888
DELAY_LONG
usb.h, 1507
DELAY_MEDIUM
usb.h, 1507
DELAY_SHORT
usb.h, 1507
DESCRIPTORHEADERMAGIC
zip.c, 1834
DEV_MAX
device.h, 1226
DIALOG_HEIGHT_MAX
fwupgradedialog.cpp, 1624
DIALOG_HEIGHT_MIN
fwupgradedialog.cpp, 1625
DIALOG_WIDTH
fwupgradedialog.cpp, 1625
DPI_BASE
mperfwidget.cpp, 1703
DPI_COUNT
KbPerf, 534
MPerfWidget, 792
structures.h, 1489
DPI_CUST_IDX
rebindwidget.cpp, 1894
DPI_CUSTOM
KeyAction, 630
DPI_DOWN
KeyAction, 630
DPI_MAX
KbPerf, 534
MPerfWidget, 792
DPI_MIN
KbPerf, 534
MPerfWidget, 792
DPI_OFFSET
rebindwidget.cpp, 1894
DPI_SNIPER
KeyAction, 630
DPI_UP
KeyAction, 631
DROP_MAX
ckb-rain/main.c, 1400
daemon/keymap.h
BTN_WHEELDOWN, 1673
BTN_WHEELUP, 1673
corsair_kbcopy, 1675
corsair_mousecopy, 1676
hid_kb_translate, 1676
hid_mouse_translate, 1678
KEY_BACKSLASH_ISO, 1673
KEY_CORSAIR, 1673
KEY_NONE, 1673
KEY_UNBOUND, 1673
keymap, 1679
LED_DPI, 1673
LED_MOUSE, 1673
MOUSE_BUTTON_FIRST, 1673
MOUSE_EXTRA_FIRST, 1674
N_BUTTONS_EXTENDED, 1674
N_BUTTONS_HW, 1674
N_KEY_ZONES, 1674
N_KEYBYTES_EXTENDED, 1674
N_KEYBYTES_HW, 1674
N_KEYBYTES_INPUT, 1674
N_KEYS_EXTENDED, 1674
N_KEYS_EXTRA, 1674
N_KEYS_HW, 1674
N_KEYS_INPUT, 1675
N_MOUSE_ZONES, 1675
SCAN_KBD, 1675
SCAN_MOUSE, 1675
SCAN_SILENT, 1675
dataDescriptorWritingEnabled
QuaZipPrivate, 931
dataForBoard
KbFirmware, 419
dateTime
QuaZipFileInfo, 902
QuaZipFileInfo64, 909
QuaZipNewInfo, 923
deAlloc
ColorMap, 156
decrypt_byte
crypt.h, 1707
defaultAction
KbBind, 371
KeyAction, 610
defaultFileNameCodec
QuaZipPrivate, 932
delayBox
Ui::AnimSettingDialog, 93
Ui::ExtraSettingsWidget, 170
Ui_AnimSettingDialog, 1041
Ui_ExtraSettingsWidget, 1054
deleteButton
Ui::KbAnimWidget, 345
Ui_KbAnimWidget, 1078
deleteHw
Kb, 272
deletePrevious
Kb, 273

description
AnimScript, 64
devLabel
Ui::FwUpgradeDialog, 198
Ui_FwUpgradeDialog, 1063
devParent
KbBind, 372
devTab
Ui::KbWidget, 596
Ui_KbWidget, 1105
devUpdate
KbWidget, 573
devcmd, 1214
command.h, 1215
devcmd.__unnamed__, 160
active, 161
allocprofile, 161
bind, 161
dpi, 161
dpisel, 161
erase, 161
eraseprofile, 161
freeprofile, 161
fwupdate, 161
get, 161
hwload, 161
hwsave, 161
iauto, 161
id, 161
idle, 161
inotify, 161
ioff, 161
ion, 161
lift, 161
loadprofile, 161
macro, 162
name, 162
notify, 162
pollrate, 162
profileid, 162
profilename, 162
rebind, 162
restart, 162
rgb, 162
setmodeindex, 162
snap, 162
start, 162
unbind, 162
updatedpi, 162
updateindicators, 162
updatergb, 162
device
KbProfileDialog, 562
KbWidget, 589
device.c
_start_dev, 1222
devlistmutex, 1223
devmutex, 1223
hwload_mode, 1224
inputmutex, 1224
keyboard, 1224
start_dev, 1223
device.h
ACT_LIGHT, 1225
ACT_LOCK, 1225
ACT_M1, 1225
ACT_M2, 1225
ACT_M3, 1226
ACT_MR_RING, 1226
ACT_NEXT, 1226
ACT_NEXT_NOWRAP, 1226
cmd_active_kb, 1227
cmd_active_mouse, 1227
cmd_idle_kb, 1227
cmd_idle_mouse, 1228
cmd_pollrate, 1228
DEV_MAX, 1226
devmutex, 1232
dmutex, 1226
IN_CORSAIR, 1226
IN_HID, 1226
IS_CONNECTED, 1226
imutex, 1226
inputmutex, 1232
keyboard, 1233
setactive, 1227
setactive_kb, 1228
setactive_mouse, 1230
setmodeindex_nrgb, 1231
start_dev, 1232
start_kb_nrgb, 1232
device_keyboard.c
cmd_active_kb, 1233
cmd_idle_kb, 1234
setactive_kb, 1234
setmodeindex_nrgb, 1236
start_kb_nrgb, 1236
device_mouse.c
cmd_active_mouse, 1237
cmd_idle_mouse, 1238
cmd_pollrate, 1238
setactive_mouse, 1238
device_vtable.c
cmd_io_none, 1240
cmd_macro_none, 1240
cmd_none, 1241
int1_int_none, 1241
int1_void_none, 1241
loadprofile_none, 1241
vtable_keyboard, 1241
vtable_keyboard_nonrgb, 1241
vtable_mouse, 1241
devices
KbManager, 481
devicesLabel
Ui::SettingsWidget, 1022

Ui_SettingsWidget, 1196
devlistmutex
device.c, 1223
devmain
usb.c, 1500
devmutex
device.c, 1223
device.h, 1232
devnode.c
_mkdevpath, 1244
_mknotifynode, 1246
_rmnotifynode, 1247
_updateconnected, 1247
devpath, 1254
gid, 1254
MAX_BUFFER, 1243
mkdevpath, 1248
mkfwnode, 1249
mknotifynode, 1249
readlines, 1250
readlines_ctx_free, 1251
readlines_ctx_init, 1251
rm_recursive, 1251
rmdevpath, 1252
rmnotifynode, 1253
S_GID_READ, 1243
updateconnected, 1254
devnode.h
devpath, 1262
gid, 1262
mkdevpath, 1256
mkfwnode, 1257
mknotifynode, 1258
readlines, 1258
readlines_ctx, 1256
readlines_ctx_free, 1259
readlines_ctx_init, 1260
rmdevpath, 1260
rmnotifynode, 1261
S_CUSTOM, 1256
S_CUSTOM_R, 1256
S_READ, 1256
S_READDIR, 1256
S_READWRITE, 1256
updateconnected, 1262
devpath
devnode.c, 1254
devnode.h, 1262
Kb, 308
kbmanager.cpp, 1647
settingswidget.cpp, 2003
didLoad
KbBind, 372
KbLight, 435
KbPerf, 513
didUpdateSelection
KbAnimWidget, 353
dimming
KbLight, 436
dirName
QuaZipDir, 866
directoryCaseInsensitive
QuaZipPrivate, 932
directoryCaseSensitive
QuaZipPrivate, 932
disable
AutoRun, 121
disableAppNap
media_mac.m, 1698
diskNumberStart
QuaZipFileInfo, 902
QuaZipFileInfo64, 909
displayColorMap
KeyWidget, 662
dither
Kb, 273, 274
ditherBox
Ui::ExtraSettingsWidget, 170
Ui_ExtraSettingsWidget, 1054
Divide
KbAnim, 315
dmutex
device.h, 1226
doUpdate
KbMode, 493
downloadFinished
KbFirmware, 420
downloaded
KbFirmware, 420
dpi
devcmd.__unnamed__, 161
KbPerf, 514
dpi.c
cmd_dpi, 1263
cmd_dpisel, 1264
cmd_lift, 1264
cmd_snap, 1264
loaddpi, 1264
printdpi, 1265
savedpi, 1266
updatedpi, 1267
dpi.h
cmd_dpi, 1268
cmd_dpisel, 1269
cmd_lift, 1269
cmd_snap, 1269
loaddpi, 1269
printdpi, 1270
savedpi, 1271
updatedpi, 1272
dpiAction
KeyAction, 611
dpiBox
Ui::RebindWidget, 983
Ui_RebindWidget, 1176
dpiButton

Ui::RebindWidget, 983
Ui_RebindWidget, 1176
dpiClr
KbPerf, 534
dpiColor
KbPerf, 515, 516
dpiCurIdx
KbPerf, 534
dpiCurX
KbPerf, 534
dpiCurY
KbPerf, 534
dpiCustLabel
Ui::RebindWidget, 983
Ui_RebindWidget, 1177
dpiCustXBox
Ui::RebindWidget, 983
Ui_RebindWidget, 1177
dpiCustYBox
Ui::RebindWidget, 984
Ui_RebindWidget, 1177
dpiDown
KbPerf, 516
dpiEnabled
KbPerf, 517
dpiExp
mperfwidget.cpp, 1702
dpiIndicator
KbPerf, 517, 518
dpiInfo
KeyAction, 611
dpiLastIdx
KbPerf, 534
dpiLog
mperfwidget.cpp, 1702
dpiOn
KbPerf, 534
dpiRound
mperfwidget.cpp, 1703
dpiUp
KbPerf, 518
dpiWarning
Ui::RebindWidget, 984
Ui_RebindWidget, 1177
dpiX
KbPerf, 535
dpiY
KbPerf, 535
dpisel
devcmd.__unnamed__, 161
dpiset, 1481
dragged
RListWidget, 1002
drawInfo
KeyWidget, 662
driverName
KeyAction, 612
drop
ckb-rain/main.c, 1404
drop_add
ckb-rain/main.c, 1403
duplicateAnim
KbAnimWidget, 354
KbLight, 437
durationMsec
AnimScript, 84

ERASE
command.h, 1215
ERASEPROFILE
command.h, 1215
ES
KeyMap, 636
EU
KeyMap, 636
EU_DVORAK
KeyMap, 636
eBox1
Ui::MPerfWidget, 767
Ui_MPerfWidget, 1152
eBox2
Ui::MPerfWidget, 767
Ui_MPerfWidget, 1152
eBox3
Ui::MPerfWidget, 767
Ui_MPerfWidget, 1152
eBox4
Ui::MPerfWidget, 767
Ui_MPerfWidget, 1152
eBox5
Ui::MPerfWidget, 767
Ui_MPerfWidget, 1153
ENDHEADERMAGIC
zip.c, 1834
ENUM_C
media.h, 1696
ENUM_END_C
media.h, 1696
EXTERN_C
media.h, 1696
effectiveParams
KbAnim, 320
enable
AutoRun, 121
enableChanged
MPerfWidget, 784
enableMapper
MPerfWidget, 792
end
AnimScript, 64
endGroup
CkbSettings, 131
enter
RListWidget, 999
entryInfoList
QuaZipDir, 866, 867
entryInfoList64

QuaZipDir, 867, 868
entryList
QuaZipDir, 868, 869
erase
devcmd.__unnamed__, 161
eraseprofile
devcmd.__unnamed__, 161
euid_guard_start
os.h, 1438
euid_guard_stop
os.h, 1438
evLoop
FwUpgradeDialog, 193
eventTimer
KbManager, 481
exec
FwUpgradeDialog, 188
exists
QuaZipDir, 869, 870
exitSuccess
FwUpgradeDialog, 193
externalAttr
QuaZipFileInfo, 902
QuaZipFileInfo64, 909
QuaZipNewInfo, 923
extra
QuaZipFileInfo, 902
QuaZipFileInfo64, 910
SettingsWidget, 1013
extraButton
Ui::SettingsWidget, 1022
Ui_SettingsWidget, 1197
extraGlobal
QuaZipNewInfo, 924
extraLocal
QuaZipNewInfo, 924
ExtraSettingsWidget, 175
~ExtraSettingsWidget, 178
ExtraSettingsWidget, 177
ExtraSettingsWidget, 177
on_animScanButton_clicked, 178
on_brightnessBox_clicked, 179
on_delayBox_clicked, 179
on_ditherBox_clicked, 179
on_fpsBox_valueChanged, 180
on_mAccelBox_clicked, 180
on_sAccelBox_clicked, 181
on_sSpeedBox_valueChanged, 181
on_trayBox_clicked, 182
pollUpdates, 182
ui, 183
extractDir
JlCompress, 252
extractFile
JlCompress, 254, 256
extractFiles
JlCompress, 257
extrasettingswidget.cpp
lastSharedDimming, 1621

FPS
command.h, 1215
FR
KeyMap, 636
FWUPDATE
command.h, 1215
FALSE
ckb-anim.h, 1598
FEAT_ADJRATE
structures.h, 1489
FEAT_ANSI
structures.h, 1489
FEAT_BIND
structures.h, 1489
FEAT_COMMON
structures.h, 1489
FEAT_FWUPDATE
structures.h, 1489
FEAT_FWVERSION
structures.h, 1489
FEAT_HWLOAD
structures.h, 1490
FEAT_ISO
structures.h, 1490
FEAT_LMASK
structures.h, 1490
FEAT_MONOCHROME
structures.h, 1490
FEAT_MOUSEACCEL
structures.h, 1490
FEAT_NOTIFY
structures.h, 1490
FEAT_POLLRATE
structures.h, 1490
FEAT_RGB
structures.h, 1490
FEAT_STD_NRGB
structures.h, 1490
FEAT_STD_RGB
structures.h, 1491
FW
KbFirmware::FW, 184
FW_MAXSIZE
firmware.c, 1274
FW_NOFILE
firmware.c, 1274
FW_OK
firmware.c, 1274
FW_USBFAIL
firmware.c, 1274
FW_WRONGDEV
firmware.c, 1274
fadein
ckb-random/main.c, 1410
features
Kb, 309
features_mask

ckb-daemon/main.c, 1376
usb.c, 1504
ffade
ckb-heat/main.c, 1388
file_in_zip64_read_info_s, 1759
fileName
KbFirmware::FW, 184
QuaZipFilePrivate, 914
fileNameCodec
QuaZipPrivate, 932
filePath
QuaZipDir, 871
fill_qiodevice64_filefunc
qioapi.cpp, 1721
fill_qiodevice_filefunc
qioapi.cpp, 1722
fill_zlib_filefunc64_32_def_from_filefunc32
ioapi.h, 1715
qioapi.cpp, 1723
fillRect
GradientDialogWidget, 231
filter
QuaZipDir, 871
find
Kb, 274
KbProfile, 542
findAnim
KbLight, 437
findAnimIdx
KbLight, 438
firmware
Kb, 309
firmware.c
cmd_fwupdate, 1274
FW_MAXSIZE, 1274
FW_NOFILE, 1274
FW_OK, 1274
FW_USBFAIL, 1274
FW_WRONGDEV, 1274
fwupdate, 1275
getfwversion, 1277
firmware.h
cmd_fwupdate, 1278
getfwversion, 1279
firstFrame
AnimScript, 84
flags
QuaZipFileInfo, 902
QuaZipFileInfo64, 910
flush
QuaGzipFile, 817
QuaZIODevice, 823
fnBox
Ui::RebindWidget, 984
Ui_RebindWidget, 1177
fnButton
Ui::RebindWidget, 984
Ui_RebindWidget, 1177
fnKeys
RebindWidget, 964
fps
KbManager, 481
fpsBox
Ui::ExtraSettingsWidget, 170
Ui_ExtraSettingsWidget, 1054
fpsWarnLabel
Ui::ExtraSettingsWidget, 170
Ui_ExtraSettingsWidget, 1054
frame
AnimScript, 65
ckb-pinwheel/main.c, 1398
frameDisplayed
KbLight, 439
frameRate
Kb, 275
frameUpdate
Kb, 276
KbLight, 439
free_datablock
zip.c, 1838
free_linkedlist
zip.c, 1838
freebind
input.c, 1288
input.h, 1296
freemode
profile.c, 1444
freeprofile
devcmd.__unnamed__, 161
profile.c, 1445
profile.h, 1464
friendlyActionName
KbBind, 373
friendlyName
KbBind, 373
Key, 601
KeyAction, 613
KeyMap, 639
fromName
KeyMap, 640
fromStorage
KeyMap, 641
fromString
GradientButton, 202
functions
kbanim.cpp, 1634
fwLabel
Ui::KbWidget, 596
Ui_KbWidget, 1105
fwTable
KbFirmware, 424
fwTableHash
KbFirmware, 424
fwUpdButton
Ui::KbWidget, 596
Ui_KbWidget, 1105

fwUpdLabel
Ui::KbWidget, 597
Ui_KbWidget, 1105
fwUpdLayout
Ui::KbWidget, 597
Ui_KbWidget, 1106
fwUpdPath
Kb, 309
fwUpdate
Kb, 277
fwUpdateFinished
FwUpgradeDialog, 189
Kb, 278
fwUpdateProgress
FwUpgradeDialog, 190
Kb, 278
FwUpgradeDialog, 184
~FwUpgradeDialog, 187
blob, 192
cleanBlob, 187
closeEvent, 187
evLoop, 193
exec, 188
exitSuccess, 193
fwUpdateFinished, 189
fwUpdateProgress, 190
FwUpgradeDialog, 186
FwUpgradeDialog, 186
kb, 193
on_actionButton_clicked, 190
on_cancelButton_clicked, 191
removeDev, 191
saveBlob, 192
savePath, 193
ui, 193
fwVersion
KbFirmware::FW, 184
fwupdate
devcmd.__unnamed__, 161
firmware.c, 1275
fwupgradedialog.cpp
DIALOG_HEIGHT_MAX, 1624
DIALOG_HEIGHT_MIN, 1625
DIALOG_WIDTH, 1625
ids, 1625
verifyFw, 1624

GB
KeyMap, 636
GB_DVORAK
KeyMap, 636
GET
command.h, 1216
GUID
KbProfileDialog, 563
KbWidget, 590
gcounter
ckb-mviz/main.c, 1394
get
CkbSettings, 131
devcmd.__unnamed__, 161
get_vtable
usb.c, 1501
getActualFileName
QuaZipFile, 885
getCaseSensitivity
QuaZipFile, 886
getComment
QuaZip, 834
getCommentCodec
QuaZip, 834
getCurrentFileInfo
QuaZip, 835, 836
getCurrentFileName
QuaZip, 837
getDefaultFileNameCodec
QuaZipPrivate, 929
getEntriesCount
QuaZip, 838
getFileInfo
QuaZipFile, 886, 887
getFileInfoList
QuaZip, 839
QuaZipPrivate, 929
getFileInfoList64
QuaZip, 839
getFileList
JlCompress, 258
getFileName
QuaGzipFile, 817
QuaZipFile, 888
getFileNameCodec
QuaZip, 840
getFileNameList
QuaZip, 840
getFreqDec
ckb-mviz/main.c, 1392
getGradient
GradientDialog, 220
getIndicator
KbPerf, 518
getIoDevice
QuaZIODevice, 824
QuaZip, 841
getKeyMap
Kb, 279
getLayout
KeyMap, 641, 642
getMacroNumber
Kb, 279
KbBind, 374
getMacroPath
Kb, 279
KbBind, 374
getMap
keymap.cpp, 1662
getMode

QuaZip, 841
getModel
KeyMap, 643
getMuteState
media.h, 1696
media_linux.cpp, 1697
media_mac.m, 1699
getNTFSTime
quazipfileinfo.cpp, 1748
getNTFSaTime
QuaZipFileInfo64, 905
getNTFScTime
QuaZipFileInfo64, 906
getNTFSmTime
QuaZipFileInfo64, 906
getPermissions
QuaZipFileInfo, 901
QuaZipFileInfo64, 907
getUnzFile
QuaZip, 842
getZip
QuaZipFile, 888
getZipError
QuaZip, 843
QuaZipFile, 888
getZipFile
QuaZip, 844
getZipName
QuaZip, 844
QuaZipFile, 889
getfwversion
firmware.c, 1277
firmware.h, 1279
gethwmodename
profile.c, 1445
profile.h, 1464
gethwprofilename
profile.c, 1446
profile.h, 1465
getid
profile.c, 1447
profile.h, 1466
getmodename
profile.c, 1447
profile.h, 1466
getprofilename
profile.c, 1448
profile.h, 1467
gid
devnode.c, 1254
devnode.h, 1262
globalCache
ckbsettings.cpp, 1614
globalRemap
KbBind, 375
globalRemapTime
KbBind, 395
globalSettings
ckbsettings.cpp, 1613
globalThread
ckbsettings.cpp, 1614
goToFirstFile
QuaZip, 845
goToFirstUnmappedFile
QuaZipPrivate, 930
goToNextFile
QuaZip, 846
gradient
GradientDialog::Preset, 794
GradientButton, 200
_alpha, 206
_stops, 206
fromString, 202
GradientButton, 202
gradientChanged, 203
GradientButton, 202
pickGradient, 203
toString, 204
updateImage, 205
gradientChanged
GradientButton, 203
GradientDialog, 214
~GradientDialog, 218
addPreset, 218
colorChanged, 219
currentChanged, 219
currentPreset, 226
getGradient, 220
GradientDialog, 217
GradientDialog, 217
makeIcon, 221
on_presetDelete_clicked, 222
on_presetList_currentItemChanged, 222
on_presetName_textEdited, 223
on_presetSave_clicked, 223
on_stopOpacity_valueChanged, 224
on_stopPos_valueChanged, 224
presets, 226
setPreset, 224
ui, 227
updatePresets, 225
GradientDialog::Preset, 793
builtIn, 794
gradient, 794
name, 794
Preset, 794
GradientDialogWidget, 227
_colors, 242
_current, 242
_stops, 242
colorAt, 230
current, 231
currentChanged, 231
fillRect, 231
GradientDialogWidget, 230
GradientDialogWidget, 230

makeStops, 232
mouseMoveEvent, 233
mousePressEvent, 234
mouseReleaseEvent, 234
moveCurrent, 235
paintEvent, 236
selected, 242
selectedOffset, 242
selectedPos, 242
selectedStop, 237
selectionColors, 238
setCurrentColor, 238
setStops, 239
stopCount, 240
stopRect, 240
stops, 241
gradientdialog.cpp
prefsPath, 1628
gridLayout
Ui::AnimAddDialog, 47
Ui::AnimSettingDialog, 93
Ui::ExtraSettingsWidget, 171
Ui::FwUpgradeDialog, 199
Ui::GradientDialog, 211
Ui::KbAnimWidget, 345
Ui::KbBindWidget, 400
Ui::KbLightWidget, 460
Ui::KbProfileDialog, 567
Ui::KbWidget, 597
Ui::KPerfWidget, 691
Ui::LayoutDialog, 716
Ui::MainWindow, 732
Ui::ModeSelectDialog, 751
Ui::MPerfWidget, 767
Ui::RebindWidget, 984
Ui::SettingsWidget, 1022
Ui_AnimAddDialog, 1032
Ui_AnimSettingDialog, 1041
Ui_ExtraSettingsWidget, 1054
Ui_FwUpgradeDialog, 1063
Ui_GradientDialog, 1069
Ui_KbAnimWidget, 1078
Ui_KbBindWidget, 1085
Ui_KbLightWidget, 1093
Ui_KbProfileDialog, 1098
Ui_KbWidget, 1106
Ui_KPerfWidget, 1120
Ui_LayoutDialog, 1132
Ui_MainWindow, 1136
Ui_ModeSelectDialog, 1140
Ui_MPerfWidget, 1153
Ui_RebindWidget, 1177
Ui_SettingsWidget, 1197
gridLayout_10
Ui::RebindWidget, 984
Ui_RebindWidget, 1177
gridLayout_2
Ui::AnimSettingDialog, 94
Ui::FwUpgradeDialog, 199
Ui::GradientDialog, 211
Ui::KbAnimWidget, 345
Ui::KbBindWidget, 400
Ui::KbLightWidget, 460
Ui::KbWidget, 597
Ui::RebindWidget, 984
Ui_AnimSettingDialog, 1041
Ui_FwUpgradeDialog, 1063
Ui_GradientDialog, 1069
Ui_KbAnimWidget, 1078
Ui_KbBindWidget, 1085
Ui_KbLightWidget, 1093
Ui_KbWidget, 1106
Ui_RebindWidget, 1177
gridLayout_3
Ui::GradientDialog, 211
Ui::KbAnimWidget, 345
Ui::KbWidget, 597
Ui::RebindWidget, 984
Ui::SettingsWidget, 1022
Ui_GradientDialog, 1069
Ui_KbAnimWidget, 1078
Ui_KbWidget, 1106
Ui_RebindWidget, 1178
Ui_SettingsWidget, 1197
gridLayout_4
Ui::KbAnimWidget, 345
Ui::KbLightWidget, 460
Ui::KbWidget, 597
Ui::RebindWidget, 985
Ui_KbAnimWidget, 1078
Ui_KbLightWidget, 1093
Ui_KbWidget, 1106
Ui_RebindWidget, 1178
gridLayout_5
Ui::KbWidget, 597
Ui::RebindWidget, 985
Ui::SettingsWidget, 1022
Ui_KbWidget, 1106
Ui_RebindWidget, 1178
Ui_SettingsWidget, 1197
gridLayout_7
Ui::KbWidget, 597
Ui_KbWidget, 1106
gridLayout_8
Ui::RebindWidget, 985
Ui_RebindWidget, 1178
groupBox
Ui::RebindWidget, 985
Ui_RebindWidget, 1178
groupBox_2
Ui::GradientDialog, 212
Ui::RebindWidget, 985
Ui_GradientDialog, 1070
Ui_RebindWidget, 1178
groupBox_3
Ui::RebindWidget, 985

Ui_RebindWidget, 1178
groupBox_4
Ui::RebindWidget, 985
Ui_RebindWidget, 1178
groups
CkbSettings, 138
guid
AnimScript, 66
KbAnim, 321
UsbId, 1205
guidString
UsbId, 1202, 1203

HIGH
KbPerf, 505
HW_IMAX
KbPerf, 506
HWLOAD
command.h, 1215
HWSAVE
command.h, 1215
HALF_OF
_kiss_fft_guts.h, 1552
HAS_ANY_FEATURE
structures.h, 1491
HAS_FEATURES
structures.h, 1491
hLine
AnimSettingDialog, 109
HOLD
ckb-gradient/main.c, 1378
HW_I_COUNT
KbPerf, 535
KPerfWidget, 711
HW_STANDARD
notify.c, 1425
HWMODE_K70
structures.h, 1491
HWMODE_K95
structures.h, 1491
HWMODE_MAX
Kb, 309
structures.h, 1491
HWMODE_OR_RETURN
notify.c, 1425
handleNotificationChannel
KbBind, 376
has_key
led.c, 1318
hasCurrentFile
QuaZip, 847
hasCurrentFile_f
QuaZipPrivate, 932
hasDownloaded
KbFirmware, 421
hasFrame
AnimScript, 66
hasGPG
KbFirmware, 424
hasKeypress
AnimScript, 67
hasLed
Key, 602
hasParam
AnimScript, 67
hasParameter
KbAnim, 321
hasRepeat
AnimSettingDialog, 119
hasScan
Key, 602
hasShownNewFW
KbWidget, 590
hash
KbFirmware::FW, 184
height
KbPerf, 505
Key, 602
KeyMap, 644
helpStatus
RebindWidget, 942
hid_kb_translate
daemon/keymap.h, 1676
keymap.c, 1311
hid_mouse_translate
daemon/keymap.h, 1678
keymap.c, 1313
horizontalLayout
Ui::AnimAddDialog, 47
Ui::ExtraSettingsWidget, 171
Ui::GradientDialog, 212
Ui::KbAnimWidget, 345
Ui::KbLightWidget, 461
Ui::KPerfWidget, 691
Ui::MPerfWidget, 768
Ui::RebindWidget, 985
Ui::SettingsWidget, 1022
Ui_AnimAddDialog, 1032
Ui_ExtraSettingsWidget, 1054
Ui_GradientDialog, 1070
Ui_KbAnimWidget, 1078
Ui_KbLightWidget, 1093
Ui_KPerfWidget, 1120
Ui_MPerfWidget, 1153
Ui_RebindWidget, 1178
Ui_SettingsWidget, 1197
horizontalLayout_2
Ui::ExtraSettingsWidget, 171
Ui::GradientDialog, 212
Ui::KbBindWidget, 400
Ui::KbLightWidget, 461
Ui::KPerfWidget, 691
Ui::MPerfWidget, 768
Ui::RebindWidget, 985
Ui::SettingsWidget, 1022
Ui_ExtraSettingsWidget, 1055
Ui_GradientDialog, 1070

Ui_KbBindWidget, 1086
Ui_KbLightWidget, 1093
Ui_KPerfWidget, 1120
Ui_MPerfWidget, 1153
Ui_RebindWidget, 1179
Ui_SettingsWidget, 1197
horizontalLayout_3
Ui::KbLightWidget, 461
Ui::RebindWidget, 985
Ui_KbLightWidget, 1093
Ui_RebindWidget, 1179
horizontalLayout_4
Ui::MPerfWidget, 768
Ui_MPerfWidget, 1153
horizontalSpacer
Ui::AnimAddDialog, 47
Ui::AnimSettingDialog, 94
Ui::ExtraSettingsWidget, 171
Ui::FwUpgradeDialog, 199
Ui::GradientDialog, 212
Ui::KbAnimWidget, 345
Ui::KbBindWidget, 400
Ui::KbProfileDialog, 567
Ui::KPerfWidget, 691
Ui::LayoutDialog, 716
Ui::MPerfWidget, 768
Ui::RebindWidget, 986
Ui::SettingsWidget, 1023
Ui_AnimAddDialog, 1032
Ui_AnimSettingDialog, 1041
Ui_ExtraSettingsWidget, 1055
Ui_FwUpgradeDialog, 1063
Ui_GradientDialog, 1070
Ui_KbAnimWidget, 1079
Ui_KbBindWidget, 1086
Ui_KbProfileDialog, 1099
Ui_KPerfWidget, 1120
Ui_LayoutDialog, 1132
Ui_MPerfWidget, 1153
Ui_RebindWidget, 1179
Ui_SettingsWidget, 1197
horizontalSpacer_10
Ui::RebindWidget, 986
Ui::SettingsWidget, 1023
Ui_RebindWidget, 1179
Ui_SettingsWidget, 1197
horizontalSpacer_11
Ui::RebindWidget, 986
Ui_RebindWidget, 1179
horizontalSpacer_12
Ui::RebindWidget, 986
Ui_RebindWidget, 1179
horizontalSpacer_13
Ui::RebindWidget, 986
Ui_RebindWidget, 1179
horizontalSpacer_14
Ui::RebindWidget, 986
Ui_RebindWidget, 1179
horizontalSpacer_15
Ui::RebindWidget, 986
Ui_RebindWidget, 1179
horizontalSpacer_16
Ui::RebindWidget, 986
Ui_RebindWidget, 1180
horizontalSpacer_17
Ui::RebindWidget, 986
Ui_RebindWidget, 1180
horizontalSpacer_18
Ui::RebindWidget, 987
Ui_RebindWidget, 1180
horizontalSpacer_19
Ui::RebindWidget, 987
Ui_RebindWidget, 1180
horizontalSpacer_2
Ui::AnimAddDialog, 47
Ui::AnimSettingDialog, 94
Ui::ExtraSettingsWidget, 171
Ui::FwUpgradeDialog, 199
Ui::GradientDialog, 212
Ui::KbAnimWidget, 346
Ui::KbBindWidget, 400
Ui::KbProfileDialog, 567
Ui::KbWidget, 597
Ui::KPerfWidget, 692
Ui::LayoutDialog, 716
Ui::MPerfWidget, 768
Ui::RebindWidget, 987
Ui::SettingsWidget, 1023
Ui_AnimAddDialog, 1032
Ui_AnimSettingDialog, 1041
Ui_ExtraSettingsWidget, 1055
Ui_FwUpgradeDialog, 1063
Ui_GradientDialog, 1070
Ui_KbAnimWidget, 1079
Ui_KbBindWidget, 1086
Ui_KbProfileDialog, 1099
Ui_KbWidget, 1106
Ui_KPerfWidget, 1120
Ui_LayoutDialog, 1132
Ui_MPerfWidget, 1153
Ui_RebindWidget, 1180
Ui_SettingsWidget, 1197
horizontalSpacer_20
Ui::RebindWidget, 987
Ui_RebindWidget, 1180
horizontalSpacer_21
Ui::RebindWidget, 987
Ui_RebindWidget, 1180
horizontalSpacer_22
Ui::RebindWidget, 987
Ui_RebindWidget, 1180
horizontalSpacer_23
Ui::RebindWidget, 987
Ui_RebindWidget, 1180
horizontalSpacer_24
Ui::RebindWidget, 987

Ui_RebindWidget, 1181
horizontalSpacer_25
Ui::RebindWidget, 987
Ui_RebindWidget, 1181
horizontalSpacer_26
Ui::RebindWidget, 988
Ui_RebindWidget, 1181
horizontalSpacer_3
Ui::AnimSettingDialog, 94
Ui::ExtraSettingsWidget, 171
Ui::FwUpgradeDialog, 199
Ui::GradientDialog, 212
Ui::KbAnimWidget, 346
Ui::KbLightWidget, 461
Ui::KbWidget, 598
Ui::KPerfWidget, 692
Ui::MPerfWidget, 768
Ui::RebindWidget, 988
Ui_AnimSettingDialog, 1041
Ui_ExtraSettingsWidget, 1055
Ui_FwUpgradeDialog, 1063
Ui_GradientDialog, 1070
Ui_KbAnimWidget, 1079
Ui_KbLightWidget, 1093
Ui_KbWidget, 1106
Ui_KPerfWidget, 1120
Ui_MPerfWidget, 1153
Ui_RebindWidget, 1181
horizontalSpacer_4
Ui::AnimSettingDialog, 94
Ui::FwUpgradeDialog, 199
Ui::KbAnimWidget, 346
Ui::KbLightWidget, 461
Ui::KPerfWidget, 692
Ui::MPerfWidget, 768
Ui::RebindWidget, 988
Ui_AnimSettingDialog, 1041
Ui_FwUpgradeDialog, 1063
Ui_KbAnimWidget, 1079
Ui_KbLightWidget, 1094
Ui_KPerfWidget, 1120
Ui_MPerfWidget, 1153
Ui_RebindWidget, 1181
horizontalSpacer_5
Ui::AnimSettingDialog, 94
Ui::KbAnimWidget, 346
Ui::KbLightWidget, 461
Ui::KPerfWidget, 692
Ui::MPerfWidget, 768
Ui::RebindWidget, 988
Ui_AnimSettingDialog, 1041
Ui_KbAnimWidget, 1079
Ui_KbLightWidget, 1094
Ui_KPerfWidget, 1121
Ui_MPerfWidget, 1154
Ui_RebindWidget, 1181
horizontalSpacer_6
Ui::AnimSettingDialog, 94
Ui::KbLightWidget, 461
Ui::KPerfWidget, 692
Ui::MPerfWidget, 768
Ui::RebindWidget, 988
Ui_AnimSettingDialog, 1041
Ui_KbLightWidget, 1094
Ui_KPerfWidget, 1121
Ui_MPerfWidget, 1154
Ui_RebindWidget, 1181
horizontalSpacer_7
Ui::KPerfWidget, 692
Ui::MPerfWidget, 769
Ui::RebindWidget, 988
Ui::SettingsWidget, 1023
Ui_KPerfWidget, 1121
Ui_MPerfWidget, 1154
Ui_RebindWidget, 1181
Ui_SettingsWidget, 1198
horizontalSpacer_8
Ui::KPerfWidget, 692
Ui::RebindWidget, 988
Ui_KPerfWidget, 1121
Ui_RebindWidget, 1181
horizontalSpacer_9
Ui::RebindWidget, 988
Ui::SettingsWidget, 1023
Ui_RebindWidget, 1182
Ui_SettingsWidget, 1198
hwIType
KbPerf, 535
hwLoading
Kb, 309
HwMode
KPerfWidget, 704
hwModeCount
Kb, 309
hwModified
UsbId, 1205
hwModifiedString
UsbId, 1203
hwProfile
Kb, 280
hwSave
Kb, 281
hwSaveButton
Ui::KbWidget, 598
Ui_KbWidget, 1107
hwload
devcmd.__unnamed__, 161
hwload_mode
ckb-daemon/main.c, 1376
device.c, 1224
usb.c, 1504
hwloadmode
profile_keyboard.c, 1472
hwloadprofile
profile.h, 1456
hwprofile, 1485

hwsave
devcmd.__unnamed__, 161
hwtonative
profile.c, 1449
profile.h, 1468

IAUTO
command.h, 1216
ID
command.h, 1216
IDLE
command.h, 1215
INOTIFY
command.h, 1216
IOFF
command.h, 1216
ION
command.h, 1216
IT
KeyMap, 636
I_CAPS
structures.h, 1491
I_COUNT
KbPerf, 535
KPerfWidget, 711
I_NUM
structures.h, 1491
I_SCROLL
structures.h, 1491
i_hw
KbPerf, 505
KPerfWidget, 703
iButton0
Ui::MPerfWidget, 769
Ui_MPerfWidget, 1154
iButton1
Ui::MPerfWidget, 769
Ui_MPerfWidget, 1154
iButton2
Ui::MPerfWidget, 769
Ui_MPerfWidget, 1154
iButton3
Ui::MPerfWidget, 769
Ui_MPerfWidget, 1154
iButton4
Ui::MPerfWidget, 769
Ui_MPerfWidget, 1154
iButton5
Ui::MPerfWidget, 769
Ui_MPerfWidget, 1154
iButtonO
Ui::MPerfWidget, 769
Ui_MPerfWidget, 1155
iColor
KbPerf, 535
iEnable
KbPerf, 535
IFACE_MAX
structures.h, 1491
IN_CORSAIR
device.h, 1226
IN_HID
device.h, 1226
INDEX_OF
includes.h, 1283
iOpacity
KbPerf, 519
IS_CONNECTED
device.h, 1226
IS_FULLRANGE
usb.h, 1508
IS_K65
usb.h, 1508
IS_K70
usb.h, 1508
IS_K95
usb.h, 1508
IS_M65
usb.h, 1508
IS_MOD
input.h, 1295
IS_MONOCHROME
usb.h, 1508
IS_MONOCHROME_DEV
usb.h, 1508
IS_MOUSE
usb.h, 1508
IS_MOUSE_DEV
usb.h, 1509
IS_RGB
usb.h, 1509
IS_RGB_DEV
usb.h, 1509
IS_SABRE
usb.h, 1509
IS_SCIMITAR
usb.h, 1509
IS_STRAFE
usb.h, 1509
IS_WHEEL
input.c, 1285
iState
Kb, 309
iauto
devcmd.__unnamed__, 161
iconClicked
MainWindow, 739
id
devcmd.__unnamed__, 161
KbMode, 494
KbProfile, 543
idle
devcmd.__unnamed__, 161
ids
fwupgradedialog.cpp, 1625
imutex
device.h, 1226

inFrame
AnimScript, 84
inbuf
ckb-mviz/main.c, 1394
includes.h
__FILE_NOPATH__, 1282
ckb_err, 1282
ckb_err_fn, 1282
ckb_err_nofile, 1282
ckb_fatal, 1282
ckb_fatal_fn, 1282
ckb_fatal_nofile, 1282
ckb_info, 1282
ckb_info_fn, 1282
ckb_info_nofile, 1283
ckb_s_err, 1283
ckb_s_out, 1283
ckb_warn, 1283
ckb_warn_fn, 1283
ckb_warn_nofile, 1283
INDEX_OF, 1283
timespec_add, 1284
timespec_eq, 1283
timespec_ge, 1283
timespec_gt, 1284
timespec_le, 1284
timespec_lt, 1284
uchar, 1284
ushort, 1284
indexOf
Kb, 282
KbProfile, 544
indicBox
Ui::MPerfWidget, 769
Ui_MPerfWidget, 1155
indicator
KbPerf, 506
KPerfWidget, 704
indicators
KPerfWidget, 712
infoTab
Ui::AnimSettingDialog, 94
Ui_AnimSettingDialog, 1041
infoUpdated
Kb, 283
init
AnimScript, 68
ColorMap, 157
KbManager, 482
init_keys
crypt.h, 1707
init_linkedlist
zip.c, 1839
initManager
KbFirmware, 421
initbind
input.c, 1289
input.h, 1297
initialized
AnimScript, 84
initmode
profile.c, 1449
inotify
devcmd.__unnamed__, 161
input.c
_cmd_macro, 1285
cmd_bind, 1287
cmd_macro, 1288
cmd_rebind, 1288
cmd_unbind, 1288
freebind, 1288
IS_WHEEL, 1285
initbind, 1289
inputupdate, 1289
inputupdate_keys, 1290
macromask, 1292
updateindicators_kb, 1293
input.h
cmd_bind, 1295
cmd_macro, 1295
cmd_rebind, 1296
cmd_unbind, 1296
freebind, 1296
IS_MOD, 1295
initbind, 1297
inputupdate, 1297
os_inputclose, 1298
os_inputopen, 1299
os_keypress, 1300
os_mousemove, 1300
os_setupindicators, 1301
updateindicators_kb, 1302
input_linux.c
_ledthread, 1303
isync, 1304
os_inputclose, 1304
os_inputopen, 1305
os_keypress, 1306
os_mousemove, 1307
os_setupindicators, 1308
uinputopen, 1308
inputmutex
device.c, 1224
device.h, 1232
inputupdate
input.c, 1289
input.h, 1297
inputupdate_keys
input.c, 1290
insert
KbProfile, 544
instance
KbFirmware, 424
int1_int_none
device_vtable.c, 1241
int1_void_none

device_vtable.c, 1241
intensityBox
Ui::KPerfWidget, 692
Ui_KPerfWidget, 1121
internal
QuaZipFilePrivate, 914
internalAttr
QuaZipFileInfo, 903
QuaZipFileInfo64, 910
QuaZipNewInfo, 924
ioDevice
QuaZipPrivate, 932
ioapi.h
_FILE_OFFSET_BIT, 1712
_LARGEFILE64_SOURCE, 1713
_Z_OF, 1715
__USE_LARGEFILE64, 1712
fill_zlib_filefunc64_32_def_from_filefunc32, 1715
OF, 1713
ZCALLBACK, 1713
ZCLOSE64, 1713
ZERROR64, 1713
ZFAKECLOSE64, 1713
ZOPEN64, 1714
ZPOS64_T, 1715
ZREAD64, 1714
ZSEEK64, 1714
ZTELL64, 1715
ZWRITE64, 1715
zlib_filefunc64_32_def, 1715
zlib_filefunc64_def, 1715
zlib_filefunc_def, 1715
ioff
devcmd.__unnamed__, 161
ion
devcmd.__unnamed__, 161
isActive
KbAnim, 322
isAnim
KeyAction, 614
isAutoClose
QuaZip, 847
isBusy
CkbSettings, 132
isDPI
KeyAction, 614
isDataDescriptorWritingEnabled
QuaZip, 847
isEnabled
AutoRun, 122
isEncrypted
QuaZipFileInfo64, 908
isISO
KbBind, 377
KeyMap, 644
isKeyboard
Kb, 283
KbBind, 377
KeyMap, 645, 646
isMacro
KeyAction, 615
isMedia
KeyAction, 615
isMouse
Kb, 284
KbBind, 377
KeyAction, 615
KeyMap, 647
isNormal
KeyAction, 616
isOpen
Kb, 285
QuaZip, 848
isProgram
KeyAction, 616
isRaw
QuaZipFile, 889
isRoot
QuaZipDir, 872
isRunning
KbAnim, 322
main.cpp, 1689
isSequential
QuaGzipFile, 817
QuaZIODevice, 824
QuaZipFile, 890
isSetting
MPerfWidget, 792
isSpecial
KeyAction, 617
isStarted
KbLight, 441
isUnbound
KeyAction, 617
isValidMacro
KeyAction, 618
isZip64Enabled
QuaZip, 848
isblack
led_mouse.c, 1364
iselect
led.c, 1318
isync
input_linux.c, 1304

JlCompress, 243
compressDir, 244
compressFile, 245, 246
compressFiles, 247
compressSubDir, 249
extractDir, 252
extractFile, 254, 256
extractFiles, 257
getFileList, 258
removeFile, 259
JlCompress.cpp
copyData, 1717

K65
KeyMap, 636
K65_HEIGHT
keymap.cpp, 1659
K65_TOP_COUNT
keymap.cpp, 1659
K65_WIDTH
keymap.cpp, 1659
K65TopRow
keymap.cpp, 1665
K70
KeyMap, 636
K70_HEIGHT
keymap.cpp, 1659
K70_WIDTH
keymap.cpp, 1659
K70_X_START
keymap.cpp, 1659
K95
KeyMap, 636
K95_HEIGHT
keymap.cpp, 1659
K95_WIDTH
keymap.cpp, 1659
K95BaseMap
keymap.cpp, 1665
K95Keys
keymap.cpp, 1665
k95Label1
Ui::KPerfWidget, 692
Ui_KPerfWidget, 1121
k95Label2
Ui::KPerfWidget, 693
Ui_KPerfWidget, 1121
k95Label3
Ui::KPerfWidget, 693
Ui_KPerfWidget, 1121
k95Label4
Ui::KPerfWidget, 693
Ui_KPerfWidget, 1121
k95Label5
Ui::KPerfWidget, 693
Ui_KPerfWidget, 1122
k95Label6
Ui::KPerfWidget, 693
Ui_KPerfWidget, 1122
k95Line
Ui::KPerfWidget, 693
Ui_KPerfWidget, 1122
k95Spacer
Ui::KPerfWidget, 693
Ui_KPerfWidget, 1122
k95Widgets
KPerfWidget, 712
KPerfWidget
ALWAYS_OFF, 704
ALWAYS_ON, 704
BOTH, 704
NORMAL, 704
RGB, 704
KPerfWidget::IndicatorUi, 702, 1683
KB_NAME_LEN
structures.h, 1492
KEY_BACKSLASH_ISO
daemon/keymap.h, 1673
KEY_CORSAIR
daemon/keymap.h, 1673
KEY_NONE
daemon/keymap.h, 1673
KEY_SIZE
keywidget.cpp, 1680
KEY_UNBOUND
daemon/keymap.h, 1673
KEYCOUNT_K95
keymap.cpp, 1659
KEYCOUNT_M65
keymap.cpp, 1660
KEYCOUNT_SABRE
keymap.cpp, 1660
KEYCOUNT_SCIM
keymap.cpp, 1660
KISS_FFT_COS
_kiss_fft_guts.h, 1552
KISS_FFT_FREE
kiss_fft.h, 1566
KISS_FFT_MALLOC
kiss_fft.h, 1566
KISS_FFT_SIN
_kiss_fft_guts.h, 1552
KP_NAME
AnimScript, 84
KP_NONE
AnimScript, 84
KP_POSITION
AnimScript, 84
kPerfTab
Ui::KbWidget, 598
Ui_KbWidget, 1107
KPerfWidget, 699
~KPerfWidget, 706
HW_I_COUNT, 711
HwMode, 704
I_COUNT, 711
i_hw, 703
indicator, 704
indicators, 712
k95Widgets, 712
KPerfWidget, 704
KPerfWidget, 704
mode2Raw, 706
on_copyButton_clicked, 707
on_intensityBox_valueChanged, 707
perf, 712
profile, 712
raw2Mode, 708
setPerf, 708

ui, 712
uiUpdated, 710
updateMapper, 712
kPerfWidget
Ui::KbWidget, 598
Ui_KbWidget, 1107
KSTRAFE_HEIGHT
keymap.cpp, 1660
KSTRAFE_WIDTH
keymap.cpp, 1660
KSTRAFE_X_START
keymap.cpp, 1660
KStrafeKeys
keymap.cpp, 1666
Kb, 261
~Kb, 266
_currentMode, 307
_currentProfile, 307
_delay, 307
_dither, 307
_frameRate, 307
_hwProfile, 307
_layout, 308
_model, 308
_mouseAccel, 308
_needsSave, 308
_profiles, 308
_scrollSpeed, 308
appendProfile, 269
autoSave, 269
cmd, 308
cmdpath, 308
currentBind, 269
currentLight, 270
currentMode, 271
currentPerf, 271
currentProfile, 272
deleteHw, 272
deletePrevious, 273
devpath, 308
dither, 273, 274
features, 309
find, 274
firmware, 309
frameRate, 275
frameUpdate, 276
fwUpdPath, 309
fwUpdate, 277
fwUpdateFinished, 278
fwUpdateProgress, 278
getKeyMap, 279
getMacroNumber, 279
getMacroPath, 279
HWMODE_MAX, 309
hwLoading, 309
hwModeCount, 309
hwProfile, 280
hwSave, 281
iState, 309
indexOf, 282
infoUpdated, 283
isKeyboard, 283
isMouse, 284
isOpen, 285
Kb, 266
KbManager, 307
lastAutoSave, 309
layout, 285
load, 286
macroDelay, 287
macroNumber, 309
macroPath, 310
matches, 288
modeChanged, 288
modeRenamed, 289
model, 288
monochrome, 310
mouseAccel, 289
needsSave, 290
newMode, 290, 291
newProfile, 291, 292
notifyNumber, 310
notifyPath, 310
pollrate, 310
prefsPath, 310
prevMode, 310
prevProfile, 310
profileAdded, 293
profileChanged, 293
profileRenamed, 293
profiles, 294
readNotify, 295
run, 299
save, 300
scrollSpeed, 301
setCurrentMode, 302, 303
setCurrentProfile, 304
updateLayout, 305
usbModel, 310
usbSerial, 311
writeProfileHeader, 306
kb
FwUpgradeDialog, 193
kb.cpp
activeDevices, 1631
notifyPathMutex, 1631
notifyPaths, 1631
KbAnim
Add, 314
Divide, 315
Multiply, 314
Normal, 314
Subtract, 314
KbFirmware
NO, 416
UNKNOWN, 416

YES, 416
KbId, 1623
KbPerf
CAPS, 506
HIGH, 505
HW_IMAX, 506
LIGHT, 506
LOCK, 506
LOW, 505
LOWMED, 505
MACRO, 506
MEDHIGH, 505
MEDIUM, 505
MODE, 506
MUTE, 506
NONE, 506
NORMAL, 506
NUM, 506
OFF, 506
ON, 506
SCROLL, 506
KbAnim, 311
_guid, 336
_isActive, 336
_isActiveKp, 336
_keys, 336
_map, 336
_mode, 336
_name, 336
_needsSave, 336
_opacity, 337
_parameters, 337
_script, 337
_scriptGuid, 337
_scriptName, 337
_tempParameters, 337
blend, 317
catchUp, 318
commitParams, 320
effectiveParams, 320
guid, 321
hasParameter, 321
isActive, 322
isRunning, 322
KbAnim, 315–317
KbAnim, 315–317
keypress, 323
keys, 324, 325
kpRepeatMsec, 337
kpRepeatTime, 337
kpStopTime, 337
map, 325, 326
Mode, 314
mode, 326
name, 326, 327
needsSave, 327
newId, 328
opacity, 328
parameter, 328, 329
reInit, 330
repeatKey, 338
repeatMsec, 338
repeatTime, 338
resetParams, 330
save, 331
script, 332
scriptName, 332
stop, 333
stopTime, 338
trigger, 334
updateParams, 335
KbAnimWidget, 348
~KbAnimWidget, 351
addAnim, 351
animChanged, 352
animations, 365
clearSelection, 353
current, 365
didUpdateSelection, 353
duplicateAnim, 354
KbAnimWidget, 350
KbAnimWidget, 350
light, 365
noReorder, 365
on_animList_currentItemChanged, 354
on_animList_customContextMenuRequested, 355
on_animList_itemChanged, 356
on_blendBox_activated, 356
on_deleteButton_clicked, 357
on_keyButton_clicked, 357
on_nameBox_textEdited, 358
on_opacityBox_valueChanged, 359
on_propertyButton_clicked, 359
refreshList, 360
reorderAnims, 361
selectedKeys, 365
setCurrent, 362
setLight, 363
setSelectedKeys, 364
ui, 365
KbBind, 366
_bind, 394
_devParent, 394
_globalRemap, 394
_map, 394
_needsSave, 394
_needsUpdate, 394
_winLock, 394
action, 370
bindAction, 370
defaultAction, 371
devParent, 372
didLoad, 372
friendlyActionName, 373
friendlyName, 373
getMacroNumber, 374

getMacroPath, 374
globalRemap, 375
globalRemapTime, 395
handleNotificationChannel, 376
isISO, 377
isKeyboard, 377
isMouse, 377
KbBind, 369
KbBind, 369
KeyAction, 394
keyEvent, 378
lastCmd, 395
lastGlobalRemapTime, 395
layoutChanged, 379
light, 380
load, 380
loadGlobalRemap, 381
map, 382, 383
modeParent, 383
needsSave, 383
noAction, 384
perf, 385
resetAction, 386
save, 387
saveGlobalRemap, 388
setAction, 389
setGlobalRemap, 390
setNeedsUpdate, 391
update, 391
updated, 393
winLock, 393
KbBindWidget, 402
~KbBindWidget, 405
bind, 412
currentSelection, 412
KbBindWidget, 405
KbBindWidget, 405
newLayout, 406
newSelection, 406
on_copyButton_clicked, 407
on_resetButton_clicked, 408
profile, 412
setBind, 409
ui, 413
updateBind, 410
updateSelDisplay, 411
kbConnected
KbManager, 483
kbDisconnected
KbManager, 483
KbFirmware, 413
~KbFirmware, 416
_checkUpdates, 416
_fileForBoard, 417
_latestForBoard, 418
checkUpdates, 419
dataForBoard, 419
downloadFinished, 420
downloaded, 420
fwTable, 424
fwTableHash, 424
hasDownloaded, 421
hasGPG, 424
initManager, 421
instance, 424
KbFirmware, 416
KbFirmware, 416
lastCheck, 424
lastFinished, 425
networkManager, 425
processDownload, 422
tableDownload, 425
versionForBoard, 423
KbFirmware::FW, 183
ckbVersion, 184
FW, 184
fileName, 184
fwVersion, 184
hash, 184
url, 184
KbLight, 425
~KbLight, 430
_animList, 452
_animMap, 452
_colorMap, 453
_dimming, 453
_indicatorList, 453
_indicatorMap, 453
_map, 453
_needsMapRefresh, 453
_needsSave, 453
_previewAnim, 453
_qColorMap, 453
_start, 454
addAnim, 430
animKeypress, 430
AnimList, 429
animList, 431, 432
base, 432
close, 433
color, 434
colorMap, 435
didLoad, 435
dimming, 436
duplicateAnim, 437
findAnim, 437
findAnimIdx, 438
frameDisplayed, 439
frameUpdate, 439
isStarted, 441
KbLight, 429
KbLight, 429
lastFrameSignal, 454
load, 441
MAX_DIM, 454
map, 443

needsSave, 444
open, 444
previewAnim, 445
printRGB, 446
rebuildBaseMap, 447
resetIndicators, 448
restartAnimation, 448
save, 449
setIndicator, 450
shareDimming, 450, 451
stopPreview, 451
updated, 452
KbLightWidget, 463
~KbLightWidget, 465
changeAnim, 466
changeAnimKeys, 466
changeColor, 467
currentSelection, 475
KbLightWidget, 465
KbLightWidget, 465
light, 475
newSelection, 468
on_animButton_clicked, 469
on_bgButton_clicked, 470
on_brightnessBox_activated, 470
on_showAnimBox_clicked, 471
setLight, 471
setMonochrome, 472
toggleSidelight, 473
ui, 475
updateLight, 474
KbManager, 476
_daemonVersion, 487
_devices, 487
_eventTimer, 487
_guiVersion, 487
_kbManager, 488
_scanTimer, 488
ckbDaemonVersion, 479
ckbDaemonVersionF, 479
ckbGuiVersion, 480
ckbGuiVersionF, 480
devices, 481
eventTimer, 481
fps, 481
init, 482
Kb, 307
kbConnected, 483
kbDisconnected, 483
KbManager, 478
kbManager, 483
KbManager, 478
parseVersionString, 484
scanKeyboards, 484
scanTimer, 486
stop, 486
versionUpdated, 487
kbManager
KbManager, 483
KbMode, 488
~KbMode, 493
_bind, 501
_id, 501
_light, 501
_name, 501
_needsSave, 501
_perf, 501
bind, 493
doUpdate, 493
id, 494
KbMode, 491, 492
KbMode, 491, 492
keyMap, 495
light, 495
name, 496
needsSave, 497
newId, 497
perf, 498
save, 498
setNeedsSave, 499
setNeedsUpdate, 500
updated, 500
KbPerf, 502
_angleSnap, 533
_curDpi, 508
_dpiIndicator, 533
_iOpacity, 533
_liftHeight, 533
_needsSave, 533
_needsUpdate, 534
angleSnap, 508, 509
applyIndicators, 509
bind, 510
curDpi, 511, 512
curDpiIdx, 512, 513
DPI_COUNT, 534
DPI_MAX, 534
DPI_MIN, 534
didLoad, 513
dpi, 514
dpiClr, 534
dpiColor, 515, 516
dpiCurIdx, 534
dpiCurX, 534
dpiCurY, 534
dpiDown, 516
dpiEnabled, 517
dpiIndicator, 517, 518
dpiLastIdx, 534
dpiOn, 534
dpiUp, 518
dpiX, 535
dpiY, 535
getIndicator, 518
HW_I_COUNT, 535
height, 505

hwIType, 535
I_COUNT, 535
i_hw, 505
iColor, 535
iEnable, 535
iOpacity, 519
indicator, 506
KbPerf, 506, 507
KbPerf, 506, 507
liftHeight, 520
light, 520
light100Color, 535
lightIndicator, 521
load, 522
modeParent, 523
muteNAColor, 535
needsSave, 524
OTHER, 536
operator=, 524
popDpi, 525
pushDpi, 525, 526
pushSniper, 527
pushedDpis, 536
runningPushIdx, 536
SNIPER, 536
save, 528
setIndicator, 529
setNeedsUpdate, 529
settingsUpdated, 530
sniperDpi, 530, 531
update, 532
KbProfile, 536
_currentMode, 553
_id, 553
_keyMap, 553
_modes, 553
_name, 553
_needsSave, 553
append, 541
currentMode, 541, 542
find, 542
id, 543
indexOf, 544
insert, 544
KbProfile, 539, 540
KbProfile, 539, 540
keyMap, 545
modeCount, 546
ModeList, 539
modes, 546, 547
move, 547
name, 548
needsSave, 548
newId, 549
removeAll, 550
save, 551
setNeedsSave, 552
setNeedsUpdate, 552
KbProfileDialog, 554
~KbProfileDialog, 556
addNewProfileItem, 556
device, 562
GUID, 563
KbProfileDialog, 556
KbProfileDialog, 556
NEW_FLAG, 563
on_profileList_currentItemChanged, 557
on_profileList_customContextMenuRequested, 557
on_profileList_itemChanged, 559
on_profileList_itemClicked, 560
profileList_reordered, 560
repopulate, 561
ui, 563
KbWidget, 568
~KbWidget, 572
addNewModeItem, 572
currentMode, 589
devUpdate, 573
device, 589
GUID, 590
hasShownNewFW, 590
KbWidget, 570
KbWidget, 570
lastAutoSave, 590
modeChanged, 573
modeIcon, 575
modeUpdate, 577
modesList_reordered, 576
NEW_FLAG, 590
name, 577
on_fwUpdButton_clicked, 577
on_hwSaveButton_clicked, 579
on_modesList_currentItemChanged, 580
on_modesList_customContextMenuRequested, 581
on_modesList_itemChanged, 582
on_modesList_itemClicked, 583
on_profileBox_activated, 584
on_tabWidget_currentChanged, 584
profileChanged, 585
showFirstTab, 586
showFwUpdate, 586
showLastTab, 587
ui, 590
updateFwButton, 587
updateProfileList, 588
kbWidgets
MainWindow, 746
kbanim.cpp
blendAdd, 1633
blendDivide, 1633
blendFunc, 1633
blendMultiply, 1633
blendNormal, 1633
blendSubtract, 1634

functions, 1634
kbfirmware.cpp
AUTO_CHECK_TIME, 1640
tableName, 1640
kblight.cpp
_shareDimming, 1644
activeLights, 1644
lToS, 1642
monoRgb, 1642
sToL, 1643
kbmanager.cpp
devpath, 1647
kbperf.cpp
map_last, 1649
kbsize
ckb-ripple/main.c, 1416
kbsyspath
usb_linux.c, 1546
Key, 600
_friendlyName, 602
_storageName, 602
friendlyName, 601
hasLed, 602
hasScan, 602
height, 602
name, 603
operator bool, 601
storageName, 602
width, 603
x, 603
y, 603
key, 1672
KeyMap, 648
KeyAction
NORMAL, 607
SPECIAL, 607
UNBOUND, 607
keyAnim, 1377
KeyMap
_LAYOUT_MAX, 636
_MODEL_MAX, 637
DE, 636
DK, 636
ES, 636
EU, 636
EU_DVORAK, 636
FR, 636
GB, 636
GB_DVORAK, 636
IT, 636
K65, 636
K70, 636
K95, 636
M65, 637
MX, 636
NO, 636
NO_LAYOUT, 636
NO_MODEL, 636
PL, 636
SABRE, 637
SCIMITAR, 637
SE, 636
STRAFE, 637
US, 636
US_DVORAK, 636
KeyPatch, 1657
KeyWidget
ADD, 660
NONE, 660
SET, 660
SUBTRACT, 660
TOGGLE, 660
KeyAction, 603
~KeyAction, 608
_value, 630
adjustDisplay, 608
animAction, 609
animInfo, 610
DPI_CUSTOM, 630
DPI_DOWN, 630
DPI_SNIPER, 630
DPI_UP, 631
defaultAction, 610
dpiAction, 611
dpiInfo, 611
driverName, 612
friendlyName, 613
isAnim, 614
isDPI, 614
isMacro, 615
isMedia, 615
isMouse, 615
isNormal, 616
isProgram, 616
isSpecial, 617
isUnbound, 617
isValidMacro, 618
KbBind, 394
KeyAction, 608
keyEvent, 619
keyRelease, 622
KeyAction, 608
LIGHT_DOWN, 631
LIGHT_DOWN_WRAP, 631
LIGHT_UP, 631
LIGHT_UP_WRAP, 631
LOCK_OFF, 631
LOCK_ON, 631
LOCK_TOGGLE, 631
lightAction, 622
lockAction, 623
MODE_NEXT, 631
MODE_NEXT_WRAP, 632
MODE_PREV, 632
MODE_PREV_WRAP, 632
macroAction, 623

macroContent, 624
macroDisplay, 624
macroFullLine, 625
macroLine, 626
modeAction, 627
noAction, 627
operator QString, 627
operator=, 627
PROGRAM_PR_INDEF, 632
PROGRAM_PR_KPSTOP, 632
PROGRAM_PR_KRSTOP, 632
PROGRAM_PR_MULTI, 632
PROGRAM_RE_INDEF, 632
PROGRAM_RE_KPSTOP, 633
PROGRAM_RE_MULTI, 633
preProgram, 632
programAction, 627
programInfo, 628
relProgram, 633
sniperValue, 633
specialInfo, 629
Type, 607
type, 629
value, 630
keyButton
Ui::KbAnimWidget, 346
Ui_KbAnimWidget, 1079
keyEvent
KbBind, 378
KeyAction, 619
keyHeight
KeyMap, 656
keyLayout
KeyMap, 656
KeyMap, 633
_keys, 656
byPosition, 638
contains, 638
count, 638
friendlyName, 639
fromName, 640
fromStorage, 641
getLayout, 641, 642
getModel, 643
height, 644
isISO, 644
isKeyboard, 645, 646
isMouse, 647
key, 648
keyHeight, 656
keyLayout, 656
KeyMap, 637
keyModel, 656
keyWidth, 656
KeyMap, 637
keys, 648
Layout, 636
layout, 649
layoutNames, 649
locale, 650
map, 651
Model, 636
model, 651
modelHeight, 651
modelWidth, 652
name, 652
operator const QHash< QString, Key > &, 653
positions, 653
strLayout, 654
strModel, 654
toStorage, 655
width, 655
keyMap
KbMode, 495
KbProfile, 545
KeyWidget, 678
keyModel
KeyMap, 656
keyNames
ColorMap, 158
keyRelease
KeyAction, 622
keyTab
Ui::RebindWidget, 988
Ui_RebindWidget, 1182
KeyWidget, 656
_bindMap, 677
_colorMap, 677
_displayColorMap, 678
_indicators, 678
_monochrome, 678
_rgbMode, 678
animation, 678
BindMap, 659
bindMap, 660
clearAnimation, 661
clearSelection, 661
colorMap, 661, 662
displayColorMap, 662
drawInfo, 662
keyMap, 678
KeyWidget, 660
KeyWidget, 660
map, 663, 664
monochrome, 664, 665
mouseCurrentX, 678
mouseCurrentY, 678
mouseDownMode, 678
mouseDownX, 679
mouseDownY, 679
mouseMoveEvent, 665
mousePressEvent, 666
mouseReleaseEvent, 667
newSelection, 679
paintEvent, 668
rgbMode, 673, 674

selectAll, 674
selection, 679
selectionChanged, 675
setAnimation, 675
setAnimationToSelection, 676
setSelection, 676
sidelightToggled, 677
keyWidget
Ui::KbBindWidget, 401
Ui::KbLightWidget, 461
Ui_KbBindWidget, 1086
Ui_KbLightWidget, 1094
keyWidth
KeyMap, 656
keyaction.cpp
ANIM_KRSTOP, 1655
ANIM_ONCE, 1655
keyanim, 1383
keyboard
device.c, 1224
device.h, 1233
keymacro, 1479
keymap
daemon/keymap.h, 1679
keymap.c, 1314
keymap.c
BUTTON_HID_COUNT, 1311
corsair_kbcopy, 1311
corsair_mousecopy, 1311
hid_kb_translate, 1311
hid_mouse_translate, 1313
keymap, 1314
keymap.cpp
_patch, 1661
ANSI_ENTER_H, 1658
ANSI_ENTER_W, 1658
ANSI_ENTER_X, 1658
ANSI_ENTER_Y, 1658
ANSI_LSHIFT_W, 1658
ANSI_LSHIFT_X, 1659
getMap, 1662
K65_HEIGHT, 1659
K65_TOP_COUNT, 1659
K65_WIDTH, 1659
K65TopRow, 1665
K70_HEIGHT, 1659
K70_WIDTH, 1659
K70_X_START, 1659
K95_HEIGHT, 1659
K95_WIDTH, 1659
K95BaseMap, 1665
K95Keys, 1665
KEYCOUNT_K95, 1659
KEYCOUNT_M65, 1660
KEYCOUNT_SABRE, 1660
KEYCOUNT_SCIM, 1660
KSTRAFE_HEIGHT, 1660
KSTRAFE_WIDTH, 1660
KSTRAFE_X_START, 1660
KStrafeKeys, 1666
M65_HEIGHT, 1660
M65_WIDTH, 1660
M65Keys, 1667
N_LAYOUTS, 1660
N_MODELS, 1661
NS, 1661
PATCH_COUNT, 1661
patch, 1661
patchANSI, 1664
patchDE, 1667
patchDK, 1667
patchDvorak, 1667
patchES, 1667
patchEU, 1668
patchFR, 1668
patchISO, 1665
patchIT, 1668
patchMX, 1668
patchNO, 1668
patchSE, 1669
SABRE_HEIGHT, 1661
SABRE_WIDTH, 1661
SCIM_HEIGHT, 1661
SCIM_WIDTH, 1661
SabreKeys, 1669
ScimKeys, 1669
standardMaps, 1669
keypress
AnimScript, 69
KbAnim, 323
keys
KbAnim, 324, 325
KeyMap, 648
keywidget.cpp
KEY_SIZE, 1680
m65Overlay, 1680
monoRgb, 1680
sabOverlay, 1681
scimOverlay, 1681
kf_bfly2
kiss_fft.c, 1554
kf_bfly3
kiss_fft.c, 1554
kf_bfly4
kiss_fft.c, 1555
kf_bfly5
kiss_fft.c, 1556
kf_bfly_generic
kiss_fft.c, 1557
kf_cexp
_kiss_fft_guts.h, 1552
kf_factor
kiss_fft.c, 1558
kf_work
kiss_fft.c, 1558
kiss_fft_cpx, 1566

kiss_fft_state, 1549
kiss_fftr_state, 1572
kiss_fft
    kiss_fft.c, 1560
    kiss_fft.h, 1567
kiss_fft.c
    kf_bfly2, 1554
    kf_bfly3, 1554
    kf_bfly4, 1555
    kf_bfly5, 1556
    kf_bfly_generic, 1557
    kf_factor, 1558
    kf_work, 1558
    kiss_fft, 1560
    kiss_fft_alloc, 1561
    kiss_fft_cleanup, 1562
    kiss_fft_next_fast_size, 1563
    kiss_fft_stride, 1563
kiss_fft.h
    KISS_FFT_FREE, 1566
    KISS_FFT_MALLOC, 1566
    kiss_fft, 1567
    kiss_fft_alloc, 1568
    kiss_fft_cfg, 1567
    kiss_fft_cleanup, 1569
    kiss_fft_free, 1566
    kiss_fft_next_fast_size, 1569
    kiss_fft_scalar, 1567
    kiss_fft_stride, 1570
    kiss_fftr_next_fast_size_real, 1567
kiss_fft_alloc
    kiss_fft.c, 1561
    kiss_fft.h, 1568
kiss_fft_cfg
    kiss_fft.h, 1567
kiss_fft_cleanup
    kiss_fft.c, 1562
    kiss_fft.h, 1569
kiss_fft_free
    kiss_fft.h, 1566
kiss_fft_next_fast_size
    kiss_fft.c, 1563
    kiss_fft.h, 1569
kiss_fft_scalar
    kiss_fft.h, 1567
kiss_fft_stride
    kiss_fft.c, 1563
    kiss_fft.h, 1570
kiss_fftr
    kiss_fftr.c, 1573
    kiss_fftr.h, 1577
kiss_fftr.c
    kiss_fftr, 1573
    kiss_fftr_alloc, 1574
    kiss_fftri, 1575
kiss_fftr.h
    kiss_fftr, 1577
    kiss_fftr_alloc, 1578
    kiss_fftr_cfg, 1577
    kiss_fftr_free, 1577
    kiss_fftri, 1579
kiss_fftr_alloc
    kiss_fftr.c, 1574
    kiss_fftr.h, 1578
kiss_fftr_cfg
    kiss_fftr.h, 1577
kiss_fftr_free
    kiss_fftr.h, 1577
kiss_fftr_next_fast_size_real
    kiss_fft.h, 1567
kiss_fftri
    kiss_fftr.c, 1575
    kiss_fftr.h, 1579
kpDelayBox
    Ui::AnimSettingDialog, 94
    Ui_AnimSettingDialog, 1042
kpModeStopBox
    Ui::AnimSettingDialog, 95
    Ui_AnimSettingDialog, 1042
kpReleaseBox
    Ui::AnimSettingDialog, 95
    Ui_AnimSettingDialog, 1042
kpRepeatBox
    Ui::AnimSettingDialog, 95
    Ui_AnimSettingDialog, 1042
kpRepeatLabel
    Ui::AnimSettingDialog, 95
    Ui_AnimSettingDialog, 1042
kpRepeatLabel_2
    Ui::AnimSettingDialog, 95
    Ui_AnimSettingDialog, 1042
kpRepeatMsec
    KbAnim, 337
kpRepeatTime
    KbAnim, 337
kpStopCheck
    AnimSettingDialog, 119
kpStopTime
    KbAnim, 337
kphold
    ckb-gradient/main.c, 1382
kprelease
    ckb-gradient/main.c, 1382
    ckb-ripple/main.c, 1416
    ckb-wave/main.c, 1424

LAYOUT
    command.h, 1215
LIFT
    command.h, 1216
LIGHT
    KbPerf, 506
LOCK
    KbPerf, 506
LOW
    KbPerf, 505
LOWMED

KbPerf, 505
LED_DPI
daemon/keymap.h, 1673
LED_MOUSE
daemon/keymap.h, 1673
lHeightBox
Ui::MPerfWidget, 771
Ui_MPerfWidget, 1156
LIFT_MAX
structures.h, 1492
LIFT_MIN
structures.h, 1492
LIGHT_DOWN
KeyAction, 631
LIGHT_DOWN_WRAP
KeyAction, 631
LIGHT_UP
KeyAction, 631
LIGHT_UP_WRAP
KeyAction, 631
LOCALHEADERMAGIC
zip.c, 1834
LOCK_OFF
KeyAction, 631
LOCK_ON
KeyAction, 631
LOCK_TOGGLE
KeyAction, 631
lToS
kblight.cpp, 1642
label
Ui::AnimAddDialog, 47
Ui::AnimSettingDialog, 95
Ui::ExtraSettingsWidget, 171
Ui::GradientDialog, 212
Ui::KbBindWidget, 401
Ui::KbLightWidget, 461
Ui::KPerfWidget, 693
Ui::LayoutDialog, 716
Ui::ModeSelectDialog, 751
Ui::MPerfWidget, 770
Ui::SettingsWidget, 1023
Ui_AnimAddDialog, 1033
Ui_AnimSettingDialog, 1042
Ui_ExtraSettingsWidget, 1055
Ui_GradientDialog, 1070
Ui_KbBindWidget, 1086
Ui_KbLightWidget, 1094
Ui_KPerfWidget, 1122
Ui_LayoutDialog, 1132
Ui_ModeSelectDialog, 1140
Ui_MPerfWidget, 1155
Ui_SettingsWidget, 1198
label_10
Ui::AnimSettingDialog, 95
Ui::ExtraSettingsWidget, 171
Ui::KPerfWidget, 693
Ui_AnimSettingDialog, 1042
Ui_ExtraSettingsWidget, 1055
Ui_KPerfWidget, 1122
label_11
Ui::AnimSettingDialog, 95
Ui::ExtraSettingsWidget, 171
Ui::KPerfWidget, 694
Ui::MPerfWidget, 770
Ui_AnimSettingDialog, 1042
Ui_ExtraSettingsWidget, 1055
Ui_KPerfWidget, 1122
Ui_MPerfWidget, 1155
label_12
Ui::AnimSettingDialog, 95
Ui::KPerfWidget, 694
Ui::MPerfWidget, 770
Ui_AnimSettingDialog, 1043
Ui_KPerfWidget, 1122
Ui_MPerfWidget, 1155
label_13
Ui::AnimSettingDialog, 96
Ui::MPerfWidget, 770
Ui_AnimSettingDialog, 1043
Ui_MPerfWidget, 1155
label_14
Ui::KPerfWidget, 694
Ui::MPerfWidget, 770
Ui_KPerfWidget, 1122
Ui_MPerfWidget, 1155
label_15
Ui::KPerfWidget, 694
Ui::MPerfWidget, 770
Ui_KPerfWidget, 1123
Ui_MPerfWidget, 1155
label_16
Ui::KPerfWidget, 694
Ui_KPerfWidget, 1123
label_17
Ui::KPerfWidget, 694
Ui_KPerfWidget, 1123
label_18
Ui::KPerfWidget, 694
Ui_KPerfWidget, 1123
label_19
Ui::KPerfWidget, 694
Ui_KPerfWidget, 1123
label_2
Ui::AnimAddDialog, 47
Ui::AnimSettingDialog, 96
Ui::ExtraSettingsWidget, 172
Ui::FwUpgradeDialog, 199
Ui::GradientDialog, 212
Ui::KbBindWidget, 401
Ui::KbLightWidget, 462
Ui::KPerfWidget, 694
Ui::LayoutDialog, 717
Ui::MPerfWidget, 770
Ui::SettingsWidget, 1023
Ui_AnimAddDialog, 1033

Ui_AnimSettingDialog, 1043
Ui_ExtraSettingsWidget, 1055
Ui_FwUpgradeDialog, 1064
Ui_GradientDialog, 1070
Ui_KbBindWidget, 1086
Ui_KbLightWidget, 1094
Ui_KPerfWidget, 1123
Ui_LayoutDialog, 1133
Ui_MPerfWidget, 1155
Ui_SettingsWidget, 1198
label_20
Ui::KPerfWidget, 695
Ui_KPerfWidget, 1123
label_21
Ui::KPerfWidget, 695
Ui_KPerfWidget, 1123
label_22
Ui::KPerfWidget, 695
Ui_KPerfWidget, 1123
label_23
Ui::KPerfWidget, 695
Ui_KPerfWidget, 1124
label_24
Ui::KPerfWidget, 695
Ui_KPerfWidget, 1124
label_25
Ui::MPerfWidget, 770
Ui_MPerfWidget, 1156
label_3
Ui::AnimSettingDialog, 96
Ui::ExtraSettingsWidget, 172
Ui::KbLightWidget, 462
Ui::KbWidget, 598
Ui::KPerfWidget, 695
Ui::MPerfWidget, 770
Ui::SettingsWidget, 1023
Ui_AnimSettingDialog, 1043
Ui_ExtraSettingsWidget, 1055
Ui_KbLightWidget, 1094
Ui_KbWidget, 1107
Ui_KPerfWidget, 1124
Ui_MPerfWidget, 1156
Ui_SettingsWidget, 1198
label_4
Ui::AnimSettingDialog, 96
Ui::FwUpgradeDialog, 199
Ui::KbWidget, 598
Ui::KPerfWidget, 695
Ui::MPerfWidget, 771
Ui_AnimSettingDialog, 1043
Ui_FwUpgradeDialog, 1064
Ui_KbWidget, 1107
Ui_KPerfWidget, 1124
Ui_MPerfWidget, 1156
label_5
Ui::AnimSettingDialog, 96
Ui::ExtraSettingsWidget, 172
Ui::KbAnimWidget, 346
Ui::KPerfWidget, 695
Ui::MPerfWidget, 771
Ui::SettingsWidget, 1023
Ui_AnimSettingDialog, 1043
Ui_ExtraSettingsWidget, 1056
Ui_KbAnimWidget, 1079
Ui_KPerfWidget, 1124
Ui_MPerfWidget, 1156
Ui_SettingsWidget, 1198
label_6
Ui::AnimSettingDialog, 96
Ui::ExtraSettingsWidget, 172
Ui::KbAnimWidget, 346
Ui::KPerfWidget, 695
Ui::MPerfWidget, 771
Ui::SettingsWidget, 1024
Ui_AnimSettingDialog, 1043
Ui_ExtraSettingsWidget, 1056
Ui_KbAnimWidget, 1079
Ui_KPerfWidget, 1124
Ui_MPerfWidget, 1156
Ui_SettingsWidget, 1198
label_7
Ui::AnimSettingDialog, 96
Ui::KbAnimWidget, 346
Ui::KPerfWidget, 696
Ui::MPerfWidget, 771
Ui_AnimSettingDialog, 1043
Ui_KbAnimWidget, 1079
Ui_KPerfWidget, 1124
Ui_MPerfWidget, 1156
label_8
Ui::AnimSettingDialog, 96
Ui::KPerfWidget, 696
Ui::MPerfWidget, 771
Ui::SettingsWidget, 1024
Ui_AnimSettingDialog, 1043
Ui_KPerfWidget, 1124
Ui_MPerfWidget, 1156
Ui_SettingsWidget, 1198
label_9
Ui::AnimSettingDialog, 96
Ui::KbWidget, 598
Ui_AnimSettingDialog, 1044
Ui_KbWidget, 1107
lastAutoSave
Kb, 309
KbWidget, 590
lastCheck
KbFirmware, 424
lastCmd
KbBind, 395
lastDuration
AnimSettingDialog, 119
lastFinished
KbFirmware, 425
lastFrame
AnimScript, 84

lastFrameSignal
KbLight, 454
lastGlobalRemapTime
KbBind, 395
lastMappedDirectoryEntry
QuaZipPrivate, 932
lastSharedDimming
extrasettingswidget.cpp, 1621
Layout
KeyMap, 636
layout
Kb, 285
KeyMap, 649
layoutBox
Ui::SettingsWidget, 1024
Ui_SettingsWidget, 1198
layoutChanged
KbBind, 379
LayoutDialog, 717
~LayoutDialog, 719
LayoutDialog, 719
LayoutDialog, 719
selected, 720
ui, 720
layoutNames
KeyMap, 649
layoutWidget
Ui::RebindWidget, 989
Ui_RebindWidget, 1182
layoutWidget1
Ui::RebindWidget, 989
Ui_RebindWidget, 1182
layoutWidget_2
Ui::RebindWidget, 989
Ui_RebindWidget, 1182
lbl_macro
Ui::RebindWidget, 989
Ui_RebindWidget, 1182
led.c
cmd_iauto, 1316
cmd_inotify, 1316
cmd_ioff, 1316
cmd_ion, 1317
cmd_rgb, 1317
has_key, 1318
iselect, 1318
printrgb, 1319
led.h
cmd_iauto, 1321
cmd_inotify, 1322
cmd_ioff, 1322
cmd_ion, 1323
cmd_rgb, 1323
loadrgb_kb, 1323
loadrgb_mouse, 1325
printrgb, 1326
savergb_kb, 1327
savergb_mouse, 1329
updatergb_kb, 1329
updatergb_mouse, 1331
led_keyboard.c
BR1, 1355
BR2, 1355
BR4, 1355
bit_reverse_table, 1362
loadrgb_kb, 1356
makergb_512, 1357
makergb_full, 1358
O0, 1355
O1, 1355
O2, 1355
O3, 1355
O4, 1355
O5, 1355
O6, 1355
O7, 1355
O8, 1355
ordered8to3, 1359
quantize8to3, 1359
rgbcmp, 1359
savergb_kb, 1360
updatergb_kb, 1361
led_mouse.c
isblack, 1364
loadrgb_mouse, 1365
rgbcmp, 1365
savergb_mouse, 1366
updatergb_mouse, 1366
left
ckb-wave/main.c, 1424
license
AnimScript, 70
lift
devcmd.__unnamed__, 161
liftHeight
KbPerf, 520
light
KbAnimWidget, 365
KbBind, 380
KbLightWidget, 475
KbMode, 495
KbPerf, 520
light100Color
KbPerf, 535
lightAction
KeyAction, 622
lightBox
Ui::KPerfWidget, 696
Ui::RebindWidget, 989
Ui_KPerfWidget, 1124
Ui_RebindWidget, 1182
lightButton
Ui::RebindWidget, 989
Ui_RebindWidget, 1182
lightColor1
Ui::KPerfWidget, 696

Ui_KPerfWidget, 1125
lightColor2
Ui::KPerfWidget, 696
Ui_KPerfWidget, 1125
lightColor3
Ui::KPerfWidget, 696
Ui_KPerfWidget, 1125
lightIndicator
KbPerf, 521
lightTab
Ui::KbWidget, 598
Ui_KbWidget, 1107
lightWidget
Ui::KbWidget, 598
Ui_KbWidget, 1107
lightWrapBox
Ui::RebindWidget, 989
Ui_RebindWidget, 1182
lighting, 1482
line
Ui::AnimSettingDialog, 97
Ui::ExtraSettingsWidget, 172
Ui::KbBindWidget, 401
Ui::KbLightWidget, 462
Ui::KPerfWidget, 696
Ui::MPerfWidget, 771
Ui::SettingsWidget, 1024
Ui_AnimSettingDialog, 1044
Ui_ExtraSettingsWidget, 1056
Ui_KbBindWidget, 1086
Ui_KbLightWidget, 1094
Ui_KPerfWidget, 1125
Ui_MPerfWidget, 1156
Ui_SettingsWidget, 1199
line_2
Ui::AnimSettingDialog, 97
Ui::ExtraSettingsWidget, 172
Ui::KbBindWidget, 401
Ui::KbLightWidget, 462
Ui::KPerfWidget, 696
Ui::MPerfWidget, 771
Ui::SettingsWidget, 1024
Ui_AnimSettingDialog, 1044
Ui_ExtraSettingsWidget, 1056
Ui_KbBindWidget, 1086
Ui_KbLightWidget, 1094
Ui_KPerfWidget, 1125
Ui_MPerfWidget, 1157
Ui_SettingsWidget, 1199
line_3
Ui::ExtraSettingsWidget, 172
Ui::KPerfWidget, 696
Ui::MPerfWidget, 771
Ui::SettingsWidget, 1024
Ui_ExtraSettingsWidget, 1056
Ui_KPerfWidget, 1125
Ui_MPerfWidget, 1157
Ui_SettingsWidget, 1199
linkedlist_data_s, 1831
linkedlist_datablock_internal_s, 1830
linkedlist_data
zip.c, 1836
linkedlist_datablock_internal
zip.c, 1836
list
AnimScript, 70
load
AnimScript, 71
Kb, 286
KbBind, 380
KbLight, 441
KbPerf, 522
LoadCentralDirectoryRecord
zip.c, 1840
loadGlobalRemap
KbBind, 381
loaddpi
dpi.c, 1264
dpi.h, 1269
loadprofile
devcmd.__unnamed__, 161
profile.c, 1450
profile.h, 1468
loadprofile_none
device_vtable.c, 1241
loadrgb_kb
led.h, 1323
led_keyboard.c, 1356
loadrgb_mouse
led.h, 1325
led_mouse.c, 1365
local
unzip.c, 1762
zip.c, 1834
locale
KeyMap, 650
localecase
ckb-daemon/main.c, 1368
lockAction
KeyAction, 623
lockBox
Ui::KPerfWidget, 697
Ui::RebindWidget, 989
Ui_KPerfWidget, 1125
Ui_RebindWidget, 1183
lockButton
Ui::RebindWidget, 990
Ui_RebindWidget, 1183
lockColorOff
Ui::KPerfWidget, 697
Ui_KPerfWidget, 1125
lockColorOn
Ui::KPerfWidget, 697
Ui_KPerfWidget, 1125
lockMutex
ckbsettings.cpp, 1613

ckbsettingswriter.cpp, 1616
lockMutexCache
ckbsettings.cpp, 1613
ckbsettingswriter.cpp, 1616
lockMutexStatic
ckbsettings.cpp, 1613
ckbsettingswriter.cpp, 1616
lockMutexStatic2
ckbsettings.cpp, 1613
ckbsettingswriter.cpp, 1616
loginItemBox
Ui::SettingsWidget, 1024
Ui_SettingsWidget, 1199

M65
KeyMap, 637
M65_HEIGHT
keymap.cpp, 1660
M65_WIDTH
keymap.cpp, 1660
M65Keys
keymap.cpp, 1667
m65Overlay
keywidget.cpp, 1680
MACRO
command.h, 1216
KbPerf, 506
MAX_FILE_NAME_LENGTH
QuaZip, 830
MEDHIGH
KbPerf, 505
MEDIUM
KbPerf, 505
MODE
command.h, 1215
KbPerf, 506
MPerfWidget::DpiUi, 778, 1705
MUTE
KbPerf, 506
MUTED
media.h, 1696
MX
KeyMap, 636
M_PI
ckb-anim.h, 1599
MACRO_MAX
structures.h, 1492
MAKEULONG64
zip.c, 1834
MAX_BUFFER
devnode.c, 1243
MAX_DIM
KbLight, 454
MAXFACTORS
_kiss_fft_guts.h, 1552
mAccelBox
Ui::ExtraSettingsWidget, 172
Ui_ExtraSettingsWidget, 1056
MD_NAME_LEN
structures.h, 1492
MODE_COUNT
structures.h, 1492
MODE_NEXT
KeyAction, 631
MODE_NEXT_WRAP
KeyAction, 632
MODE_PREV
KeyAction, 632
MODE_PREV_WRAP
KeyAction, 632
MOUSE_BUTTON_FIRST
daemon/keymap.h, 1673
MOUSE_EXTRA_FIRST
daemon/keymap.h, 1674
mPerfTab
Ui::KbWidget, 599
Ui_KbWidget, 1108
MPerfWidget, 775
~MPerfWidget, 781
_xyLink, 791
boxXChanged, 781
boxXMapper, 791
boxYChanged, 782
boxYMapper, 791
buttonMapper1, 791
buttonMapper2, 791
colorChanged, 783
colorClicked, 784
colorLink, 792
DPI_COUNT, 792
DPI_MAX, 792
DPI_MIN, 792
enableChanged, 784
enableMapper, 792
isSetting, 792
MPerfWidget, 779
MPerfWidget, 779
on_aSnapBox_clicked, 785
on_copyButton_clicked, 785
on_indicBox_clicked, 786
on_lHeightBox_activated, 786
on_spinBox_valueChanged, 787
on_xyBox_clicked, 787
perf, 792
profile, 792
setPerf, 788
sliderXMapper, 792
sliderXMoved, 789
sliderYMapper, 792
sliderYMoved, 790
stages, 793
ui, 793
mPerfWidget
Ui::KbWidget, 599
Ui_KbWidget, 1108
MSG_SIZE
structures.h, 1492

macReader
RebindWidget, 965
macro
devcmd.__unnamed__, 162
macroAction
KeyAction, 623
macroBox
MacroReaderThread, 727
Ui::KPerfWidget, 697
Ui_KPerfWidget, 1126
macroColorOff
Ui::KPerfWidget, 697
Ui_KPerfWidget, 1126
macroColorOn
Ui::KPerfWidget, 697
Ui_KPerfWidget, 1126
macroContent
KeyAction, 624
macroDelay
Kb, 287
macroDisplay
KeyAction, 624
macroFullLine
KeyAction, 625
macroLine
KeyAction, 626
macroNumber
Kb, 309
MacroReaderThread, 728
macroPath
Kb, 310
MacroReaderThread, 728
MacroReader, 720
~MacroReader, 723
MacroReader, 723
macroReaderThread, 724
MacroReader, 723
startWorkInAThread, 723
MacroReaderThread, 724
macroBox, 727
macroNumber, 728
macroPath, 728
MacroReaderThread, 726
macroText, 728
MacroReaderThread, 726
readMacro, 727
run, 727
macroReaderThread
MacroReader, 724
macroTab
Ui::RebindWidget, 990
Ui_RebindWidget, 1183
macroText
MacroReaderThread, 728
macroaction, 1478
macromask
input.c, 1292
main
ckb-anim.h, 1608
ckb-daemon/main.c, 1368
main.cpp, 1690
main.cpp
CommandLineBackground, 1688
CommandLineClose, 1688
CommandLineError, 1688
CommandLineHelpRequested, 1688
CommandLineOK, 1688
CommandLineVersionRequested, 1688
main.cpp
appShare, 1689
CommandLineParseResults, 1688
isRunning, 1689
main, 1690
parseCommandLine, 1691
pidActive, 1693
SHMEM_SIZE, 1688
SHMEM_SIZE_V015, 1688
main_ac
ckb-daemon/main.c, 1376
main_av
ckb-daemon/main.c, 1376
MainWindow, 732
~MainWindow, 736
addDevice, 737
checkFwUpdates, 737
cleanup, 738
closeAction, 746
closeEvent, 739
iconClicked, 739
kbWidgets, 746
MainWindow, 735
mainWindow, 746
MainWindow, 735
quitApp, 740
removeDevice, 741
restoreAction, 746
settingsWidget, 747
SettingsWidget, 1013
showFwUpdateNotification, 741
showWindow, 742
stateChange, 743
timerTick, 744
toggleTrayIcon, 745
trayIcon, 747
trayIconMenu, 747
ui, 747
updateVersion, 745
mainWindow
MainWindow, 746
mainwindow.cpp
appShare, 1694
configLabel, 1694
makeIcon
GradientDialog, 221
makeStops
GradientDialogWidget, 232

makergb_512
led_keyboard.c, 1357
makergb_full
led_keyboard.c, 1358
map
KbAnim, 325, 326
KbBind, 382, 383
KbLight, 443
KeyMap, 651
KeyWidget, 663, 664
map_last
kbperf.cpp, 1649
matches
Kb, 288
max
ckb-mviz/main.c, 1393
maxsize
ckb-rain/main.c, 1404
mb2Box
Ui::RebindWidget, 990
Ui_RebindWidget, 1183
mb2Button
Ui::RebindWidget, 990
Ui_RebindWidget, 1183
mbBox
Ui::RebindWidget, 990
Ui_RebindWidget, 1183
mbButton
Ui::RebindWidget, 990
Ui_RebindWidget, 1183
mdAdd
QuaZip, 830
mdAppend
QuaZip, 830
mdCreate
QuaZip, 830
mdNotOpen
QuaZip, 830
mdUnzip
QuaZip, 830
media.h
MUTED, 1696
UNKNOWN, 1696
UNMUTED, 1696
media.h
ENUM_C, 1696
ENUM_END_C, 1696
EXTERN_C, 1696
getMuteState, 1696
muteState, 1696
media_linux.cpp
getMuteState, 1697
muteProcess, 1698
media_mac.m
disableAppNap, 1698
getMuteState, 1699
mediaBox
Ui::RebindWidget, 990
Ui_RebindWidget, 1183
mediaButton
Ui::RebindWidget, 990
Ui_RebindWidget, 1184
mediaKeys
RebindWidget, 965
method
QuaZipFileInfo, 903
QuaZipFileInfo64, 910
min
ckb-mviz/main.c, 1393
minX
AnimScript, 85
minY
AnimScript, 85
mkdevpath
devnode.c, 1248
devnode.h, 1256
mkfwnode
devnode.c, 1249
devnode.h, 1257
mknotifynode
devnode.c, 1249
devnode.h, 1258
moc_animadddialog.cpp
QT_MOC_LITERAL, 1897
qt_meta_data_AnimAddDialog, 1897
qt_meta_stringdata_AnimAddDialog, 1898
moc_animscript.cpp
QT_MOC_LITERAL, 1900
qt_meta_data_AnimScript, 1900
qt_meta_stringdata_AnimScript, 1901
moc_animsettingdialog.cpp
QT_MOC_LITERAL, 1902
qt_meta_data_AnimSettingDialog, 1903
qt_meta_stringdata_AnimSettingDialog, 1903
moc_ckbsettingswriter.cpp
QT_MOC_LITERAL, 1905
qt_meta_data_CkbSettingsWriter, 1905
qt_meta_stringdata_CkbSettingsWriter, 1906
moc_colorbutton.cpp
QT_MOC_LITERAL, 1907
qt_meta_data_ColorButton, 1908
qt_meta_stringdata_ColorButton, 1908
moc_extrasettingswidget.cpp
QT_MOC_LITERAL, 1910
qt_meta_data_ExtraSettingsWidget, 1910
qt_meta_stringdata_ExtraSettingsWidget, 1910
moc_fwupgradedialog.cpp
QT_MOC_LITERAL, 1913
qt_meta_data_FwUpgradeDialog, 1913
qt_meta_stringdata_FwUpgradeDialog, 1914
moc_gradientbutton.cpp
QT_MOC_LITERAL, 1916
qt_meta_data_GradientButton, 1916
qt_meta_stringdata_GradientButton, 1917
moc_gradientdialog.cpp
QT_MOC_LITERAL, 1918

qt_meta_data_GradientDialog, 1919
qt_meta_stringdata_GradientDialog, 1919
moc_gradientdialogwidget.cpp
QT_MOC_LITERAL, 1921
qt_meta_data_GradientDialogWidget, 1921
qt_meta_stringdata_GradientDialogWidget, 1922
moc_kb.cpp
QT_MOC_LITERAL, 1924
qt_meta_data_Kb, 1924
qt_meta_stringdata_Kb, 1924
moc_kbanim.cpp
QT_MOC_LITERAL, 1926
qt_meta_data_KbAnim, 1926
qt_meta_stringdata_KbAnim, 1927
moc_kbanimwidget.cpp
QT_MOC_LITERAL, 1929
qt_meta_data_KbAnimWidget, 1929
qt_meta_stringdata_KbAnimWidget, 1929
moc_kbbind.cpp
QT_MOC_LITERAL, 1931
qt_meta_data_KbBind, 1931
qt_meta_stringdata_KbBind, 1931
moc_kbbindwidget.cpp
QT_MOC_LITERAL, 1933
qt_meta_data_KbBindWidget, 1934
qt_meta_stringdata_KbBindWidget, 1934
moc_kbfirmware.cpp
QT_MOC_LITERAL, 1936
qt_meta_data_KbFirmware, 1936
qt_meta_stringdata_KbFirmware, 1937
moc_kblight.cpp
QT_MOC_LITERAL, 1939
qt_meta_data_KbLight, 1939
qt_meta_stringdata_KbLight, 1940
moc_kblightwidget.cpp
QT_MOC_LITERAL, 1942
qt_meta_data_KbLightWidget, 1942
qt_meta_stringdata_KbLightWidget, 1942
moc_kbmanager.cpp
QT_MOC_LITERAL, 1944
qt_meta_data_KbManager, 1944
qt_meta_stringdata_KbManager, 1944
moc_kbmode.cpp
QT_MOC_LITERAL, 1946
qt_meta_data_KbMode, 1947
qt_meta_stringdata_KbMode, 1947
moc_kbperf.cpp
QT_MOC_LITERAL, 1949
qt_meta_data_KbPerf, 1949
qt_meta_stringdata_KbPerf, 1950
moc_kbprofile.cpp
QT_MOC_LITERAL, 1951
qt_meta_data_KbProfile, 1952
qt_meta_stringdata_KbProfile, 1952
moc_kbprofiledialog.cpp
QT_MOC_LITERAL, 1954
qt_meta_data_KbProfileDialog, 1954
qt_meta_stringdata_KbProfileDialog, 1955
moc_kbwidget.cpp
QT_MOC_LITERAL, 1957
qt_meta_data_KbWidget, 1957
qt_meta_stringdata_KbWidget, 1957
moc_keyaction.cpp
QT_MOC_LITERAL, 1959
qt_meta_data_KeyAction, 1959
qt_meta_stringdata_KeyAction, 1960
moc_keywidget.cpp
QT_MOC_LITERAL, 1961
qt_meta_data_KeyWidget, 1962
qt_meta_stringdata_KeyWidget, 1962
moc_kperfwidget.cpp
QT_MOC_LITERAL, 1964
qt_meta_data_KPerfWidget, 1964
qt_meta_stringdata_KPerfWidget, 1965
moc_layoutdialog.cpp
QT_MOC_LITERAL, 1967
qt_meta_data_LayoutDialog, 1967
qt_meta_stringdata_LayoutDialog, 1968
moc_macroreader.cpp
QT_MOC_LITERAL, 1970
qt_meta_data_MacroReader, 1970
qt_meta_data_MacroReaderThread, 1971
qt_meta_stringdata_MacroReader, 1971
qt_meta_stringdata_MacroReaderThread, 1971
moc_mainwindow.cpp
QT_MOC_LITERAL, 1973
qt_meta_data_MainWindow, 1973
qt_meta_stringdata_MainWindow, 1973
moc_modeselectdialog.cpp
QT_MOC_LITERAL, 1975
qt_meta_data_ModeSelectDialog, 1975
qt_meta_stringdata_ModeSelectDialog, 1976
moc_mperfwidget.cpp
QT_MOC_LITERAL, 1977
qt_meta_data_MPerfWidget, 1978
qt_meta_stringdata_MPerfWidget, 1978
moc_quagzipfile.cpp
QT_MOC_LITERAL, 1980
qt_meta_data_QuaGzipFile, 1980
qt_meta_stringdata_QuaGzipFile, 1981
moc_quaziodevice.cpp
QT_MOC_LITERAL, 1982
qt_meta_data_QuaZIODevice, 1983
qt_meta_stringdata_QuaZIODevice, 1983
moc_quazipfile.cpp
QT_MOC_LITERAL, 1984
qt_meta_data_QuaZipFile, 1985
qt_meta_stringdata_QuaZipFile, 1985
moc_rebindwidget.cpp
QT_MOC_LITERAL, 1987
qt_meta_data_RebindWidget, 1987
qt_meta_stringdata_RebindWidget, 1987
moc_rlistwidget.cpp
QT_MOC_LITERAL, 1989
qt_meta_data_RListWidget, 1989
qt_meta_stringdata_RListWidget, 1989

moc_settingswidget.cpp
QT_MOC_LITERAL, 1991
qt_meta_data_SettingsWidget, 1992
qt_meta_stringdata_SettingsWidget, 1992
modBox
Ui::RebindWidget, 991
Ui_RebindWidget, 1184
modButton
Ui::RebindWidget, 991
Ui_RebindWidget, 1184
modKeys
RebindWidget, 965
settingswidget.cpp, 2003
modNames
settingswidget.cpp, 2003
Mode
KbAnim, 314
QuaZip, 830
mode
KbAnim, 326
QuaZipPrivate, 932
mode2Raw
KPerfWidget, 706
modeAction
KeyAction, 627
modeBox
Ui::KPerfWidget, 697
Ui::RebindWidget, 991
Ui_KPerfWidget, 1126
Ui_RebindWidget, 1184
modeButton
Ui::RebindWidget, 991
Ui_RebindWidget, 1184
modeChanged
Kb, 288
KbWidget, 573
modeColorOff
Ui::KPerfWidget, 697
Ui_KPerfWidget, 1126
modeColorOn
Ui::KPerfWidget, 697
Ui_KPerfWidget, 1126
modeCount
KbProfile, 546
modeIcon
KbWidget, 575
ModeList
KbProfile, 539
modeList
Ui::ModeSelectDialog, 751
Ui_ModeSelectDialog, 1140
modeParent
KbBind, 383
KbPerf, 523
modeRenamed
Kb, 289
ModeSelectDialog, 751
~ModeSelectDialog, 753
_modeList, 755
ModeSelectDialog, 753
ModeSelectDialog, 753
on_selAllButton_clicked, 754
on_selNoneButton_clicked, 754
selection, 754
ui, 755
modeUpdate
KbWidget, 577
modeWrapBox
Ui::RebindWidget, 991
Ui_RebindWidget, 1184
Model
KeyMap, 636
model
Kb, 288
KeyMap, 651
modelHeight
KeyMap, 651
modelWidth
KeyMap, 652
models
usb_linux.c, 1546
modes
KbProfile, 546, 547
modesList
Ui::KbWidget, 599
Ui_KbWidget, 1107
modesList_reordered
KbWidget, 576
modified
UsbId, 1205
modifiedString
UsbId, 1204
monoRgb
kblight.cpp, 1642
keywidget.cpp, 1680
monochrome
Kb, 310
KeyWidget, 664, 665
mouseAccel
Kb, 289
mouseCurrentX
KeyWidget, 678
mouseCurrentY
KeyWidget, 678
mouseDownMode
KeyWidget, 678
mouseDownX
KeyWidget, 679
mouseDownY
KeyWidget, 679
mouseExtKeys
RebindWidget, 965
mouseKeys
RebindWidget, 965
mouseMoveEvent
GradientDialogWidget, 233

KeyWidget, 665
mousePressEvent
GradientDialogWidget, 234
KeyWidget, 666
mouseReleaseEvent
GradientDialogWidget, 234
KeyWidget, 667
mouseTab
Ui::RebindWidget, 991
Ui_RebindWidget, 1184
move
KbProfile, 547
moveCurrent
GradientDialogWidget, 235
mperfwidget.cpp
DPI_BASE, 1703
dpiExp, 1702
dpiLog, 1702
dpiRound, 1703
SET_END, 1702
SET_START, 1702
xyLinkPath, 1703
Multiply
KbAnim, 314
muteBox
Ui::KPerfWidget, 698
Ui_KPerfWidget, 1126
muteColorNA
Ui::KPerfWidget, 698
Ui_KPerfWidget, 1126
muteColorOff
Ui::KPerfWidget, 698
Ui_KPerfWidget, 1126
muteColorOn
Ui::KPerfWidget, 698
Ui_KPerfWidget, 1127
muteNAColor
KbPerf, 535
muteProcess
media_linux.cpp, 1698
muteState
media.h, 1696

NAME
command.h, 1215
NO
KbFirmware, 416
KeyMap, 636
NO_LAYOUT
KeyMap, 636
NO_MODEL
KeyMap, 636
NONE
command.h, 1215
KbPerf, 506
KeyWidget, 660
NORMAL
KPerfWidget, 704
KbPerf, 506
KeyAction, 607
NOTIFY
command.h, 1216
NOTIFYOFF
command.h, 1215
NOTIFYON
command.h, 1215
NUM
KbPerf, 506
N_BUTTONS_EXTENDED
daemon/keymap.h, 1674
N_BUTTONS_HW
daemon/keymap.h, 1674
N_KEY_ZONES
daemon/keymap.h, 1674
N_KEYBYTES_EXTENDED
daemon/keymap.h, 1674
N_KEYBYTES_HW
daemon/keymap.h, 1674
N_KEYBYTES_INPUT
daemon/keymap.h, 1674
N_KEYS_EXTENDED
daemon/keymap.h, 1674
N_KEYS_EXTRA
daemon/keymap.h, 1674
N_KEYS_HW
daemon/keymap.h, 1674
N_KEYS_INPUT
daemon/keymap.h, 1675
N_LAYOUTS
keymap.cpp, 1660
N_MODELS
keymap.cpp, 1661
usb_linux.c, 1532
N_MOUSE_ZONES
daemon/keymap.h, 1675
NEEDS_FW_UPDATE
structures.h, 1492
NEW_FLAG
KbProfileDialog, 563
KbWidget, 590
NK95_HWOFF
usb.h, 1509
NK95_HWON
usb.h, 1509
NK95_M1
usb.h, 1509
NK95_M2
usb.h, 1510
NK95_M3
usb.h, 1510
NONE
ckb-gradient/main.c, 1378
NS
keymap.cpp, 1661
name
AnimScript, 74
AnimSettingDialog, 110

devcmd.__unnamed__, 162
GradientDialog::Preset, 794
KbAnim, 326, 327
KbMode, 496
KbProfile, 548
KbWidget, 577
Key, 603
KeyMap, 652
QuaZipFileInfo, 903
QuaZipFileInfo64, 910
QuaZipNewInfo, 924
nameBox
Ui::KbAnimWidget, 346
Ui_KbAnimWidget, 1080
nameFilters
QuaZipDir, 872
nativetohw
profile.c, 1450
profile.h, 1469
needsSave
Kb, 290
KbAnim, 327
KbBind, 383
KbLight, 444
KbMode, 497
KbPerf, 524
KbProfile, 548
networkManager
KbFirmware, 425
newDuration
AnimSettingDialog, 110
newGuid
UsbId, 1204
newId
KbAnim, 328
KbMode, 497
KbProfile, 549
newLabel
Ui::FwUpgradeDialog, 199
Ui_FwUpgradeDialog, 1064
newLayout
KbBindWidget, 406
newMode
Kb, 290, 291
newModified
UsbId, 1204
newProfile
Kb, 291, 292
newSelection
KbBindWidget, 406
KbLightWidget, 468
KeyWidget, 679
newtarget
ckb-random/main.c, 1409
nk95cmd
usb.h, 1510
noAction
KbBind, 384
KeyAction, 627
noAnimLabel
Ui::KbAnimWidget, 347
Ui_KbAnimWidget, 1080
noReorder
KbAnimWidget, 365
noSelPage
Ui::KbAnimWidget, 347
Ui_KbAnimWidget, 1080
Normal
KbAnim, 314
notify
devcmd.__unnamed__, 162
notify.c
_cmd_get, 1426
cmd_get, 1428
cmd_notify, 1429
cmd_restart, 1429
HW_STANDARD, 1425
HWMODE_OR_RETURN, 1425
nprintf, 1430
nprintind, 1430
nprintkey, 1431
restart, 1432
notify.h
cmd_get, 1434
cmd_notify, 1434
cmd_restart, 1435
nprintf, 1435
nprintind, 1436
nprintkey, 1437
notifyNumber
Kb, 310
notifyPath
Kb, 310
notifyPathMutex
kb.cpp, 1631
notifyPaths
kb.cpp, 1631
nprintf
notify.c, 1430
notify.h, 1435
nprintind
notify.c, 1430
notify.h, 1436
nprintkey
notify.c, 1431
notify.h, 1437
numBox
Ui::KPerfWidget, 698
Ui::RebindWidget, 991
Ui_KPerfWidget, 1127
Ui_RebindWidget, 1184
numButton
Ui::RebindWidget, 992
Ui_RebindWidget, 1185
numColorOff
Ui::KPerfWidget, 698

Ui_KPerfWidget, 1127
numColorOn
Ui::KPerfWidget, 698
Ui_KPerfWidget, 1127
numKeys
RebindWidget, 965

O0
led_keyboard.c, 1355
O1
led_keyboard.c, 1355
O2
led_keyboard.c, 1355
O3
led_keyboard.c, 1355
O4
led_keyboard.c, 1355
O5
led_keyboard.c, 1355
O6
led_keyboard.c, 1355
O7
led_keyboard.c, 1355
O8
led_keyboard.c, 1355
OFF
KbPerf, 506
ON
KbPerf, 506
OF
ioapi.h, 1713
ONE_DAY
animscript.cpp, 1582
OTHER
KbPerf, 536
OUTFIFO_MAX
structures.h, 1492
on_aSnapBox_clicked
MPerfWidget, 785
on_actionButton_clicked
FwUpgradeDialog, 190
on_altBox_activated
SettingsWidget, 1006
on_animBox_activated
AnimAddDialog, 51
on_animBox_currentIndexChanged
RebindWidget, 942
on_animButton_clicked
KbLightWidget, 469
RebindWidget, 943
on_animList_currentItemChanged
KbAnimWidget, 354
on_animList_customContextMenuRequested
KbAnimWidget, 355
on_animList_itemChanged
KbAnimWidget, 356
on_animScanButton_clicked
ExtraSettingsWidget, 178
on_applyButton_clicked
RebindWidget, 943
on_autoFWBox_clicked
SettingsWidget, 1007
on_bgButton_clicked
KbLightWidget, 470
on_blendBox_activated
KbAnimWidget, 356
on_brightnessBox_activated
KbLightWidget, 470
on_brightnessBox_clicked
ExtraSettingsWidget, 179
on_btnClearMacro_clicked
RebindWidget, 943
on_btnStartMacro_clicked
RebindWidget, 944
on_btnStopMacro_clicked
RebindWidget, 944
on_cancelButton_clicked
FwUpgradeDialog, 191
RebindWidget, 945
on_capsBox_activated
SettingsWidget, 1007
on_copyButton_clicked
KbBindWidget, 407
KPerfWidget, 707
MPerfWidget, 785
on_ctrlBox_activated
SettingsWidget, 1007
on_delayBox_clicked
ExtraSettingsWidget, 179
on_delayBox_valueChanged
AnimSettingDialog, 111
on_deleteButton_clicked
KbAnimWidget, 357
on_ditherBox_clicked
ExtraSettingsWidget, 179
on_dpiBox_currentIndexChanged
RebindWidget, 946
on_dpiButton_clicked
RebindWidget, 947
on_extraButton_clicked
SettingsWidget, 1008
on_fnBox_currentIndexChanged
RebindWidget, 947
on_fnButton_clicked
RebindWidget, 947
on_fpsBox_valueChanged
ExtraSettingsWidget, 180
on_fwUpdButton_clicked
KbWidget, 577
on_hwSaveButton_clicked
KbWidget, 579
on_indicBox_clicked
MPerfWidget, 786
on_intensityBox_valueChanged
KPerfWidget, 707
on_keyButton_clicked
KbAnimWidget, 357

on_kpDelayBox_valueChanged
AnimSettingDialog, 112
on_kpReleaseBox_stateChanged
AnimSettingDialog, 112
on_kpRepeatBox_valueChanged
AnimSettingDialog, 113
on_lHeightBox_activated
MPerfWidget, 786
on_layoutBox_activated
SettingsWidget, 1008
on_lightBox_currentIndexChanged
RebindWidget, 947
on_lightButton_clicked
RebindWidget, 948
on_lockBox_currentIndexChanged
RebindWidget, 948
on_lockButton_clicked
RebindWidget, 948
on_loginItemBox_clicked
SettingsWidget, 1009
on_mAccelBox_clicked
ExtraSettingsWidget, 180
on_mb2Box_currentIndexChanged
RebindWidget, 949
on_mb2Button_clicked
RebindWidget, 949
on_mbBox_currentIndexChanged
RebindWidget, 949
on_mbButton_clicked
RebindWidget, 950
on_mediaBox_currentIndexChanged
RebindWidget, 950
on_mediaButton_clicked
RebindWidget, 950
on_modBox_currentIndexChanged
RebindWidget, 950
on_modButton_clicked
RebindWidget, 951
on_modeBox_currentIndexChanged
RebindWidget, 951
on_modeButton_clicked
RebindWidget, 951
on_modesList_currentItemChanged
KbWidget, 580
on_modesList_customContextMenuRequested
KbWidget, 581
on_modesList_itemChanged
KbWidget, 582
on_modesList_itemClicked
KbWidget, 583
on_nameBox_textEdited
KbAnimWidget, 358
on_numBox_currentIndexChanged
RebindWidget, 952
on_numButton_clicked
RebindWidget, 952
on_opacityBox_valueChanged
KbAnimWidget, 359
on_presetBox_activated
AnimAddDialog, 52
on_presetDelete_clicked
GradientDialog, 222
on_presetList_currentItemChanged
GradientDialog, 222
on_presetName_textEdited
GradientDialog, 223
on_presetSave_clicked
GradientDialog, 223
on_previewBox_clicked
AnimAddDialog, 53
on_profileBox_activated
KbWidget, 584
on_profileList_currentItemChanged
KbProfileDialog, 557
on_profileList_customContextMenuRequested
KbProfileDialog, 557
on_profileList_itemChanged
KbProfileDialog, 559
on_profileList_itemClicked
KbProfileDialog, 560
on_programKpBox_textChanged
RebindWidget, 952
on_programKpButton_clicked
RebindWidget, 953
on_programKpSIBox_clicked
RebindWidget, 953
on_programKrBox_textChanged
RebindWidget, 953
on_programKrButton_clicked
RebindWidget, 954
on_programKrSIBox_clicked
RebindWidget, 954
on_propertyButton_clicked
KbAnimWidget, 359
on_pteMacroBox_textChanged
RebindWidget, 954
on_pushButton_clicked
SettingsWidget, 1009
on_repeatBox_valueChanged
AnimSettingDialog, 113
on_resetButton_clicked
KbBindWidget, 408
RebindWidget, 955
on_sAccelBox_clicked
ExtraSettingsWidget, 181
on_sSpeedBox_valueChanged
ExtraSettingsWidget, 181
on_selAllButton_clicked
ModeSelectDialog, 754
on_selNoneButton_clicked
ModeSelectDialog, 754
on_shiftBox_activated
SettingsWidget, 1009
on_showAnimBox_clicked
KbLightWidget, 471
on_spinBox_valueChanged

MPerfWidget, 787
on_stopOpacity_valueChanged
GradientDialog, 224
on_stopPos_valueChanged
GradientDialog, 224
on_tabWidget_currentChanged
KbWidget, 584
on_trayBox_clicked
ExtraSettingsWidget, 182
on_typingBox_currentIndexChanged
RebindWidget, 955
on_typingButton_clicked
RebindWidget, 955
on_unbindButton_clicked
RebindWidget, 956
on_wheelBox_currentIndexChanged
RebindWidget, 956
on_wheelButton_clicked
RebindWidget, 956
on_winBox_activated
SettingsWidget, 1010
on_xyBox_clicked
MPerfWidget, 787
once
AutoRun, 123
opacity
KbAnim, 328
opacityBox
Ui::KbAnimWidget, 347
Ui_KbAnimWidget, 1080
open
KbLight, 444
QuaGzipFile, 817, 818
QuaZIODevice, 824
QuaZip, 849
QuaZipFile, 890–892
operator bool
Key, 601
operator const QHash< QString, Key > &
KeyMap, 653
operator QString
KeyAction, 627
operator=
ColorMap, 158
KbPerf, 524
KeyAction, 627
QuaGzipFile, 818
QuaZip, 852
QuaZipDir, 873
QuaZipFile, 894
operator==
QuaZipDir, 873
orderChanged
RListWidget, 1000
ordered8to3
led_keyboard.c, 1359
os.h
_DEFAULT_SOURCE, 1438
_GNU_SOURCE, 1438
euid_guard_start, 1438
euid_guard_stop, 1438
UINPUT_VERSION, 1438
os_closeusb
usb.h, 1518
usb_linux.c, 1532
os_inputclose
input.h, 1298
input_linux.c, 1304
os_inputmain
usb.h, 1519
usb_linux.c, 1533
os_inputopen
input.h, 1299
input_linux.c, 1305
os_keypress
input.h, 1300
input_linux.c, 1306
os_mousemove
input.h, 1300
input_linux.c, 1307
os_resetusb
usb.h, 1521
usb_linux.c, 1535
os_sendindicators
usb.h, 1522
usb_linux.c, 1536
os_setupindicators
input.h, 1301
input_linux.c, 1308
os_setupusb
usb.h, 1522
usb_linux.c, 1536
os_usbrecv
usb.h, 1523
usb_linux.c, 1537
os_usbsend
usb.h, 1524
usb_linux.c, 1538
osxLabel
Ui::ExtraSettingsWidget, 172
Ui_ExtraSettingsWidget, 1056
osxLine
Ui::ExtraSettingsWidget, 173
Ui_ExtraSettingsWidget, 1056
outbuf
ckb-mviz/main.c, 1394

p
QuaZip, 859
QuaZipFile, 900
PL
KeyMap, 636
POLLRATE
command.h, 1215
PROFILEID
command.h, 1216
PROFILENAME

command.h, 1216
P_K65
usb.h, 1510
P_K65_LUX
usb.h, 1510
P_K65_LUX_STR
usb.h, 1510
P_K65_NRGB
usb.h, 1510
P_K65_NRGB_STR
usb.h, 1510
P_K65_RFIRE
usb.h, 1510
P_K65_RFIRE_STR
usb.h, 1510
P_K65_STR
usb.h, 1511
P_K70
usb.h, 1511
P_K70_LUX
usb.h, 1511
P_K70_LUX_NRGB
usb.h, 1511
P_K70_LUX_NRGB_STR
usb.h, 1511
P_K70_LUX_STR
usb.h, 1511
P_K70_NRGB
usb.h, 1511
P_K70_NRGB_STR
usb.h, 1511
P_K70_RFIRE
usb.h, 1511
P_K70_RFIRE_NRGB
usb.h, 1511
P_K70_RFIRE_NRGB_STR
usb.h, 1512
P_K70_RFIRE_STR
usb.h, 1512
P_K70_STR
usb.h, 1512
P_K95
usb.h, 1512
P_K95_NRGB
usb.h, 1512
P_K95_NRGB_STR
usb.h, 1512
P_K95_PLATINUM
usb.h, 1512
P_K95_PLATINUM_STR
usb.h, 1512
P_K95_STR
usb.h, 1512
P_M65
usb.h, 1512
P_M65_PRO
usb.h, 1512
P_M65_PRO_STR
usb.h, 1513
P_M65_STR
usb.h, 1513
P_SABRE_L
usb.h, 1513
P_SABRE_L_STR
usb.h, 1513
P_SABRE_N
usb.h, 1513
P_SABRE_N_STR
usb.h, 1513
P_SABRE_O
usb.h, 1513
P_SABRE_O2
usb.h, 1513
P_SABRE_O2_STR
usb.h, 1513
P_SABRE_O_STR
usb.h, 1513
P_SCIMITAR
usb.h, 1513
P_SCIMITAR_PRO
usb.h, 1514
P_SCIMITAR_PRO_STR
usb.h, 1514
P_SCIMITAR_STR
usb.h, 1514
P_STRAFE
usb.h, 1514
P_STRAFE_NRGB
usb.h, 1514
P_STRAFE_NRGB_STR
usb.h, 1514
P_STRAFE_STR
usb.h, 1514
PATCH_COUNT
keymap.cpp, 1661
PR_NAME_LEN
structures.h, 1493
PROGRAM_PR_INDEF
KeyAction, 632
PROGRAM_PR_KPSTOP
KeyAction, 632
PROGRAM_PR_KRSTOP
KeyAction, 632
PROGRAM_PR_MULTI
KeyAction, 632
PROGRAM_RE_INDEF
KeyAction, 632
PROGRAM_RE_KPSTOP
KeyAction, 633
PROGRAM_RE_MULTI
KeyAction, 633
paintEvent
GradientDialogWidget, 236
KeyWidget, 668
param
AnimScript, 74

paramIterator
AnimScript, 76
parameter
KbAnim, 328, 329
parameters
AnimScript, 75
parseCommandLine
main.cpp, 1691
parseVersionString
KbManager, 484
pas
ckb-mviz/main.c, 1394
patch
keymap.cpp, 1661
patchANSI
keymap.cpp, 1664
patchDE
keymap.cpp, 1667
patchDK
keymap.cpp, 1667
patchDvorak
keymap.cpp, 1667
patchES
keymap.cpp, 1667
patchEU
keymap.cpp, 1668
patchFR
keymap.cpp, 1668
patchISO
keymap.cpp, 1665
patchIT
keymap.cpp, 1668
patchMX
keymap.cpp, 1668
patchNO
keymap.cpp, 1668
patchSE
keymap.cpp, 1669
path
AnimScript, 76
QuaZipDir, 873
pcpx
_kiss_fft_guts.h, 1553
perf
KbBind, 385
KbMode, 498
KPerfWidget, 712
MPerfWidget, 792
period
ckb-rain/main.c, 1405
permissionsFromExternalAttr
quazipfileinfo.cpp, 1750
phase
ckb-random/main.c, 1410
pickColor
ColorButton, 148
pickGradient
GradientButton, 203
pidActive
main.cpp, 1693
pollLabel
Ui::KbWidget, 599
Ui_KbWidget, 1108
pollLabel2
Ui::KbWidget, 599
Ui_KbWidget, 1108
pollUpdates
ExtraSettingsWidget, 182
SettingsWidget, 1010
pollrate
devcmd.__unnamed__, 162
Kb, 310
popDpi
KbPerf, 525
pos
QIODevice_descriptor, 797
QuaZipFile, 894
positions
KeyMap, 653
power
ckb-mviz/main.c, 1394
powers
ckb-mviz/main.c, 1394
preProgram
KeyAction, 632
prefsPath
gradientdialog.cpp, 1628
Kb, 310
Preset
GradientDialog::Preset, 794
preset
AnimScript, 76
presetBox
Ui::AnimAddDialog, 47
Ui_AnimAddDialog, 1033
presetDelete
Ui::GradientDialog, 212
Ui_GradientDialog, 1070
presetList
Ui::GradientDialog, 213
Ui_GradientDialog, 1070
presetName
Ui::GradientDialog, 213
Ui_GradientDialog, 1071
presetSave
Ui::GradientDialog, 213
Ui_GradientDialog, 1071
PresetValue
AnimScript, 59
presets
AnimScript, 77
GradientDialog, 226
pressestofull
ckb-heat/main.c, 1388
prevMode
Kb, 310

prevProfile
Kb, 310
previewAnim
KbLight, 445
previewBox
Ui::AnimAddDialog, 47
Ui_AnimAddDialog, 1033
previousItems
RListWidget, 1002
printParams
AnimScript, 77
printRGB
KbLight, 446
printdpi
dpi.c, 1265
dpi.h, 1270
printname
profile.c, 1451
printrgb
led.c, 1319
led.h, 1326
printurl
ckb-anim.h, 1610
process
AnimScript, 85
processDownload
KbFirmware, 422
product_str
usb.c, 1501
usb.h, 1525
profile
KbBindWidget, 412
KPerfWidget, 712
MPerfWidget, 792
RebindWidget, 965
profile.c
_freeprofile, 1440
allocprofile, 1440
cmd_erase, 1441
cmd_eraseprofile, 1442
cmd_id, 1442
cmd_name, 1443
cmd_profileid, 1443
cmd_profilename, 1444
freemode, 1444
freeprofile, 1445
gethwmodename, 1445
gethwprofilename, 1446
getid, 1447
getmodename, 1447
getprofilename, 1448
hwtonative, 1449
initmode, 1449
loadprofile, 1450
nativetohw, 1450
printname, 1451
setid, 1452
u16dec, 1452
u16enc, 1453
urldecode2, 1453
urlencode2, 1454
utf16to8, 1455
utf8to16, 1455
profile.h
allocprofile, 1456
cmd_erase, 1457
cmd_eraseprofile, 1458
cmd_hwload_kb, 1458
cmd_hwload_mouse, 1459
cmd_hwsave_kb, 1460
cmd_hwsave_mouse, 1461
cmd_id, 1462
cmd_name, 1462
cmd_profileid, 1463
cmd_profilename, 1463
freeprofile, 1464
gethwmodename, 1464
gethwprofilename, 1465
getid, 1466
getmodename, 1466
getprofilename, 1467
hwloadprofile, 1456
hwtonative, 1468
loadprofile, 1468
nativetohw, 1469
setid, 1469
profile_keyboard.c
cmd_hwload_kb, 1470
cmd_hwsave_kb, 1471
hwloadmode, 1472
profile_mouse.c
cmd_hwload_mouse, 1473
cmd_hwsave_mouse, 1474
profileAdded
Kb, 293
profileBox
Ui::KbWidget, 599
Ui_KbWidget, 1108
profileChanged
Kb, 293
KbWidget, 585
profileList
Ui::KbProfileDialog, 567
Ui_KbProfileDialog, 1099
profileList_reordered
KbProfileDialog, 560
profileRenamed
Kb, 293
profileid
devcmd.__unnamed__, 162
profilename
devcmd.__unnamed__, 162
profiles
Kb, 294
progTipLabel
Ui::RebindWidget, 993

Ui_RebindWidget, 1186
programAction
KeyAction, 627
programInfo
KeyAction, 628
programKpBox
Ui::RebindWidget, 992
Ui_RebindWidget, 1185
programKpButton
Ui::RebindWidget, 992
Ui_RebindWidget, 1185
programKpExtra
Ui::RebindWidget, 992
Ui_RebindWidget, 1185
programKpModeBox
Ui::RebindWidget, 992
Ui_RebindWidget, 1185
programKpSIBox
Ui::RebindWidget, 992
Ui_RebindWidget, 1185
programKrBox
Ui::RebindWidget, 992
Ui_RebindWidget, 1185
programKrButton
Ui::RebindWidget, 992
Ui_RebindWidget, 1185
programKrExtra
Ui::RebindWidget, 993
Ui_RebindWidget, 1186
programKrModeBox
Ui::RebindWidget, 993
Ui_RebindWidget, 1186
programKrSIBox
Ui::RebindWidget, 993
Ui_RebindWidget, 1186
programTab
Ui::RebindWidget, 993
Ui_RebindWidget, 1186
progressBar
Ui::FwUpgradeDialog, 200
Ui_FwUpgradeDialog, 1064
propertyButton
Ui::KbAnimWidget, 347
Ui_KbAnimWidget, 1080
pteMacroBox
Ui::RebindWidget, 993
Ui_RebindWidget, 1186
pteMacroComment
Ui::RebindWidget, 993
Ui_RebindWidget, 1186
pteMacroText
Ui::RebindWidget, 993
Ui_RebindWidget, 1186
pushButton
Ui::SettingsWidget, 1024
Ui_SettingsWidget, 1199
pushDpi
KbPerf, 525, 526
pushSniper
KbPerf, 527
pushedDpis
KbPerf, 536
pwd
CkbSettings, 133, 134

q
QuaZipFilePrivate, 915
QuaZipPrivate, 933
qCleanupResources_binary
qrc_binary.cpp, 1993
qCleanupResources_image
qrc_image.cpp, 1996
qCleanupResources_text
qrc_text.cpp, 1998
QColorMap
colormap.h, 1621
QColorMapIterator
colormap.h, 1621
QDialog, 795
QIODevice, 796
QIODevice_descriptor, 797
pos, 797
QIODevice_descriptor, 797
QIODevice_descriptor, 797
qInitResources_binary
qrc_binary.cpp, 1993
qInitResources_image
qrc_image.cpp, 1996
qInitResources_text
qrc_text.cpp, 1999
QListWidget, 798
QMainWindow, 799
QMutableColorMapIterator
colormap.h, 1621
QObject, 800
QPushButton, 801
qRegisterResourceData
qrc_binary.cpp, 1994
qrc_image.cpp, 1997
qrc_text.cpp, 1999
QT_MOC_LITERAL
moc_animadddialog.cpp, 1897
moc_animscript.cpp, 1900
moc_animsettingdialog.cpp, 1902
moc_ckbsettingswriter.cpp, 1905
moc_colorbutton.cpp, 1907
moc_extrasettingswidget.cpp, 1910
moc_fwupgradedialog.cpp, 1913
moc_gradientbutton.cpp, 1916
moc_gradientdialog.cpp, 1918
moc_gradientdialogwidget.cpp, 1921
moc_kb.cpp, 1924
moc_kbanim.cpp, 1926
moc_kbanimwidget.cpp, 1929
moc_kbbind.cpp, 1931
moc_kbbindwidget.cpp, 1933
moc_kbfirmware.cpp, 1936

moc_kblight.cpp, 1939
moc_kblightwidget.cpp, 1942
moc_kbmanager.cpp, 1944
moc_kbmode.cpp, 1946
moc_kbperf.cpp, 1949
moc_kbprofile.cpp, 1951
moc_kbprofiledialog.cpp, 1954
moc_kbwidget.cpp, 1957
moc_keyaction.cpp, 1959
moc_keywidget.cpp, 1961
moc_kperfwidget.cpp, 1964
moc_layoutdialog.cpp, 1967
moc_macroreader.cpp, 1970
moc_mainwindow.cpp, 1973
moc_modeselectdialog.cpp, 1975
moc_mperfwidget.cpp, 1977
moc_quagzipfile.cpp, 1980
moc_quaziodevice.cpp, 1982
moc_quazipfile.cpp, 1984
moc_rebindwidget.cpp, 1987
moc_rlistwidget.cpp, 1989
moc_settingswidget.cpp, 1991
QThread, 802
QUAZIO_INBUFSIZE
quaziodevice.cpp, 1738
QUAZIO_OUTBUFSIZE
quaziodevice.cpp, 1738
QUAZIP_EXPORT
quazip_global.h, 1743
qUnregisterResourceData
qrc_binary.cpp, 1994
qrc_image.cpp, 1997
qrc_text.cpp, 1999
QWidget, 933
qioapi.cpp
call_zopen64, 1720
call_zseek64, 1720
call_ztell64, 1720
fill_qiodevice64_filefunc, 1721
fill_qiodevice_filefunc, 1722
fill_zlib_filefunc64_32_def_from_filefunc32, 1723
qiodevice64_seek_file_func, 1724
qiodevice64_tell_file_func, 1725
qiodevice_close_file_func, 1725
qiodevice_error_file_func, 1726
qiodevice_fakeclose_file_func, 1726
qiodevice_open_file_func, 1727
qiodevice_read_file_func, 1728
qiodevice_seek_file_func, 1728
qiodevice_tell_file_func, 1729
qiodevice_write_file_func, 1729
SEEK_CUR, 1720
SEEK_END, 1720
SEEK_SET, 1720
qiodevice64_seek_file_func
qioapi.cpp, 1724
qiodevice64_tell_file_func
qioapi.cpp, 1725
qiodevice_close_file_func
qioapi.cpp, 1725
qiodevice_error_file_func
qioapi.cpp, 1726
qiodevice_fakeclose_file_func
qioapi.cpp, 1726
qiodevice_open_file_func
qioapi.cpp, 1727
qiodevice_read_file_func
qioapi.cpp, 1728
qiodevice_seek_file_func
qioapi.cpp, 1728
qiodevice_tell_file_func
qioapi.cpp, 1729
qiodevice_write_file_func
qioapi.cpp, 1729
qrc_binary.cpp
qCleanupResources_binary, 1993
qInitResources_binary, 1993
qRegisterResourceData, 1994
qUnregisterResourceData, 1994
qt_resource_data, 1995
qt_resource_name, 1995
qt_resource_struct, 1995
qrc_image.cpp
qCleanupResources_image, 1996
qInitResources_image, 1996
qRegisterResourceData, 1997
qUnregisterResourceData, 1997
qt_resource_data, 1997
qt_resource_name, 1997
qt_resource_struct, 1998
qrc_text.cpp
qCleanupResources_text, 1998
qInitResources_text, 1999
qRegisterResourceData, 1999
qUnregisterResourceData, 1999
qt_resource_data, 2000
qt_resource_name, 2000
qt_resource_struct, 2000
qs_strcmp
colormap.cpp, 1619
qt_meta_stringdata_AnimAddDialog_t, 1896
qt_meta_stringdata_AnimScript_t, 1899
qt_meta_stringdata_AnimSettingDialog_t, 1902
qt_meta_stringdata_CkbSettingsWriter_t, 1904
qt_meta_stringdata_ColorButton_t, 1907
qt_meta_stringdata_ExtraSettingsWidget_t, 1909
qt_meta_stringdata_FwUpgradeDialog_t, 1912
qt_meta_stringdata_GradientButton_t, 1915
qt_meta_stringdata_GradientDialog_t, 1918
qt_meta_stringdata_GradientDialogWidget_t, 1920
qt_meta_stringdata_KPerfWidget_t, 1963
qt_meta_stringdata_Kb_t, 1923
qt_meta_stringdata_KbAnim_t, 1925
qt_meta_stringdata_KbAnimWidget_t, 1928
qt_meta_stringdata_KbBind_t, 1930
qt_meta_stringdata_KbBindWidget_t, 1933

qt_meta_stringdata_KbFirmware_t, 1935
qt_meta_stringdata_KbLight_t, 1938
qt_meta_stringdata_KbLightWidget_t, 1941
qt_meta_stringdata_KbManager_t, 1943
qt_meta_stringdata_KbMode_t, 1946
qt_meta_stringdata_KbPerf_t, 1948
qt_meta_stringdata_KbProfile_t, 1951
qt_meta_stringdata_KbProfileDialog_t, 1953
qt_meta_stringdata_KbWidget_t, 1956
qt_meta_stringdata_KeyAction_t, 1958
qt_meta_stringdata_KeyWidget_t, 1961
qt_meta_stringdata_LayoutDialog_t, 1966
qt_meta_stringdata_MPerfWidget_t, 1977
qt_meta_stringdata_MacroReader_t, 1969
qt_meta_stringdata_MacroReaderThread_t, 1969
qt_meta_stringdata_MainWindow_t, 1973
qt_meta_stringdata_ModeSelectDialog_t, 1974
qt_meta_stringdata_QuaGzipFile_t, 1979
qt_meta_stringdata_QuaZIODevice_t, 1982
qt_meta_stringdata_QuaZipFile_t, 1984
qt_meta_stringdata_RListWidget_t, 1988
qt_meta_stringdata_RebindWidget_t, 1986
qt_meta_stringdata_SettingsWidget_t, 1991
qt_meta_data_AnimAddDialog
moc_animadddialog.cpp, 1897
qt_meta_data_AnimScript
moc_animscript.cpp, 1900
qt_meta_data_AnimSettingDialog
moc_animsettingdialog.cpp, 1903
qt_meta_data_CkbSettingsWriter
moc_ckbsettingswriter.cpp, 1905
qt_meta_data_ColorButton
moc_colorbutton.cpp, 1908
qt_meta_data_ExtraSettingsWidget
moc_extrasettingswidget.cpp, 1910
qt_meta_data_FwUpgradeDialog
moc_fwupgradedialog.cpp, 1913
qt_meta_data_GradientButton
moc_gradientbutton.cpp, 1916
qt_meta_data_GradientDialog
moc_gradientdialog.cpp, 1919
qt_meta_data_GradientDialogWidget
moc_gradientdialogwidget.cpp, 1921
qt_meta_data_KPerfWidget
moc_kperfwidget.cpp, 1964
qt_meta_data_Kb
moc_kb.cpp, 1924
qt_meta_data_KbAnim
moc_kbanim.cpp, 1926
qt_meta_data_KbAnimWidget
moc_kbanimwidget.cpp, 1929
qt_meta_data_KbBind
moc_kbbind.cpp, 1931
qt_meta_data_KbBindWidget
moc_kbbindwidget.cpp, 1934
qt_meta_data_KbFirmware
moc_kbfirmware.cpp, 1936
qt_meta_data_KbLight
moc_kblight.cpp, 1939
qt_meta_data_KbLightWidget
moc_kblightwidget.cpp, 1942
qt_meta_data_KbManager
moc_kbmanager.cpp, 1944
qt_meta_data_KbMode
moc_kbmode.cpp, 1947
qt_meta_data_KbPerf
moc_kbperf.cpp, 1949
qt_meta_data_KbProfile
moc_kbprofile.cpp, 1952
qt_meta_data_KbProfileDialog
moc_kbprofiledialog.cpp, 1954
qt_meta_data_KbWidget
moc_kbwidget.cpp, 1957
qt_meta_data_KeyAction
moc_keyaction.cpp, 1959
qt_meta_data_KeyWidget
moc_keywidget.cpp, 1962
qt_meta_data_LayoutDialog
moc_layoutdialog.cpp, 1967
qt_meta_data_MPerfWidget
moc_mperfwidget.cpp, 1978
qt_meta_data_MacroReader
moc_macroreader.cpp, 1970
qt_meta_data_MacroReaderThread
moc_macroreader.cpp, 1971
qt_meta_data_MainWindow
moc_mainwindow.cpp, 1973
qt_meta_data_ModeSelectDialog
moc_modeselectdialog.cpp, 1975
qt_meta_data_QuaGzipFile
moc_quagzipfile.cpp, 1980
qt_meta_data_QuaZIODevice
moc_quaziodevice.cpp, 1983
qt_meta_data_QuaZipFile
moc_quazipfile.cpp, 1985
qt_meta_data_RListWidget
moc_rlistwidget.cpp, 1989
qt_meta_data_RebindWidget
moc_rebindwidget.cpp, 1987
qt_meta_data_SettingsWidget
moc_settingswidget.cpp, 1992
qt_meta_stringdata_AnimAddDialog
moc_animadddialog.cpp, 1898
qt_meta_stringdata_AnimScript
moc_animscript.cpp, 1901
qt_meta_stringdata_AnimSettingDialog
moc_animsettingdialog.cpp, 1903
qt_meta_stringdata_CkbSettingsWriter
moc_ckbsettingswriter.cpp, 1906
qt_meta_stringdata_ColorButton
moc_colorbutton.cpp, 1908
qt_meta_stringdata_ExtraSettingsWidget
moc_extrasettingswidget.cpp, 1910
qt_meta_stringdata_FwUpgradeDialog
moc_fwupgradedialog.cpp, 1914
qt_meta_stringdata_GradientButton

moc_gradientbutton.cpp, 1917
qt_meta_stringdata_GradientDialog
moc_gradientdialog.cpp, 1919
qt_meta_stringdata_GradientDialogWidget
moc_gradientdialogwidget.cpp, 1922
qt_meta_stringdata_KPerfWidget
moc_kperfwidget.cpp, 1965
qt_meta_stringdata_Kb
moc_kb.cpp, 1924
qt_meta_stringdata_KbAnim
moc_kbanim.cpp, 1927
qt_meta_stringdata_KbAnimWidget
moc_kbanimwidget.cpp, 1929
qt_meta_stringdata_KbBind
moc_kbbind.cpp, 1931
qt_meta_stringdata_KbBindWidget
moc_kbbindwidget.cpp, 1934
qt_meta_stringdata_KbFirmware
moc_kbfirmware.cpp, 1937
qt_meta_stringdata_KbLight
moc_kblight.cpp, 1940
qt_meta_stringdata_KbLightWidget
moc_kblightwidget.cpp, 1942
qt_meta_stringdata_KbManager
moc_kbmanager.cpp, 1944
qt_meta_stringdata_KbMode
moc_kbmode.cpp, 1947
qt_meta_stringdata_KbPerf
moc_kbperf.cpp, 1950
qt_meta_stringdata_KbProfile
moc_kbprofile.cpp, 1952
qt_meta_stringdata_KbProfileDialog
moc_kbprofiledialog.cpp, 1955
qt_meta_stringdata_KbWidget
moc_kbwidget.cpp, 1957
qt_meta_stringdata_KeyAction
moc_keyaction.cpp, 1960
qt_meta_stringdata_KeyWidget
moc_keywidget.cpp, 1962
qt_meta_stringdata_LayoutDialog
moc_layoutdialog.cpp, 1968
qt_meta_stringdata_MPerfWidget
moc_mperfwidget.cpp, 1978
qt_meta_stringdata_MacroReader
moc_macroreader.cpp, 1971
qt_meta_stringdata_MacroReaderThread
moc_macroreader.cpp, 1971
qt_meta_stringdata_MainWindow
moc_mainwindow.cpp, 1973
qt_meta_stringdata_ModeSelectDialog
moc_modeselectdialog.cpp, 1976
qt_meta_stringdata_QuaGzipFile
moc_quagzipfile.cpp, 1981
qt_meta_stringdata_QuaZIODevice
moc_quaziodevice.cpp, 1983
qt_meta_stringdata_QuaZipFile
moc_quazipfile.cpp, 1985
qt_meta_stringdata_RListWidget
moc_rlistwidget.cpp, 1989
qt_meta_stringdata_RebindWidget
moc_rebindwidget.cpp, 1987
qt_meta_stringdata_SettingsWidget
moc_settingswidget.cpp, 1992
qt_resource_data
qrc_binary.cpp, 1995
qrc_image.cpp, 1997
qrc_text.cpp, 2000
qt_resource_name
qrc_binary.cpp, 1995
qrc_image.cpp, 1997
qrc_text.cpp, 2000
qt_resource_struct
qrc_binary.cpp, 1995
qrc_image.cpp, 1998
qrc_text.cpp, 2000
QuaZip
csDefault, 830
csInsensitive, 830
csSensitive, 830
MAX_FILE_NAME_LENGTH, 830
mdAdd, 830
mdAppend, 830
mdCreate, 830
mdNotOpen, 830
mdUnzip, 830
QuaAdler32, 803
calculate, 805
checksum, 806
QuaAdler32, 805
QuaAdler32, 805
reset, 805
update, 806
value, 806
QuaChecksum32, 806
calculate, 808
reset, 808
update, 808
value, 808
QuaCrc32, 809
calculate, 811
checksum, 812
QuaCrc32, 811
QuaCrc32, 811
reset, 811
update, 812
value, 812
QuaGzipFile, 812
~QuaGzipFile, 816
close, 816
d, 819
flush, 817
getFileName, 817
isSequential, 817
open, 817, 818
operator=, 818
QuaGzipFile, 815, 816

QuaGzipFile, 815, 816
readData, 818
setFileName, 818
writeData, 818
QuaZIODevice, 819
~QuaZIODevice, 822
close, 822
d, 826
flush, 823
getIoDevice, 824
isSequential, 824
open, 824
QuaZIODevice, 822
QuaZIODevice, 822
readData, 825
writeData, 826
QuaZip, 827
~QuaZip, 831
CaseSensitivity, 830
close, 832
Constants, 830
convertCaseSensitivity, 833
getComment, 834
getCommentCodec, 834
getCurrentFileInfo, 835, 836
getCurrentFileName, 837
getEntriesCount, 838
getFileInfoList, 839
getFileInfoList64, 839
getFileNameCodec, 840
getFileNameList, 840
getIoDevice, 841
getMode, 841
getUnzFile, 842
getZipError, 843
getZipFile, 844
getZipName, 844
goToFirstFile, 845
goToNextFile, 846
hasCurrentFile, 847
isAutoClose, 847
isDataDescriptorWritingEnabled, 847
isOpen, 848
isZip64Enabled, 848
Mode, 830
open, 849
operator=, 852
p, 859
QuaZip, 831
QuaZipPrivate, 859
QuaZip, 831
QuaZipPrivate, 931
setAutoClose, 852
setComment, 853
setCommentCodec, 853
setCurrentFile, 853
setDataDescriptorWritingEnabled, 855
setDefaultFileNameCodec, 856
setFileNameCodec, 857
setIoDevice, 857
setZip64Enabled, 858
setZipName, 858
QuaZip_getFileInfo
quazip.cpp, 1740, 1741
QuaZipDir, 859
~QuaZipDir, 862
caseSensitivity, 863
cd, 863
cdUp, 865
count, 865
d, 876
dirName, 866
entryInfoList, 866, 867
entryInfoList64, 867, 868
entryList, 868, 869
exists, 869, 870
filePath, 871
filter, 871
isRoot, 872
nameFilters, 872
operator=, 873
operator==, 873
path, 873
QuaZipDir, 862
QuaZipDir, 862
relativeFilePath, 874
setCaseSensitivity, 874
setFilter, 875
setNameFilters, 875
setPath, 875
setSorting, 876
sorting, 876
QuaZipDir_convertInfoList
quazipdir.cpp, 1744, 1745
QuaZipDir_getFileInfo
quazipdir.cpp, 1745
QuaZipFile, 877
~QuaZipFile, 882
atEnd, 882
bytesAvailable, 883
close, 883
csize, 884
getActualFileName, 885
getCaseSensitivity, 886
getFileInfo, 886, 887
getFileName, 888
getZip, 888
getZipError, 888
getZipName, 889
isRaw, 889
isSequential, 890
open, 890–892
operator=, 894
p, 900
pos, 894
QuaZipFile, 880, 881

QuaZipFilePrivate, 899
QuaZipFile, 880, 881
QuaZipFilePrivate, 914
readData, 895
setFileName, 896
setZip, 896
setZipName, 897
size, 897
usize, 898
writeData, 899
QuaZipFileInfo, 900
comment, 902
compressedSize, 902
crc, 902
dateTime, 902
diskNumberStart, 902
externalAttr, 902
extra, 902
flags, 902
getPermissions, 901
internalAttr, 903
method, 903
name, 903
uncompressedSize, 903
versionCreated, 903
versionNeeded, 903
QuaZipFileInfo64, 903
comment, 909
compressedSize, 909
crc, 909
dateTime, 909
diskNumberStart, 909
externalAttr, 909
extra, 910
flags, 910
getNTFSaTime, 905
getNTFScTime, 906
getNTFSmTime, 906
getPermissions, 907
internalAttr, 910
isEncrypted, 908
method, 910
name, 910
toQuaZipFileInfo, 908
uncompressedSize, 910
versionCreated, 910
versionNeeded, 910
QuaZipFilePrivate, 911
~QuaZipFilePrivate, 913
caseSensitivity, 914
crc, 914
fileName, 914
internal, 914
q, 915
QuaZipFile, 914
QuaZipFilePrivate, 912, 913
QuaZipFile, 899
QuaZipFilePrivate, 912, 913
raw, 915
resetZipError, 913
setZipError, 913
uncompressedSize, 915
writePos, 915
zip, 915
zipError, 915
QuaZipNewInfo, 916
comment, 923
dateTime, 923
externalAttr, 923
extraGlobal, 924
extraLocal, 924
internalAttr, 924
name, 924
QuaZipNewInfo, 917, 918
QuaZipNewInfo, 917, 918
setFileDateTime, 919
setFileNTFSTimes, 922
setFileNTFSaTime, 919
setFileNTFScTime, 920
setFileNTFSmTime, 921
setFilePermissions, 922
setPermissions, 923
uncompressedSize, 924
QuaZipNewInfo_init
quazipnewinfo.cpp, 1752
QuaZipNewInfo_setPermissions
quazipnewinfo.cpp, 1753
QuaZipPrivate, 924
addCurrentFileToDirectoryMap, 927
autoClose, 931
clearDirectoryMap, 928
comment, 931
commentCodec, 931
dataDescriptorWritingEnabled, 931
defaultFileNameCodec, 932
directoryCaseInsensitive, 932
directoryCaseSensitive, 932
fileNameCodec, 932
getDefaultFileNameCodec, 929
getFileInfoList, 929
goToFirstUnmappedFile, 930
hasCurrentFile_f, 932
ioDevice, 932
lastMappedDirectoryEntry, 932
mode, 932
q, 933
QuaZip, 931
QuaZipPrivate, 926, 927
QuaZip, 859
QuaZipPrivate, 926, 927
zip64, 933
zipError, 933
zipName, 933
quantize8to3
led_keyboard.c, 1359
quaziodevice.cpp

QUAZIO_INBUFSIZE, 1738
QUAZIO_OUTBUFSIZE, 1738
quazip.cpp
QuaZip_getFileInfo, 1740, 1741
quazip.h
UNZ_OPENERROR, 1742
quazip_global.h
QUAZIP_EXPORT, 1743
UNUSED, 1744
quazipdir.cpp
QuaZipDir_convertInfoList, 1744, 1745
QuaZipDir_getFileInfo, 1745
quazipfileinfo.cpp
getNTFSTime, 1748
permissionsFromExternalAttr, 1750
quazipnewinfo.cpp
QuaZipNewInfo_init, 1752
QuaZipNewInfo_setPermissions, 1753
setNTFSTime, 1753
quit
ckb-daemon/main.c, 1371
quitApp
MainWindow, 740
quitWithLock
ckb-daemon/main.c, 1372

REBIND
command.h, 1216
RESTART
command.h, 1216
RGB
command.h, 1216
KPerfWidget, 704
README.md, 1207
RListWidget, 996
change, 999
currentData, 1002
DATA_ROLE, 1002
dragged, 1002
enter, 999
orderChanged, 1000
previousItems, 1002
RListWidget, 998
reorderTimer, 1002
rescanItems, 1000
RListWidget, 998
timerTick, 1001
ROADMAP.md, 1207
randomBright
ckb-heat/main.c, 1388
randomize
ckb-gradient/main.c, 1382
ckb-ripple/main.c, 1416
raw
QuaZipFilePrivate, 915
raw2Mode
KPerfWidget, 708
rbWidget
Ui::KbBindWidget, 401
Ui_KbBindWidget, 1086
reInit
KbAnim, 330
readAnyFrame
AnimScript, 85
readData
QuaGzipFile, 818
QuaZIODevice, 825
QuaZipFile, 895
readFrame
AnimScript, 85
readMacro
MacroReaderThread, 727
readNotify
Kb, 295
readProcess
AnimScript, 78
readcmd
command.c, 1208
command.h, 1217
readlines
devnode.c, 1250
devnode.h, 1258
readlines_ctx
devnode.h, 1256
readlines_ctx_free
devnode.c, 1251
devnode.h, 1259
readlines_ctx_init
devnode.c, 1251
devnode.h, 1260
rebind
devcmd.__unnamed__, 162
RebindWidget, 934
~RebindWidget, 939
applyChanges, 939
bind, 964
convertMacroBox, 941
fnKeys, 964
helpStatus, 942
macReader, 965
mediaKeys, 965
modKeys, 965
mouseExtKeys, 965
mouseKeys, 965
numKeys, 965
on_animBox_currentIndexChanged, 942
on_animButton_clicked, 943
on_applyButton_clicked, 943
on_btnClearMacro_clicked, 943
on_btnStartMacro_clicked, 944
on_btnStopMacro_clicked, 944
on_cancelButton_clicked, 945
on_dpiBox_currentIndexChanged, 946
on_dpiButton_clicked, 947
on_fnBox_currentIndexChanged, 947
on_fnButton_clicked, 947
on_lightBox_currentIndexChanged, 947

on_lightButton_clicked, 948
on_lockBox_currentIndexChanged, 948
on_lockButton_clicked, 948
on_mb2Box_currentIndexChanged, 949
on_mb2Button_clicked, 949
on_mbBox_currentIndexChanged, 949
on_mbButton_clicked, 950
on_mediaBox_currentIndexChanged, 950
on_mediaButton_clicked, 950
on_modBox_currentIndexChanged, 950
on_modButton_clicked, 951
on_modeBox_currentIndexChanged, 951
on_modeButton_clicked, 951
on_numBox_currentIndexChanged, 952
on_numButton_clicked, 952
on_programKpBox_textChanged, 952
on_programKpButton_clicked, 953
on_programKpSIBox_clicked, 953
on_programKrBox_textChanged, 953
on_programKrButton_clicked, 954
on_programKrSIBox_clicked, 954
on_pteMacroBox_textChanged, 954
on_resetButton_clicked, 955
on_typingBox_currentIndexChanged, 955
on_typingButton_clicked, 955
on_unbindButton_clicked, 956
on_wheelBox_currentIndexChanged, 956
on_wheelButton_clicked, 956
profile, 965
RebindWidget, 938
RebindWidget, 938
selection, 965
setBind, 957
setBox, 959
setSelection, 960
TAB_ANIM, 965
TAB_KB, 965
TAB_MACRO, 966
TAB_MOUSE, 966
TAB_PROGRAM, 966
TAB_SPECIAL, 966
typingKeys, 966
ui, 966
wheelKeys, 966
rebindwidget.cpp
DPI_CUST_IDX, 1894
DPI_OFFSET, 1894
rebuildBaseMap
KbLight, 447
refreshList
KbAnimWidget, 360
relProgram
KeyAction, 633
relativeFilePath
QuaZipDir, 874
remove
CkbSettings, 135
removeAll
KbProfile, 550
removeCache
CkbSettings, 139
removeDev
FwUpgradeDialog, 191
removeDevice
MainWindow, 741
removeFile
JlCompress, 259
reorderAnims
KbAnimWidget, 361
reorderTimer
RListWidget, 1002
repeatBox
Ui::AnimSettingDialog, 97
Ui_AnimSettingDialog, 1044
repeatKey
KbAnim, 338
repeatLabel
Ui::AnimSettingDialog, 97
Ui_AnimSettingDialog, 1044
repeatLabel_2
Ui::AnimSettingDialog, 97
Ui_AnimSettingDialog, 1044
repeatMsec
AnimScript, 85
KbAnim, 338
repeatTime
KbAnim, 338
repopulate
KbProfileDialog, 561
rescanItems
RListWidget, 1000
reset
QuaAdler32, 805
QuaChecksum32, 808
QuaCrc32, 811
reset_stop
ckb-daemon/main.c, 1376
usb.c, 1504
resetAction
KbBind, 386
resetButton
Ui::KbBindWidget, 401
Ui::RebindWidget, 994
Ui_KbBindWidget, 1087
Ui_RebindWidget, 1187
resetIndicators
KbLight, 448
resetParams
KbAnim, 330
resetZipError
QuaZipFilePrivate, 913
resetusb
usb.h, 1514
restart
ckb-daemon/main.c, 1373
devcmd.__unnamed__, 162

notify.c, 1432
restartAnimation
KbLight, 448
restoreAction
MainWindow, 746
retranslateUi
Ui::AnimAddDialog, 44
Ui::AnimSettingDialog, 88
Ui::ExtraSettingsWidget, 165
Ui::FwUpgradeDialog, 196
Ui::GradientDialog, 208
Ui::KbAnimWidget, 340
Ui::KbBindWidget, 397
Ui::KbLightWidget, 456
Ui::KbProfileDialog, 565
Ui::KbWidget, 592
Ui::KPerfWidget, 683
Ui::LayoutDialog, 714
Ui::MainWindow, 730
Ui::ModeSelectDialog, 749
Ui::MPerfWidget, 758
Ui::RebindWidget, 970
Ui::SettingsWidget, 1016
Ui_AnimAddDialog, 1030
Ui_AnimSettingDialog, 1036
Ui_ExtraSettingsWidget, 1049
Ui_FwUpgradeDialog, 1060
Ui_GradientDialog, 1066
Ui_KbAnimWidget, 1074
Ui_KbBindWidget, 1083
Ui_KbLightWidget, 1089
Ui_KbProfileDialog, 1097
Ui_KbWidget, 1101
Ui_KPerfWidget, 1112
Ui_LayoutDialog, 1130
Ui_MainWindow, 1135
Ui_ModeSelectDialog, 1138
Ui_MPerfWidget, 1144
Ui_RebindWidget, 1164
Ui_SettingsWidget, 1191
retrigger
AnimScript, 79
revertusb
usb.c, 1502
usb.h, 1525
rgb, 1406
devcmd.__unnamed__, 162
rgbMode
KeyWidget, 673, 674
rgbcmp
led_keyboard.c, 1359
led_mouse.c, 1365
right
settingswidget.cpp, 2003
rm_recursive
devnode.c, 1251
rmdevpath
devnode.c, 1252
devnode.h, 1260
rmnotifynode
devnode.c, 1253
devnode.h, 1261
run
CkbSettingsWriter, 141
Kb, 299
MacroReaderThread, 727
runningPushIdx
KbPerf, 536

SABRE
KeyMap, 637
SCIMITAR
KeyMap, 637
SCROLL
KbPerf, 506
SCROLLSPEED
command.h, 1215
SE
KeyMap, 636
SET
KeyWidget, 660
SNAP
command.h, 1216
SPECIAL
KeyAction, 607
STRAFE
KeyMap, 637
SUBTRACT
KeyWidget, 660
SWITCH
command.h, 1215
S_CUSTOM
devnode.h, 1256
S_CUSTOM_R
devnode.h, 1256
S_GID_READ
devnode.c, 1243
S_MUL
_kiss_fft_guts.h, 1553
S_READ
devnode.h, 1256
S_READDIR
devnode.h, 1256
S_READWRITE
devnode.h, 1256
SABRE_HEIGHT
keymap.cpp, 1661
SABRE_WIDTH
keymap.cpp, 1661
sAccelBox
Ui::ExtraSettingsWidget, 173
Ui_ExtraSettingsWidget, 1056
sAuthorLabel
Ui::AnimSettingDialog, 97
Ui_AnimSettingDialog, 1044
SCAN_KBD
daemon/keymap.h, 1675

SCAN_MOUSE
daemon/keymap.h, 1675
SCAN_SILENT
daemon/keymap.h, 1675
SCIM_HEIGHT
keymap.cpp, 1661
SCIM_WIDTH
keymap.cpp, 1661
SCROLL_ACCELERATED
structures.h, 1493
SCROLL_MAX
structures.h, 1493
SCROLL_MIN
structures.h, 1493
sDescLabel
Ui::AnimSettingDialog, 97
Ui_AnimSettingDialog, 1044
SEEK_CUR
qioapi.cpp, 1720
zip.c, 1835
SEEK_END
qioapi.cpp, 1720
zip.c, 1835
SEEK_SET
qioapi.cpp, 1720
zip.c, 1835
SERIAL_LEN
structures.h, 1493
SET_END
mperfwidget.cpp, 1702
SET_KEYBIT
structures.h, 1493
SET_START
mperfwidget.cpp, 1702
SGroup, 1026
~SGroup, 1028
_settings, 1028
SGroup, 1028
SGroup, 1028
SHMEM_SIZE
main.cpp, 1688
SHMEM_SIZE_V015
main.cpp, 1688
SIZECENTRALDIRITEM
unzip.c, 1762
SIZECENTRALHEADER
zip.c, 1835
SIZEDATA_INDATABLOCK
zip.c, 1835
SIZEZIPLOCALHEADER
unzip.c, 1762
sLicenseLabel
Ui::AnimSettingDialog, 98
Ui_AnimSettingDialog, 1045
SNIPER
KbPerf, 536
sNameLabel
Ui::AnimSettingDialog, 98
Ui_AnimSettingDialog, 1045
sSpeedBox
Ui::ExtraSettingsWidget, 173
Ui_ExtraSettingsWidget, 1057
sSpeedWidget
Ui::ExtraSettingsWidget, 173
Ui_ExtraSettingsWidget, 1057
sToL
kblight.cpp, 1643
sVerLabel
Ui::AnimSettingDialog, 98
Ui_AnimSettingDialog, 1045
sYearLabel
Ui::AnimSettingDialog, 98
Ui_AnimSettingDialog, 1045
sabOverlay
keywidget.cpp, 1681
SabreKeys
keymap.cpp, 1669
save
Kb, 300
KbAnim, 331
KbBind, 387
KbLight, 449
KbMode, 498
KbPerf, 528
KbProfile, 551
saveBlob
FwUpgradeDialog, 192
saveGlobalRemap
KbBind, 388
savePath
FwUpgradeDialog, 193
savedpi
dpi.c, 1266
dpi.h, 1271
savergb_kb
led.h, 1327
led_keyboard.c, 1360
savergb_mouse
led.h, 1329
led_mouse.c, 1366
scan
AnimScript, 80
scanKeyboards
KbManager, 484
scanTimer
KbManager, 486
ScimKeys
keymap.cpp, 1669
scimOverlay
keywidget.cpp, 1681
script
KbAnim, 332
scriptName
KbAnim, 332
scripts
AnimAddDialog, 53

AnimScript, 85
scrollBox
Ui::KPerfWidget, 698
Ui_KPerfWidget, 1127
scrollColorOff
Ui::KPerfWidget, 698
Ui_KPerfWidget, 1127
scrollColorOn
Ui::KPerfWidget, 699
Ui_KPerfWidget, 1127
scrollSpeed
Kb, 301
selAllButton
Ui::ModeSelectDialog, 751
Ui_ModeSelectDialog, 1140
selLabel
Ui::KbLightWidget, 462
Ui_KbLightWidget, 1095
selNoneButton
Ui::ModeSelectDialog, 751
Ui_ModeSelectDialog, 1141
selectAll
KeyWidget, 674
selectLabel
Ui::KbBindWidget, 401
Ui_KbBindWidget, 1087
selected
GradientDialogWidget, 242
LayoutDialog, 720
selectedKeys
KbAnimWidget, 365
selectedOffset
GradientDialogWidget, 242
selectedPos
GradientDialogWidget, 242
selectedStop
GradientDialogWidget, 237
selection
KeyWidget, 679
ModeSelectDialog, 754
RebindWidget, 965
selectionChanged
KeyWidget, 675
selectionColors
GradientDialogWidget, 238
selectionStack
Ui::KbAnimWidget, 347
Ui_KbAnimWidget, 1080
serialLabel
Ui::KbWidget, 599
Ui_KbWidget, 1108
set
CkbSettings, 135
setAction
KbBind, 389
setAnimation
KeyWidget, 675
setAnimationToSelection
KeyWidget, 676
setAutoClose
QuaZip, 852
setBind
KbBindWidget, 409
RebindWidget, 957
setBox
RebindWidget, 959
setCaseSensitivity
QuaZipDir, 874
setComment
QuaZip, 853
setCommentCodec
QuaZip, 853
setCurrent
KbAnimWidget, 362
setCurrentColor
GradientDialogWidget, 238
setCurrentFile
QuaZip, 853
setCurrentMode
Kb, 302, 303
setCurrentProfile
Kb, 304
setDataDescriptorWritingEnabled
QuaZip, 855
setDefaultFileNameCodec
QuaZip, 856
setDuration
AnimScript, 80
setFileDateTime
QuaZipNewInfo, 919
setFileNTFSTimes
QuaZipNewInfo, 922
setFileNTFSaTime
QuaZipNewInfo, 919
setFileNTFScTime
QuaZipNewInfo, 920
setFileNTFSmTime
QuaZipNewInfo, 921
setFileName
QuaGzipFile, 818
QuaZipFile, 896
setFileNameCodec
QuaZip, 857
setFilePermissions
QuaZipNewInfo, 922
setFilter
QuaZipDir, 875
setGlobalRemap
KbBind, 390
setIndicator
KbLight, 450
KbPerf, 529
setIoDevice
QuaZip, 857
setLabel
ColorButton, 148, 149

setLight
KbAnimWidget, 363
KbLightWidget, 471
setMonochrome
KbLightWidget, 472
setNTFSTime
quazipnewinfo.cpp, 1753
setNameFilters
QuaZipDir, 875
setNeedsSave
KbMode, 499
KbProfile, 552
setNeedsUpdate
KbBind, 391
KbMode, 500
KbPerf, 529
KbProfile, 552
setPath
QuaZipDir, 875
setPerf
KPerfWidget, 708
MPerfWidget, 788
setPermissions
QuaZipNewInfo, 923
setPreset
GradientDialog, 224
setSelectedKeys
KbAnimWidget, 364
setSelection
KeyWidget, 676
RebindWidget, 960
setSorting
QuaZipDir, 876
setStatus
SettingsWidget, 1010
setStops
GradientDialogWidget, 239
setValue
CkbSettings, 136
setVersion
SettingsWidget, 1011
setZip
QuaZipFile, 896
setZip64Enabled
QuaZip, 858
setZipError
QuaZipFilePrivate, 913
setZipName
QuaZip, 858
QuaZipFile, 897
setactive
device.h, 1227
setactive_kb
device.h, 1228
device_keyboard.c, 1234
setactive_mouse
device.h, 1230
device_mouse.c, 1238
setid
profile.c, 1452
profile.h, 1469
setmodeindex
devcmd.__unnamed__, 162
setmodeindex_nrgb
device.h, 1231
device_keyboard.c, 1236
settingPath
autorun.cpp, 1587
settingTab
Ui::AnimSettingDialog, 97
Ui_AnimSettingDialog, 1045
settingWidgets
AnimSettingDialog, 119
settingsCacheMutex
ckbsettings.cpp, 1614
ckbsettingswriter.cpp, 1617
settingsGrid
Ui::AnimSettingDialog, 97
Ui_AnimSettingDialog, 1044
settingsMutex
ckbsettings.cpp, 1614
ckbsettingswriter.cpp, 1617
settingsUpdated
KbPerf, 530
SettingsWidget, 1002
~SettingsWidget, 1006
extra, 1013
MainWindow, 1013
on_altBox_activated, 1006
on_autoFWBox_clicked, 1007
on_capsBox_activated, 1007
on_ctrlBox_activated, 1007
on_extraButton_clicked, 1008
on_layoutBox_activated, 1008
on_loginItemBox_clicked, 1009
on_pushButton_clicked, 1009
on_shiftBox_activated, 1009
on_winBox_activated, 1010
pollUpdates, 1010
setStatus, 1010
setVersion, 1011
SettingsWidget, 1005
SettingsWidget, 1005
showLayoutDialog, 1011
ui, 1013
updateModifiers, 1012
settingsWidget
MainWindow, 747
settingswidget.cpp
devpath, 2003
modKeys, 2003
modNames, 2003
right, 2003
setupUi
Ui::AnimAddDialog, 45
Ui::AnimSettingDialog, 89

Ui::ExtraSettingsWidget, 166
Ui::FwUpgradeDialog, 196
Ui::GradientDialog, 209
Ui::KbAnimWidget, 341
Ui::KbBindWidget, 397
Ui::KbLightWidget, 457
Ui::KbProfileDialog, 566
Ui::KbWidget, 593
Ui::KPerfWidget, 684
Ui::LayoutDialog, 714
Ui::MainWindow, 730
Ui::ModeSelectDialog, 749
Ui::MPerfWidget, 760
Ui::RebindWidget, 972
Ui::SettingsWidget, 1017
Ui_AnimAddDialog, 1030
Ui_AnimSettingDialog, 1037
Ui_ExtraSettingsWidget, 1050
Ui_FwUpgradeDialog, 1060
Ui_GradientDialog, 1067
Ui_KbAnimWidget, 1074
Ui_KbBindWidget, 1083
Ui_KbLightWidget, 1090
Ui_KbProfileDialog, 1097
Ui_KbWidget, 1102
Ui_KPerfWidget, 1113
Ui_LayoutDialog, 1130
Ui_MainWindow, 1135
Ui_ModeSelectDialog, 1139
Ui_MPerfWidget, 1145
Ui_RebindWidget, 1166
Ui_SettingsWidget, 1192
setupusb
usb.c, 1502
usb.h, 1526
shareDimming
KbLight, 450, 451
shiftBox
Ui::SettingsWidget, 1024
Ui_SettingsWidget, 1199
shiftLabel
Ui::SettingsWidget, 1025
Ui_SettingsWidget, 1199
showAnimBox
Ui::KbLightWidget, 462
Ui_KbLightWidget, 1095
showFirstTab
KbWidget, 586
showFwUpdate
KbWidget, 586
showFwUpdateNotification
MainWindow, 741
showLastTab
KbWidget, 587
showLayoutDialog
SettingsWidget, 1011
showPreview
AnimAddDialog, 53
showWindow
MainWindow, 742
sidelightToggled
KeyWidget, 677
sighandler
ckb-daemon/main.c, 1374
sighandler2
ckb-daemon/main.c, 1375
size
QuaZipFile, 897
sliderXMapper
MPerfWidget, 792
sliderXMoved
MPerfWidget, 789
sliderYMapper
MPerfWidget, 792
sliderYMoved
MPerfWidget, 790
snap
devcmd.__unnamed__, 162
sniperDpi
KbPerf, 530, 531
sniperValue
KeyAction, 633
sorting
QuaZipDir, 876
spawn
ckb-rain/main.c, 1405
specialInfo
KeyAction, 629
speed
ckb-rain/main.c, 1405
spinBox
Ui::MPerfWidget, 772
Ui_MPerfWidget, 1157
src/ckb-daemon/command.c, 1207
src/ckb-daemon/command.h, 1212
src/ckb-daemon/device.c, 1221
src/ckb-daemon/device.h, 1224
src/ckb-daemon/device_keyboard.c, 1233
src/ckb-daemon/device_mouse.c, 1237
src/ckb-daemon/device_vtable.c, 1240
src/ckb-daemon/devnode.c, 1242
src/ckb-daemon/devnode.h, 1254
src/ckb-daemon/dpi.c, 1262
src/ckb-daemon/dpi.h, 1267
src/ckb-daemon/extra_mac.c, 1272
src/ckb-daemon/firmware.c, 1273
src/ckb-daemon/firmware.h, 1278
src/ckb-daemon/includes.h, 1280
src/ckb-daemon/input.c, 1284
src/ckb-daemon/input.h, 1294
src/ckb-daemon/input_linux.c, 1303
src/ckb-daemon/input_mac.c, 1309
src/ckb-daemon/input_mac_mouse.c, 1310
src/ckb-daemon/keymap.c, 1310
src/ckb-daemon/keymap.h, 1670
src/ckb-daemon/keymap_mac.h, 1314

src/ckb-daemon/led.c, 1315
src/ckb-daemon/led.h, 1321
src/ckb-daemon/led_keyboard.c, 1332
src/ckb-daemon/led_mouse.c, 1364
src/ckb-daemon/main.c, 1367
src/ckb-daemon/notify.c, 1424
src/ckb-daemon/notify.h, 1433
src/ckb-daemon/os.h, 1437
src/ckb-daemon/profile.c, 1439
src/ckb-daemon/profile.h, 1455
src/ckb-daemon/profile_keyboard.c, 1470
src/ckb-daemon/profile_mouse.c, 1473
src/ckb-daemon/structures.h, 1475
src/ckb-daemon/usb.c, 1494
src/ckb-daemon/usb.h, 1505
src/ckb-daemon/usb_linux.c, 1530
src/ckb-daemon/usb_mac.c, 1547
src/ckb-gradient/main.c, 1376
src/ckb-heat/main.c, 1383
src/ckb-mviz/_kiss_fft_guts.h, 1548
src/ckb-mviz/kiss_fft.c, 1553
src/ckb-mviz/kiss_fft.h, 1564
src/ckb-mviz/kiss_fftr.c, 1571
src/ckb-mviz/kiss_fftr.h, 1576
src/ckb-mviz/main.c, 1388
src/ckb-pinwheel/main.c, 1394
src/ckb-rain/main.c, 1399
src/ckb-random/main.c, 1405
src/ckb-ripple/main.c, 1410
src/ckb-wave/main.c, 1416
src/ckb/animadddialog.cpp, 1580
src/ckb/animadddialog.h, 1581
src/ckb/animscript.cpp, 1581
src/ckb/animscript.h, 1583
src/ckb/animsettingdialog.cpp, 1584
src/ckb/animsettingdialog.h, 1586
src/ckb/autorun.cpp, 1587
src/ckb/autorun.h, 1588
src/ckb/ckb-anim.h, 1588
src/ckb/ckbsettings.cpp, 1612
src/ckb/ckbsettings.h, 1615
src/ckb/ckbsettingswriter.cpp, 1615
src/ckb/ckbsettingswriter.h, 1617
src/ckb/colorbutton.cpp, 1617
src/ckb/colorbutton.h, 1618
src/ckb/colormap.cpp, 1619
src/ckb/colormap.h, 1620
src/ckb/extrasettingswidget.cpp, 1621
src/ckb/extrasettingswidget.h, 1622
src/ckb/fwupgradedialog.cpp, 1622
src/ckb/fwupgradedialog.h, 1625
src/ckb/gradientbutton.cpp, 1626
src/ckb/gradientbutton.h, 1627
src/ckb/gradientdialog.cpp, 1628
src/ckb/gradientdialog.h, 1628
src/ckb/gradientdialogwidget.cpp, 1629
src/ckb/gradientdialogwidget.h, 1629
src/ckb/kb.cpp, 1630
src/ckb/kb.h, 1631
src/ckb/kbanim.cpp, 1632
src/ckb/kbanim.h, 1634
src/ckb/kbanimwidget.cpp, 1635
src/ckb/kbanimwidget.h, 1635
src/ckb/kbbind.cpp, 1636
src/ckb/kbbind.h, 1637
src/ckb/kbbindwidget.cpp, 1638
src/ckb/kbbindwidget.h, 1638
src/ckb/kbfirmware.cpp, 1639
src/ckb/kbfirmware.h, 1640
src/ckb/kblight.cpp, 1641
src/ckb/kblight.h, 1644
src/ckb/kblightwidget.cpp, 1645
src/ckb/kblightwidget.h, 1645
src/ckb/kbmanager.cpp, 1646
src/ckb/kbmanager.h, 1647
src/ckb/kbmode.cpp, 1648
src/ckb/kbmode.h, 1648
src/ckb/kbperf.cpp, 1649
src/ckb/kbperf.h, 1649
src/ckb/kbprofile.cpp, 1650
src/ckb/kbprofile.h, 1651
src/ckb/kbprofiledialog.cpp, 1651
src/ckb/kbprofiledialog.h, 1652
src/ckb/kbwidget.cpp, 1653
src/ckb/kbwidget.h, 1653
src/ckb/keyaction.cpp, 1654
src/ckb/keyaction.h, 1655
src/ckb/keymap.cpp, 1656
src/ckb/keymap.h, 1670
src/ckb/keywidget.cpp, 1679
src/ckb/keywidget.h, 1681
src/ckb/kperfwidget.cpp, 1682
src/ckb/kperfwidget.h, 1682
src/ckb/layoutdialog.cpp, 1684
src/ckb/layoutdialog.h, 1685
src/ckb/macroreader.cpp, 1686
src/ckb/macroreader.h, 1686
src/ckb/main.cpp, 1687
src/ckb/mainwindow.cpp, 1693
src/ckb/mainwindow.h, 1694
src/ckb/media.h, 1695
src/ckb/media_linux.cpp, 1697
src/ckb/media_mac.m, 1698
src/ckb/modeselectdialog.cpp, 1700
src/ckb/modeselectdialog.h, 1700
src/ckb/mperfwidget.cpp, 1701
src/ckb/mperfwidget.h, 1704
src/ckb/quazip/JlCompress.cpp, 1716
src/ckb/quazip/JlCompress.h, 1718
src/ckb/quazip/crypt.h, 1706
src/ckb/quazip/ioapi.h, 1709
src/ckb/quazip/qioapi.cpp, 1718
src/ckb/quazip/quaadler32.cpp, 1730
src/ckb/quazip/quaadler32.h, 1731
src/ckb/quazip/quachecksum32.h, 1732
src/ckb/quazip/quacrc32.cpp, 1733

src/ckb/quazip/quacrc32.h, 1734
src/ckb/quazip/quagzipfile.cpp, 1735
src/ckb/quazip/quagzipfile.h, 1736
src/ckb/quazip/quaziodevice.cpp, 1737
src/ckb/quazip/quaziodevice.h, 1738
src/ckb/quazip/quazip.cpp, 1739
src/ckb/quazip/quazip.h, 1741
src/ckb/quazip/quazip_global.h, 1742
src/ckb/quazip/quazipdir.cpp, 1744
src/ckb/quazip/quazipdir.h, 1746
src/ckb/quazip/quazipfile.cpp, 1746
src/ckb/quazip/quazipfile.h, 1747
src/ckb/quazip/quazipfileinfo.cpp, 1748
src/ckb/quazip/quazipfileinfo.h, 1750
src/ckb/quazip/quazipnewinfo.cpp, 1751
src/ckb/quazip/quazipnewinfo.h, 1755
src/ckb/quazip/unzip.c, 1756
src/ckb/quazip/unzip.h, 1807
src/ckb/quazip/zip.c, 1827
src/ckb/quazip/zip.h, 1883
src/ckb/rebindwidget.cpp, 1894
src/ckb/rebindwidget.h, 1894
src/ckb/release/moc_animadddialog.cpp, 1895
src/ckb/release/moc_animscript.cpp, 1898
src/ckb/release/moc_animsettingdialog.cpp, 1901
src/ckb/release/moc_ckbsettingswriter.cpp, 1904
src/ckb/release/moc_colorbutton.cpp, 1906
src/ckb/release/moc_extrasettingswidget.cpp, 1908
src/ckb/release/moc_fwupgradedialog.cpp, 1911
src/ckb/release/moc_gradientbutton.cpp, 1914
src/ckb/release/moc_gradientdialog.cpp, 1917
src/ckb/release/moc_gradientdialogwidget.cpp, 1920
src/ckb/release/moc_kb.cpp, 1922
src/ckb/release/moc_kbanim.cpp, 1925
src/ckb/release/moc_kbanimwidget.cpp, 1927
src/ckb/release/moc_kbbind.cpp, 1930
src/ckb/release/moc_kbbindwidget.cpp, 1932
src/ckb/release/moc_kbfirmware.cpp, 1934
src/ckb/release/moc_kblight.cpp, 1937
src/ckb/release/moc_kblightwidget.cpp, 1940
src/ckb/release/moc_kbmanager.cpp, 1943
src/ckb/release/moc_kbmode.cpp, 1945
src/ckb/release/moc_kbperf.cpp, 1947
src/ckb/release/moc_kbprofile.cpp, 1950
src/ckb/release/moc_kbprofiledialog.cpp, 1952
src/ckb/release/moc_kbwidget.cpp, 1956
src/ckb/release/moc_keyaction.cpp, 1958
src/ckb/release/moc_keywidget.cpp, 1960
src/ckb/release/moc_kperfwidget.cpp, 1962
src/ckb/release/moc_layoutdialog.cpp, 1965
src/ckb/release/moc_macroreader.cpp, 1968
src/ckb/release/moc_mainwindow.cpp, 1972
src/ckb/release/moc_modeselectdialog.cpp, 1974
src/ckb/release/moc_mperfwidget.cpp, 1976
src/ckb/release/moc_quagzipfile.cpp, 1979
src/ckb/release/moc_quaziodevice.cpp, 1981
src/ckb/release/moc_quazipfile.cpp, 1983
src/ckb/release/moc_rebindwidget.cpp, 1985
src/ckb/release/moc_rlistwidget.cpp, 1988
src/ckb/release/moc_settingswidget.cpp, 1990
src/ckb/release/qrc_binary.cpp, 1992
src/ckb/release/qrc_image.cpp, 1995
src/ckb/release/qrc_text.cpp, 1998
src/ckb/rlistwidget.cpp, 2001
src/ckb/rlistwidget.h, 2001
src/ckb/settingswidget.cpp, 2002
src/ckb/settingswidget.h, 2004
src/ckb/ui_animadddialog.h, 2005
src/ckb/ui_animsettingdialog.h, 2005
src/ckb/ui_extrasettingswidget.h, 2006
src/ckb/ui_fwupgradedialog.h, 2007
src/ckb/ui_gradientdialog.h, 2008
src/ckb/ui_kbanimwidget.h, 2009
src/ckb/ui_kbbindwidget.h, 2010
src/ckb/ui_kblightwidget.h, 2011
src/ckb/ui_kbprofiledialog.h, 2012
src/ckb/ui_kbwidget.h, 2013
src/ckb/ui_kperfwidget.h, 2014
src/ckb/ui_layoutdialog.h, 2015
src/ckb/ui_mainwindow.h, 2016
src/ckb/ui_modeselectdialog.h, 2017
src/ckb/ui_mperfwidget.h, 2018
src/ckb/ui_rebindwidget.h, 2019
src/ckb/ui_settingswidget.h, 2020
stages
    MPerfWidget, 793
standardMaps
    keymap.cpp, 1669
start
    devcmd.__unnamed__, 162
start_dev
    device.c, 1223
    device.h, 1232
start_kb_nrgb
    device.h, 1232
    device_keyboard.c, 1236
startWorkInAThread
    MacroReader, 723
stateChange
    MainWindow, 743
statusLabel
    Ui::FwUpgradeDialog, 200
    Ui_FwUpgradeDialog, 1064
stop
    AnimScript, 81
    KbAnim, 333
    KbManager, 486
stopBox
    Ui::GradientDialog, 213
    Ui_GradientDialog, 1071
stopCheck
    AnimSettingDialog, 119
stopColor
    Ui::GradientDialog, 213
    Ui_GradientDialog, 1071
stopCount

GradientDialogWidget, 240
stopOpacity
Ui::GradientDialog, 213
Ui_GradientDialog, 1071
stopPos
Ui::GradientDialog, 213
Ui_GradientDialog, 1071
stopPreview
KbLight, 451
stopRect
GradientDialogWidget, 240
stopTime
KbAnim, 338
stopped
AnimScript, 85
stops
GradientDialogWidget, 241
storageName
Key, 602
strLayout
KeyMap, 654
strModel
KeyMap, 654
strcmpcasenosensitive_internal
unzip.c, 1763
strtrim
usb_linux.c, 1539
structures.h
CLEAR_KEYBIT, 1489
DPI_COUNT, 1489
FEAT_ADJRATE, 1489
FEAT_ANSI, 1489
FEAT_BIND, 1489
FEAT_COMMON, 1489
FEAT_FWUPDATE, 1489
FEAT_FWVERSION, 1489
FEAT_HWLOAD, 1490
FEAT_ISO, 1490
FEAT_LMASK, 1490
FEAT_MONOCHROME, 1490
FEAT_MOUSEACCEL, 1490
FEAT_NOTIFY, 1490
FEAT_POLLRATE, 1490
FEAT_RGB, 1490
FEAT_STD_NRGB, 1490
FEAT_STD_RGB, 1491
HAS_ANY_FEATURE, 1491
HAS_FEATURES, 1491
HWMODE_K70, 1491
HWMODE_K95, 1491
HWMODE_MAX, 1491
I_CAPS, 1491
I_NUM, 1491
I_SCROLL, 1491
IFACE_MAX, 1491
KB_NAME_LEN, 1492
LIFT_MAX, 1492
LIFT_MIN, 1492
MACRO_MAX, 1492
MD_NAME_LEN, 1492
MODE_COUNT, 1492
MSG_SIZE, 1492
NEEDS_FW_UPDATE, 1492
OUTFIFO_MAX, 1492
PR_NAME_LEN, 1493
SCROLL_ACCELERATED, 1493
SCROLL_MAX, 1493
SCROLL_MIN, 1493
SERIAL_LEN, 1493
SET_KEYBIT, 1493
vtable_keyboard, 1493
vtable_keyboard_nonrgb, 1493
vtable_mouse, 1493
Subtract
KbAnim, 314
symmetric
ckb-pinwheel/main.c, 1398
ckb-ripple/main.c, 1416
ckb-wave/main.c, 1424

TOGGLE
KeyWidget, 660
TAB_ANIM
RebindWidget, 965
TAB_KB
RebindWidget, 965
TAB_MACRO
RebindWidget, 966
TAB_MOUSE
RebindWidget, 966
TAB_PROGRAM
RebindWidget, 966
TAB_SPECIAL
RebindWidget, 966
TEST_RESET
usb_linux.c, 1532
TRUE
ckb-anim.h, 1599
TRY_WITH_RESET
command.c, 1208
TRYFREE
unzip.c, 1762
zip.c, 1835
tabWidget
Ui::AnimSettingDialog, 98
Ui::KbWidget, 599
Ui::MainWindow, 732
Ui::RebindWidget, 994
Ui_AnimSettingDialog, 1045
Ui_KbWidget, 1108
Ui_MainWindow, 1137
Ui_RebindWidget, 1187
tableDownload
KbFirmware, 425
tableName
kbfirmware.cpp, 1640
target

ckb-random/main.c, 1410
tick
ckb-rain/main.c, 1405
timeGrid
Ui::AnimSettingDialog, 98
Ui_AnimSettingDialog, 1045
timeTab
Ui::AnimSettingDialog, 98
Ui_AnimSettingDialog, 1045
timerTick
MainWindow, 744
RListWidget, 1001
timespec_add
ckb-daemon/main.c, 1375
includes.h, 1284
timespec_eq
includes.h, 1283
timespec_ge
includes.h, 1283
timespec_gt
includes.h, 1284
timespec_le
includes.h, 1284
timespec_lt
includes.h, 1284
tm_unz_s, 1809
tm_zip_s, 1885
tm_unz
unzip.h, 1817
tm_zip
zip.h, 1889
toQuaZipFileInfo
QuaZipFileInfo64, 908
toStorage
KeyMap, 655
toString
GradientButton, 204
toggleSidelight
KbLightWidget, 473
toggleTrayIcon
MainWindow, 745
top
ckb-wave/main.c, 1424
trayBox
Ui::ExtraSettingsWidget, 173
Ui_ExtraSettingsWidget, 1057
trayIcon
MainWindow, 747
trayIconMenu
MainWindow, 747
trigger
KbAnim, 334
Type
KeyAction, 607
type
KeyAction, 629
typingBox
Ui::RebindWidget, 994
Ui_RebindWidget, 1187
typingButton
Ui::RebindWidget, 994
Ui_RebindWidget, 1187
typingKeys
RebindWidget, 966

u16dec
profile.c, 1452
u16enc
profile.c, 1453
UNBIND
command.h, 1216
UNBOUND
KeyAction, 607
UNKNOWN
KbFirmware, 416
media.h, 1696
UNMUTED
media.h, 1696
US
KeyMap, 636
US_DVORAK
KeyMap, 636
UINPUT_VERSION
os.h, 1438
UNUSED
quazip_global.h, 1744
UNZ_AUTO_CLOSE
unzip.h, 1815
UNZ_BADZIPFILE
unzip.h, 1815
UNZ_BUFSIZE
unzip.c, 1762
UNZ_CRCERROR
unzip.h, 1815
UNZ_DEFAULT_FLAGS
unzip.h, 1815
UNZ_EOF
unzip.h, 1816
UNZ_ERRNO
unzip.h, 1816
UNZ_INTERNALERROR
unzip.h, 1816
UNZ_MAXFILENAMEINZIP
unzip.c, 1762
UNZ_OK
unzip.h, 1816
UNZ_OPENERROR
quazip.h, 1742
UNZ_PARAMERROR
unzip.h, 1816
USB_DELAY_DEFAULT
usb.h, 1514
uchar
includes.h, 1284
udev
usb_linux.c, 1547
udev_enum

usb_linux.c, 1539
udevthread
usb_linux.c, 1547
Ui, 41
ui
AnimAddDialog, 54
AnimSettingDialog, 119
ExtraSettingsWidget, 183
FwUpgradeDialog, 193
GradientDialog, 227
KbAnimWidget, 365
KbBindWidget, 413
KbLightWidget, 475
KbProfileDialog, 563
KbWidget, 590
KPerfWidget, 712
LayoutDialog, 720
MainWindow, 747
ModeSelectDialog, 755
MPerfWidget, 793
RebindWidget, 966
SettingsWidget, 1013
Ui::AnimAddDialog, 43
animBox, 46
buttonBox, 47
gridLayout, 47
horizontalLayout, 47
horizontalSpacer, 47
horizontalSpacer_2, 47
label, 47
label_2, 47
presetBox, 47
previewBox, 47
retranslateUi, 44
setupUi, 45
verticalSpacer_2, 48
verticalSpacer_3, 48
Ui::AnimSettingDialog, 86
animName, 93
buttonBox, 93
delayBox, 93
gridLayout, 93
gridLayout_2, 94
horizontalSpacer, 94
horizontalSpacer_2, 94
horizontalSpacer_3, 94
horizontalSpacer_4, 94
horizontalSpacer_5, 94
horizontalSpacer_6, 94
infoTab, 94
kpDelayBox, 94
kpModeStopBox, 95
kpReleaseBox, 95
kpRepeatBox, 95
kpRepeatLabel, 95
kpRepeatLabel_2, 95
label, 95
label_10, 95
label_11, 95
label_12, 95
label_13, 96
label_2, 96
label_3, 96
label_4, 96
label_5, 96
label_6, 96
label_7, 96
label_8, 96
label_9, 96
line, 97
line_2, 97
repeatBox, 97
repeatLabel, 97
repeatLabel_2, 97
retranslateUi, 88
sAuthorLabel, 97
sDescLabel, 97
sLicenseLabel, 98
sNameLabel, 98
sVerLabel, 98
sYearLabel, 98
settingTab, 97
settingsGrid, 97
setupUi, 89
tabWidget, 98
timeGrid, 98
timeTab, 98
verticalSpacer, 98
verticalSpacer_2, 98
verticalSpacer_3, 99
Ui::ExtraSettingsWidget, 162
animCountLabel, 170
animPathLabel, 170
animScanButton, 170
brightnessBox, 170
buttonBox, 170
delayBox, 170
ditherBox, 170
fpsBox, 170
fpsWarnLabel, 170
gridLayout, 171
horizontalLayout, 171
horizontalLayout_2, 171
horizontalSpacer, 171
horizontalSpacer_2, 171
horizontalSpacer_3, 171
label, 171
label_10, 171
label_11, 171
label_2, 172
label_3, 172
label_5, 172
label_6, 172
line, 172
line_2, 172
line_3, 172

mAccelBox, 172
osxLabel, 172
osxLine, 173
retranslateUi, 165
sAccelBox, 173
sSpeedBox, 173
sSpeedWidget, 173
setupUi, 166
trayBox, 173
verticalSpacer, 173
verticalSpacer_10, 173
verticalSpacer_11, 173
verticalSpacer_2, 174
verticalSpacer_3, 174
verticalSpacer_4, 174
verticalSpacer_5, 174
verticalSpacer_6, 174
verticalSpacer_7, 174
verticalSpacer_8, 174
verticalSpacer_9, 174
Ui::FwUpgradeDialog, 193
actionButton, 198
cancelButton, 198
curLabel, 198
devLabel, 198
gridLayout, 199
gridLayout_2, 199
horizontalSpacer, 199
horizontalSpacer_2, 199
horizontalSpacer_3, 199
horizontalSpacer_4, 199
label_2, 199
label_4, 199
newLabel, 199
progressBar, 200
retranslateUi, 196
setupUi, 196
statusLabel, 200
Ui::GradientDialog, 206
buttonBox, 211
gridLayout, 211
gridLayout_2, 211
gridLayout_3, 211
groupBox_2, 212
horizontalLayout, 212
horizontalLayout_2, 212
horizontalSpacer, 212
horizontalSpacer_2, 212
horizontalSpacer_3, 212
label, 212
label_2, 212
presetDelete, 212
presetList, 213
presetName, 213
presetSave, 213
retranslateUi, 208
setupUi, 209
stopBox, 213
stopColor, 213
stopOpacity, 213
stopPos, 213
verticalSpacer, 213
verticalSpacer_2, 214
widget, 214
Ui::KPerfWidget, 679
capsBox, 691
capsColorOff, 691
capsColorOn, 691
copyButton, 691
gridLayout, 691
horizontalLayout, 691
horizontalLayout_2, 691
horizontalSpacer, 691
horizontalSpacer_2, 692
horizontalSpacer_3, 692
horizontalSpacer_4, 692
horizontalSpacer_5, 692
horizontalSpacer_6, 692
horizontalSpacer_7, 692
horizontalSpacer_8, 692
intensityBox, 692
k95Label1, 692
k95Label2, 693
k95Label3, 693
k95Label4, 693
k95Label5, 693
k95Label6, 693
k95Line, 693
k95Spacer, 693
label, 693
label_10, 693
label_11, 694
label_12, 694
label_14, 694
label_15, 694
label_16, 694
label_17, 694
label_18, 694
label_19, 694
label_2, 694
label_20, 695
label_21, 695
label_22, 695
label_23, 695
label_24, 695
label_3, 695
label_4, 695
label_5, 695
label_6, 695
label_7, 696
label_8, 696
lightBox, 696
lightColor1, 696
lightColor2, 696
lightColor3, 696
line, 696

line_2, 696
line_3, 696
lockBox, 697
lockColorOff, 697
lockColorOn, 697
macroBox, 697
macroColorOff, 697
macroColorOn, 697
modeBox, 697
modeColorOff, 697
modeColorOn, 697
muteBox, 698
muteColorNA, 698
muteColorOff, 698
muteColorOn, 698
numBox, 698
numColorOff, 698
numColorOn, 698
retranslateUi, 683
scrollBox, 698
scrollColorOff, 698
scrollColorOn, 699
setupUi, 684
verticalSpacer, 699
verticalSpacer_2, 699
verticalSpacer_3, 699
verticalSpacer_4, 699
Ui::KbAnimWidget, 338
aCopyLabel, 344
aMissingLabel, 344
aMissingPage, 344
aNameLabel, 344
aVerLabel, 345
animList, 344
animPage, 344
blendBox, 345
deleteButton, 345
gridLayout, 345
gridLayout_2, 345
gridLayout_3, 345
gridLayout_4, 345
horizontalLayout, 345
horizontalSpacer, 345
horizontalSpacer_2, 346
horizontalSpacer_3, 346
horizontalSpacer_4, 346
horizontalSpacer_5, 346
keyButton, 346
label_5, 346
label_6, 346
label_7, 346
nameBox, 346
noAnimLabel, 347
noSelPage, 347
opacityBox, 347
propertyButton, 347
retranslateUi, 340
selectionStack, 347
setupUi, 341
verticalLayout, 347
verticalSpacer, 347
verticalSpacer_2, 347
verticalSpacer_3, 347
Ui::KbBindWidget, 395
copyButton, 400
gridLayout, 400
gridLayout_2, 400
horizontalLayout_2, 400
horizontalSpacer, 400
horizontalSpacer_2, 400
keyWidget, 401
label, 401
label_2, 401
line, 401
line_2, 401
rbWidget, 401
resetButton, 401
retranslateUi, 397
selectLabel, 401
setupUi, 397
verticalLayout, 401
verticalSpacer, 402
widget, 402
Ui::KbLightWidget, 454
animButton, 460
animWidget, 460
bgButton, 460
brightnessBox, 460
gridLayout, 460
gridLayout_2, 460
gridLayout_4, 460
horizontalLayout, 461
horizontalLayout_2, 461
horizontalLayout_3, 461
horizontalSpacer_3, 461
horizontalSpacer_4, 461
horizontalSpacer_5, 461
horizontalSpacer_6, 461
keyWidget, 461
label, 461
label_2, 462
label_3, 462
line, 462
line_2, 462
retranslateUi, 456
selLabel, 462
setupUi, 457
showAnimBox, 462
verticalLayout, 462
verticalSpacer_2, 462
verticalSpacer_3, 462
widget, 463
Ui::KbProfileDialog, 563
buttonBox, 567
gridLayout, 567
horizontalSpacer, 567

horizontalSpacer_2, 567
profileList, 567
retranslateUi, 565
setupUi, 566
Ui::KbWidget, 590
bindTab, 596
bindWidget, 596
devTab, 596
fwLabel, 596
fwUpdButton, 596
fwUpdLabel, 597
fwUpdLayout, 597
gridLayout, 597
gridLayout_2, 597
gridLayout_3, 597
gridLayout_4, 597
gridLayout_5, 597
gridLayout_7, 597
horizontalSpacer_2, 597
horizontalSpacer_3, 598
hwSaveButton, 598
kPerfTab, 598
kPerfWidget, 598
label_3, 598
label_4, 598
label_9, 598
lightTab, 598
lightWidget, 598
mPerfTab, 599
mPerfWidget, 599
modesList, 599
pollLabel, 599
pollLabel2, 599
profileBox, 599
retranslateUi, 592
serialLabel, 599
setupUi, 593
tabWidget, 599
verticalSpacer, 599
Ui::LayoutDialog, 712
buttonBox, 716
comboBox, 716
gridLayout, 716
horizontalSpacer, 716
horizontalSpacer_2, 716
label, 716
label_2, 717
retranslateUi, 714
setupUi, 714
verticalSpacer, 717
verticalSpacer_2, 717
verticalSpacer_3, 717
verticalSpacer_4, 717
Ui::MPerfWidget, 755
aSnapBox, 767
copyButton, 767
eBox1, 767
eBox2, 767
eBox3, 767
eBox4, 767
eBox5, 767
gridLayout, 767
horizontalLayout, 768
horizontalLayout_2, 768
horizontalLayout_4, 768
horizontalSpacer, 768
horizontalSpacer_2, 768
horizontalSpacer_3, 768
horizontalSpacer_4, 768
horizontalSpacer_5, 768
horizontalSpacer_6, 768
horizontalSpacer_7, 769
iButton0, 769
iButton1, 769
iButton2, 769
iButton3, 769
iButton4, 769
iButton5, 769
iButtonO, 769
indicBox, 769
lHeightBox, 771
label, 770
label_11, 770
label_12, 770
label_13, 770
label_14, 770
label_15, 770
label_2, 770
label_25, 770
label_3, 770
label_4, 771
label_5, 771
label_6, 771
label_7, 771
label_8, 771
line, 771
line_2, 771
line_3, 771
retranslateUi, 758
setupUi, 760
spinBox, 772
verticalLayout, 772
verticalSpacer, 772
verticalSpacer_2, 772
verticalSpacer_3, 772
xBox0, 772
xBox1, 772
xBox2, 772
xBox3, 772
xBox4, 773
xBox5, 773
xSlider0, 773
xSlider1, 773
xSlider2, 773
xSlider3, 773
xSlider4, 773

xSlider5, 773
xyBox, 773
yBox0, 774
yBox1, 774
yBox2, 774
yBox3, 774
yBox4, 774
yBox5, 774
ySlider0, 774
ySlider1, 774
ySlider2, 774
ySlider3, 775
ySlider4, 775
ySlider5, 775
Ui::MainWindow, 728
actionAbout, 731
actionExit, 731
centralWidget, 731
gridLayout, 732
retranslateUi, 730
setupUi, 730
tabWidget, 732
Ui::ModeSelectDialog, 747
buttonBox, 750
gridLayout, 751
label, 751
modeList, 751
retranslateUi, 749
selAllButton, 751
selNoneButton, 751
setupUi, 749
Ui::RebindWidget, 967
actionTab, 982
animBox, 982
animButton, 982
animKrBox, 982
animOnceBox, 982
animTab, 982
applyButton, 982
btnClearMacro, 983
btnStartMacro, 983
btnStopMacro, 983
cancelButton, 983
dpiBox, 983
dpiButton, 983
dpiCustLabel, 983
dpiCustXBox, 983
dpiCustYBox, 984
dpiWarning, 984
fnBox, 984
fnButton, 984
gridLayout, 984
gridLayout_10, 984
gridLayout_2, 984
gridLayout_3, 984
gridLayout_4, 985
gridLayout_5, 985
gridLayout_8, 985
groupBox, 985
groupBox_2, 985
groupBox_3, 985
groupBox_4, 985
horizontalLayout, 985
horizontalLayout_2, 985
horizontalLayout_3, 985
horizontalSpacer, 986
horizontalSpacer_10, 986
horizontalSpacer_11, 986
horizontalSpacer_12, 986
horizontalSpacer_13, 986
horizontalSpacer_14, 986
horizontalSpacer_15, 986
horizontalSpacer_16, 986
horizontalSpacer_17, 986
horizontalSpacer_18, 987
horizontalSpacer_19, 987
horizontalSpacer_2, 987
horizontalSpacer_20, 987
horizontalSpacer_21, 987
horizontalSpacer_22, 987
horizontalSpacer_23, 987
horizontalSpacer_24, 987
horizontalSpacer_25, 987
horizontalSpacer_26, 988
horizontalSpacer_3, 988
horizontalSpacer_4, 988
horizontalSpacer_5, 988
horizontalSpacer_6, 988
horizontalSpacer_7, 988
horizontalSpacer_8, 988
horizontalSpacer_9, 988
keyTab, 988
layoutWidget, 989
layoutWidget1, 989
layoutWidget_2, 989
lbl_macro, 989
lightBox, 989
lightButton, 989
lightWrapBox, 989
lockBox, 989
lockButton, 990
macroTab, 990
mb2Box, 990
mb2Button, 990
mbBox, 990
mbButton, 990
mediaBox, 990
mediaButton, 990
modBox, 991
modButton, 991
modeBox, 991
modeButton, 991
modeWrapBox, 991
mouseTab, 991
numBox, 991
numButton, 992

progTipLabel, 993
programKpBox, 992
programKpButton, 992
programKpExtra, 992
programKpModeBox, 992
programKpSIBox, 992
programKrBox, 992
programKrButton, 992
programKrExtra, 993
programKrModeBox, 993
programKrSIBox, 993
programTab, 993
pteMacroBox, 993
pteMacroComment, 993
pteMacroText, 993
resetButton, 994
retranslateUi, 970
setupUi, 972
tabWidget, 994
typingBox, 994
typingButton, 994
unbindButton, 994
verticalLayout, 994
verticalLayout_2, 994
verticalSpacer, 994
verticalSpacer_10, 995
verticalSpacer_11, 995
verticalSpacer_2, 995
verticalSpacer_3, 995
verticalSpacer_4, 995
verticalSpacer_5, 995
verticalSpacer_6, 995
verticalSpacer_7, 995
verticalSpacer_8, 995
wheelBox, 996
wheelButton, 996
Ui::SettingsWidget, 1014
altBox, 1021
altLabel, 1021
autoFWBox, 1021
capsBox, 1021
capsLabel, 1021
ctrlBox, 1022
ctrlLabel, 1022
devicesLabel, 1022
extraButton, 1022
gridLayout, 1022
gridLayout_3, 1022
gridLayout_5, 1022
horizontalLayout, 1022
horizontalLayout_2, 1022
horizontalSpacer, 1023
horizontalSpacer_10, 1023
horizontalSpacer_2, 1023
horizontalSpacer_7, 1023
horizontalSpacer_9, 1023
label, 1023
label_2, 1023
label_3, 1023
label_5, 1023
label_6, 1024
label_8, 1024
layoutBox, 1024
line, 1024
line_2, 1024
line_3, 1024
loginItemBox, 1024
pushButton, 1024
retranslateUi, 1016
setupUi, 1017
shiftBox, 1024
shiftLabel, 1025
versionLabel, 1025
verticalSpacer, 1025
verticalSpacer_10, 1025
verticalSpacer_2, 1025
verticalSpacer_3, 1025
verticalSpacer_4, 1025
verticalSpacer_5, 1025
verticalSpacer_6, 1025
verticalSpacer_7, 1026
verticalSpacer_8, 1026
winBox, 1026
winLabel, 1026
Ui_AnimAddDialog, 1029
animBox, 1032
buttonBox, 1032
gridLayout, 1032
horizontalLayout, 1032
horizontalSpacer, 1032
horizontalSpacer_2, 1032
label, 1033
label_2, 1033
presetBox, 1033
previewBox, 1033
retranslateUi, 1030
setupUi, 1030
verticalSpacer_2, 1033
verticalSpacer_3, 1033
Ui_AnimSettingDialog, 1033
animName, 1040
buttonBox, 1040
delayBox, 1041
gridLayout, 1041
gridLayout_2, 1041
horizontalSpacer, 1041
horizontalSpacer_2, 1041
horizontalSpacer_3, 1041
horizontalSpacer_4, 1041
horizontalSpacer_5, 1041
horizontalSpacer_6, 1041
infoTab, 1041
kpDelayBox, 1042
kpModeStopBox, 1042
kpReleaseBox, 1042
kpRepeatBox, 1042

kpRepeatLabel, 1042
kpRepeatLabel_2, 1042
label, 1042
label_10, 1042
label_11, 1042
label_12, 1043
label_13, 1043
label_2, 1043
label_3, 1043
label_4, 1043
label_5, 1043
label_6, 1043
label_7, 1043
label_8, 1043
label_9, 1044
line, 1044
line_2, 1044
repeatBox, 1044
repeatLabel, 1044
repeatLabel_2, 1044
retranslateUi, 1036
sAuthorLabel, 1044
sDescLabel, 1044
sLicenseLabel, 1045
sNameLabel, 1045
sVerLabel, 1045
sYearLabel, 1045
settingTab, 1045
settingsGrid, 1044
setupUi, 1037
tabWidget, 1045
timeGrid, 1045
timeTab, 1045
verticalSpacer, 1045
verticalSpacer_2, 1046
verticalSpacer_3, 1046
Ui_ExtraSettingsWidget, 1046
animCountLabel, 1053
animPathLabel, 1053
animScanButton, 1054
brightnessBox, 1054
buttonBox, 1054
delayBox, 1054
ditherBox, 1054
fpsBox, 1054
fpsWarnLabel, 1054
gridLayout, 1054
horizontalLayout, 1054
horizontalLayout_2, 1055
horizontalSpacer, 1055
horizontalSpacer_2, 1055
horizontalSpacer_3, 1055
label, 1055
label_10, 1055
label_11, 1055
label_2, 1055
label_3, 1055
label_5, 1056
label_6, 1056
line, 1056
line_2, 1056
line_3, 1056
mAccelBox, 1056
osxLabel, 1056
osxLine, 1056
retranslateUi, 1049
sAccelBox, 1056
sSpeedBox, 1057
sSpeedWidget, 1057
setupUi, 1050
trayBox, 1057
verticalSpacer, 1057
verticalSpacer_10, 1057
verticalSpacer_11, 1057
verticalSpacer_2, 1057
verticalSpacer_3, 1057
verticalSpacer_4, 1057
verticalSpacer_5, 1058
verticalSpacer_6, 1058
verticalSpacer_7, 1058
verticalSpacer_8, 1058
verticalSpacer_9, 1058
Ui_FwUpgradeDialog, 1058
actionButton, 1062
cancelButton, 1063
curLabel, 1063
devLabel, 1063
gridLayout, 1063
gridLayout_2, 1063
horizontalSpacer, 1063
horizontalSpacer_2, 1063
horizontalSpacer_3, 1063
horizontalSpacer_4, 1063
label_2, 1064
label_4, 1064
newLabel, 1064
progressBar, 1064
retranslateUi, 1060
setupUi, 1060
statusLabel, 1064
Ui_GradientDialog, 1064
buttonBox, 1069
gridLayout, 1069
gridLayout_2, 1069
gridLayout_3, 1069
groupBox_2, 1070
horizontalLayout, 1070
horizontalLayout_2, 1070
horizontalSpacer, 1070
horizontalSpacer_2, 1070
horizontalSpacer_3, 1070
label, 1070
label_2, 1070
presetDelete, 1070
presetList, 1070
presetName, 1071

presetSave, 1071
retranslateUi, 1066
setupUi, 1067
stopBox, 1071
stopColor, 1071
stopOpacity, 1071
stopPos, 1071
verticalSpacer, 1071
verticalSpacer_2, 1071
widget, 1071
Ui_KPerfWidget, 1109
capsBox, 1119
capsColorOff, 1119
capsColorOn, 1120
copyButton, 1120
gridLayout, 1120
horizontalLayout, 1120
horizontalLayout_2, 1120
horizontalSpacer, 1120
horizontalSpacer_2, 1120
horizontalSpacer_3, 1120
horizontalSpacer_4, 1120
horizontalSpacer_5, 1121
horizontalSpacer_6, 1121
horizontalSpacer_7, 1121
horizontalSpacer_8, 1121
intensityBox, 1121
k95Label1, 1121
k95Label2, 1121
k95Label3, 1121
k95Label4, 1121
k95Label5, 1122
k95Label6, 1122
k95Line, 1122
k95Spacer, 1122
label, 1122
label_10, 1122
label_11, 1122
label_12, 1122
label_14, 1122
label_15, 1123
label_16, 1123
label_17, 1123
label_18, 1123
label_19, 1123
label_2, 1123
label_20, 1123
label_21, 1123
label_22, 1123
label_23, 1124
label_24, 1124
label_3, 1124
label_4, 1124
label_5, 1124
label_6, 1124
label_7, 1124
label_8, 1124
lightBox, 1124
lightColor1, 1125
lightColor2, 1125
lightColor3, 1125
line, 1125
line_2, 1125
line_3, 1125
lockBox, 1125
lockColorOff, 1125
lockColorOn, 1125
macroBox, 1126
macroColorOff, 1126
macroColorOn, 1126
modeBox, 1126
modeColorOff, 1126
modeColorOn, 1126
muteBox, 1126
muteColorNA, 1126
muteColorOff, 1126
muteColorOn, 1127
numBox, 1127
numColorOff, 1127
numColorOn, 1127
retranslateUi, 1112
scrollBox, 1127
scrollColorOff, 1127
scrollColorOn, 1127
setupUi, 1113
verticalSpacer, 1127
verticalSpacer_2, 1127
verticalSpacer_3, 1128
verticalSpacer_4, 1128
Ui_KbAnimWidget, 1072
aCopyLabel, 1077
aMissingLabel, 1077
aMissingPage, 1077
aNameLabel, 1077
aVerLabel, 1078
animList, 1077
animPage, 1078
blendBox, 1078
deleteButton, 1078
gridLayout, 1078
gridLayout_2, 1078
gridLayout_3, 1078
gridLayout_4, 1078
horizontalLayout, 1078
horizontalSpacer, 1079
horizontalSpacer_2, 1079
horizontalSpacer_3, 1079
horizontalSpacer_4, 1079
horizontalSpacer_5, 1079
keyButton, 1079
label_5, 1079
label_6, 1079
label_7, 1079
nameBox, 1080
noAnimLabel, 1080
noSelPage, 1080

opacityBox, 1080
propertyButton, 1080
retranslateUi, 1074
selectionStack, 1080
setupUi, 1074
verticalLayout, 1080
verticalSpacer, 1080
verticalSpacer_2, 1080
verticalSpacer_3, 1081
Ui_KbBindWidget, 1081
copyButton, 1085
gridLayout, 1085
gridLayout_2, 1085
horizontalLayout_2, 1086
horizontalSpacer, 1086
horizontalSpacer_2, 1086
keyWidget, 1086
label, 1086
label_2, 1086
line, 1086
line_2, 1086
rbWidget, 1086
resetButton, 1087
retranslateUi, 1083
selectLabel, 1087
setupUi, 1083
verticalLayout, 1087
verticalSpacer, 1087
widget, 1087
Ui_KbLightWidget, 1087
animButton, 1092
animWidget, 1093
bgButton, 1093
brightnessBox, 1093
gridLayout, 1093
gridLayout_2, 1093
gridLayout_4, 1093
horizontalLayout, 1093
horizontalLayout_2, 1093
horizontalLayout_3, 1093
horizontalSpacer_3, 1093
horizontalSpacer_4, 1094
horizontalSpacer_5, 1094
horizontalSpacer_6, 1094
keyWidget, 1094
label, 1094
label_2, 1094
label_3, 1094
line, 1094
line_2, 1094
retranslateUi, 1089
selLabel, 1095
setupUi, 1090
showAnimBox, 1095
verticalLayout, 1095
verticalSpacer_2, 1095
verticalSpacer_3, 1095
widget, 1095
Ui_KbProfileDialog, 1095
buttonBox, 1098
gridLayout, 1098
horizontalSpacer, 1099
horizontalSpacer_2, 1099
profileList, 1099
retranslateUi, 1097
setupUi, 1097
Ui_KbWidget, 1099
bindTab, 1105
bindWidget, 1105
devTab, 1105
fwLabel, 1105
fwUpdButton, 1105
fwUpdLabel, 1105
fwUpdLayout, 1106
gridLayout, 1106
gridLayout_2, 1106
gridLayout_3, 1106
gridLayout_4, 1106
gridLayout_5, 1106
gridLayout_7, 1106
horizontalSpacer_2, 1106
horizontalSpacer_3, 1106
hwSaveButton, 1107
kPerfTab, 1107
kPerfWidget, 1107
label_3, 1107
label_4, 1107
label_9, 1107
lightTab, 1107
lightWidget, 1107
mPerfTab, 1108
mPerfWidget, 1108
modesList, 1107
pollLabel, 1108
pollLabel2, 1108
profileBox, 1108
retranslateUi, 1101
serialLabel, 1108
setupUi, 1102
tabWidget, 1108
verticalSpacer, 1108
Ui_LayoutDialog, 1128
buttonBox, 1132
comboBox, 1132
gridLayout, 1132
horizontalSpacer, 1132
horizontalSpacer_2, 1132
label, 1132
label_2, 1133
retranslateUi, 1130
setupUi, 1130
verticalSpacer, 1133
verticalSpacer_2, 1133
verticalSpacer_3, 1133
verticalSpacer_4, 1133
Ui_MPerfWidget, 1141

aSnapBox, 1152
copyButton, 1152
eBox1, 1152
eBox2, 1152
eBox3, 1152
eBox4, 1152
eBox5, 1153
gridLayout, 1153
horizontalLayout, 1153
horizontalLayout_2, 1153
horizontalLayout_4, 1153
horizontalSpacer, 1153
horizontalSpacer_2, 1153
horizontalSpacer_3, 1153
horizontalSpacer_4, 1153
horizontalSpacer_5, 1154
horizontalSpacer_6, 1154
horizontalSpacer_7, 1154
iButton0, 1154
iButton1, 1154
iButton2, 1154
iButton3, 1154
iButton4, 1154
iButton5, 1154
iButtonO, 1155
indicBox, 1155
lHeightBox, 1156
label, 1155
label_11, 1155
label_12, 1155
label_13, 1155
label_14, 1155
label_15, 1155
label_2, 1155
label_25, 1156
label_3, 1156
label_4, 1156
label_5, 1156
label_6, 1156
label_7, 1156
label_8, 1156
line, 1156
line_2, 1157
line_3, 1157
retranslateUi, 1144
setupUi, 1145
spinBox, 1157
verticalLayout, 1157
verticalSpacer, 1157
verticalSpacer_2, 1157
verticalSpacer_3, 1157
xBox0, 1157
xBox1, 1157
xBox2, 1158
xBox3, 1158
xBox4, 1158
xBox5, 1158
xSlider0, 1158
xSlider1, 1158
xSlider2, 1158
xSlider3, 1158
xSlider4, 1158
xSlider5, 1159
xyBox, 1159
yBox0, 1159
yBox1, 1159
yBox2, 1159
yBox3, 1159
yBox4, 1159
yBox5, 1159
ySlider0, 1159
ySlider1, 1160
ySlider2, 1160
ySlider3, 1160
ySlider4, 1160
ySlider5, 1160
Ui_MainWindow, 1133
actionAbout, 1136
actionExit, 1136
centralWidget, 1136
gridLayout, 1136
retranslateUi, 1135
setupUi, 1135
tabWidget, 1137
Ui_ModeSelectDialog, 1137
buttonBox, 1140
gridLayout, 1140
label, 1140
modeList, 1140
retranslateUi, 1138
selAllButton, 1140
selNoneButton, 1141
setupUi, 1139
Ui_RebindWidget, 1160
actionTab, 1175
animBox, 1175
animButton, 1175
animKrBox, 1175
animOnceBox, 1175
animTab, 1176
applyButton, 1176
btnClearMacro, 1176
btnStartMacro, 1176
btnStopMacro, 1176
cancelButton, 1176
dpiBox, 1176
dpiButton, 1176
dpiCustLabel, 1177
dpiCustXBox, 1177
dpiCustYBox, 1177
dpiWarning, 1177
fnBox, 1177
fnButton, 1177
gridLayout, 1177
gridLayout_10, 1177
gridLayout_2, 1177

gridLayout_3, 1178
gridLayout_4, 1178
gridLayout_5, 1178
gridLayout_8, 1178
groupBox, 1178
groupBox_2, 1178
groupBox_3, 1178
groupBox_4, 1178
horizontalLayout, 1178
horizontalLayout_2, 1179
horizontalLayout_3, 1179
horizontalSpacer, 1179
horizontalSpacer_10, 1179
horizontalSpacer_11, 1179
horizontalSpacer_12, 1179
horizontalSpacer_13, 1179
horizontalSpacer_14, 1179
horizontalSpacer_15, 1179
horizontalSpacer_16, 1180
horizontalSpacer_17, 1180
horizontalSpacer_18, 1180
horizontalSpacer_19, 1180
horizontalSpacer_2, 1180
horizontalSpacer_20, 1180
horizontalSpacer_21, 1180
horizontalSpacer_22, 1180
horizontalSpacer_23, 1180
horizontalSpacer_24, 1181
horizontalSpacer_25, 1181
horizontalSpacer_26, 1181
horizontalSpacer_3, 1181
horizontalSpacer_4, 1181
horizontalSpacer_5, 1181
horizontalSpacer_6, 1181
horizontalSpacer_7, 1181
horizontalSpacer_8, 1181
horizontalSpacer_9, 1182
keyTab, 1182
layoutWidget, 1182
layoutWidget1, 1182
layoutWidget_2, 1182
lbl_macro, 1182
lightBox, 1182
lightButton, 1182
lightWrapBox, 1182
lockBox, 1183
lockButton, 1183
macroTab, 1183
mb2Box, 1183
mb2Button, 1183
mbBox, 1183
mbButton, 1183
mediaBox, 1183
mediaButton, 1184
modBox, 1184
modButton, 1184
modeBox, 1184
modeButton, 1184
modeWrapBox, 1184
mouseTab, 1184
numBox, 1184
numButton, 1185
progTipLabel, 1186
programKpBox, 1185
programKpButton, 1185
programKpExtra, 1185
programKpModeBox, 1185
programKpSIBox, 1185
programKrBox, 1185
programKrButton, 1185
programKrExtra, 1186
programKrModeBox, 1186
programKrSIBox, 1186
programTab, 1186
pteMacroBox, 1186
pteMacroComment, 1186
pteMacroText, 1186
resetButton, 1187
retranslateUi, 1164
setupUi, 1166
tabWidget, 1187
typingBox, 1187
typingButton, 1187
unbindButton, 1187
verticalLayout, 1187
verticalLayout_2, 1187
verticalSpacer, 1187
verticalSpacer_10, 1187
verticalSpacer_11, 1188
verticalSpacer_2, 1188
verticalSpacer_3, 1188
verticalSpacer_4, 1188
verticalSpacer_5, 1188
verticalSpacer_6, 1188
verticalSpacer_7, 1188
verticalSpacer_8, 1188
wheelBox, 1188
wheelButton, 1189
Ui_SettingsWidget, 1189
altBox, 1196
altLabel, 1196
autoFWBox, 1196
capsBox, 1196
capsLabel, 1196
ctrlBox, 1196
ctrlLabel, 1196
devicesLabel, 1196
extraButton, 1197
gridLayout, 1197
gridLayout_3, 1197
gridLayout_5, 1197
horizontalLayout, 1197
horizontalLayout_2, 1197
horizontalSpacer, 1197
horizontalSpacer_10, 1197
horizontalSpacer_2, 1197

horizontalSpacer_7, 1198
horizontalSpacer_9, 1198
label, 1198
label_2, 1198
label_3, 1198
label_5, 1198
label_6, 1198
label_8, 1198
layoutBox, 1198
line, 1199
line_2, 1199
line_3, 1199
loginItemBox, 1199
pushButton, 1199
retranslateUi, 1191
setupUi, 1192
shiftBox, 1199
shiftLabel, 1199
versionLabel, 1199
verticalSpacer, 1199
verticalSpacer_10, 1200
verticalSpacer_2, 1200
verticalSpacer_3, 1200
verticalSpacer_4, 1200
verticalSpacer_5, 1200
verticalSpacer_6, 1200
verticalSpacer_7, 1200
verticalSpacer_8, 1200
winBox, 1200
winLabel, 1201
uiUpdated
KPerfWidget, 710
uinputopen
input_linux.c, 1308
unbind
devcmd.__unnamed__, 162
unbindButton
Ui::RebindWidget, 994
Ui_RebindWidget, 1187
uncompressedSize
QuaZipFileInfo, 903
QuaZipFileInfo64, 910
QuaZipFilePrivate, 915
QuaZipNewInfo, 924
unz64_file_pos_s, 1814
unz64_s, 1760
unz64_file_pos
unzip.h, 1817
unz64local_CheckCurrentFileCoherencyHeader
unzip.c, 1763
unz64local_DosDateToTmuDate
unzip.c, 1765
unz64local_GetCurrentFileInfoInternal
unzip.c, 1766
unz64local_SearchCentralDir
unzip.c, 1773
unz64local_SearchCentralDir64
unzip.c, 1774
unz64local_getByte
unzip.c, 1766
unz64local_getLong
unzip.c, 1770
unz64local_getLong64
unzip.c, 1771
unz64local_getShort
unzip.c, 1772
unz_file_info64_internal_s, 1759
unz_file_info64_s, 1811
unz_file_info_s, 1812
unz_file_pos_s, 1814
unz_global_info64_s, 1809
unz_global_info_s, 1810
unz_copyright
unzip.c, 1806
unz_file_info
unzip.h, 1817
unz_file_info64
unzip.h, 1817
unz_file_info64_internal
unzip.c, 1763
unz_file_pos
unzip.h, 1817
unz_global_info
unzip.h, 1817
unz_global_info64
unzip.h, 1817
unzClearFlags
unzip.c, 1776
unzip.h, 1818
unzClose
unzip.c, 1777
unzCloseCurrentFile
unzip.c, 1778
unzFile
unzip.h, 1817
unzGetCurrentFileInfo
unzip.c, 1779
unzGetCurrentFileInfo64
unzip.c, 1780
unzGetCurrentFileZStreamPos64
unzip.c, 1781
unzGetFilePos
unzip.c, 1781
unzip.h, 1818
unzGetFilePos64
unzip.c, 1782
unzip.h, 1819
unzGetGlobalComment
unzip.c, 1782
unzGetGlobalInfo
unzip.c, 1783
unzGetGlobalInfo64
unzip.c, 1783
unzGetLocalExtrafield
unzip.c, 1784
unzGetOffset

unzip.c, 1784
unzip.h, 1819
unzGetOffset64
unzip.c, 1785
unzip.h, 1820
unzGoToFilePos
unzip.c, 1785
unzip.h, 1820
unzGoToFilePos64
unzip.c, 1786
unzip.h, 1821
unzGoToFirstFile
unzip.c, 1787
unzGoToNextFile
unzip.c, 1788
unzLocateFile
unzip.c, 1789
unzOpen
unzip.c, 1790
unzOpen2
unzip.c, 1790
unzOpen2_64
unzip.c, 1791
unzOpen64
unzip.c, 1792
unzOpenCurrentFile
unzip.c, 1792
unzOpenCurrentFile2
unzip.c, 1793
unzOpenCurrentFile3
unzip.c, 1793
unzOpenCurrentFilePassword
unzip.c, 1796
unzOpenInternal
unzip.c, 1797
unzip.h, 1822
unzReadCurrentFile
unzip.c, 1800
unzSetFlags
unzip.c, 1803
unzip.h, 1825
unzSetOffset
unzip.c, 1804
unzip.h, 1826
unzSetOffset64
unzip.c, 1804
unzip.h, 1826
unzStringFileNameCompare
unzip.c, 1805
unzeof
unzip.c, 1779
unzip.c
_Z_OF, 1763
ALLOC, 1761
BUFREADCOMMENT, 1762
local, 1762
SIZECENTRALDIRITEM, 1762
SIZEZIPLOCALHEADER, 1762
strcmpcasenosensitive_internal, 1763
TRYFREE, 1762
UNZ_BUFSIZE, 1762
UNZ_MAXFILENAMEINZIP, 1762
unz64local_CheckCurrentFileCoherencyHeader, 1763
unz64local_DosDateToTmuDate, 1765
unz64local_GetCurrentFileInfoInternal, 1766
unz64local_SearchCentralDir, 1773
unz64local_SearchCentralDir64, 1774
unz64local_getByte, 1766
unz64local_getLong, 1770
unz64local_getLong64, 1771
unz64local_getShort, 1772
unz_copyright, 1806
unz_file_info64_internal, 1763
unzClearFlags, 1776
unzClose, 1777
unzCloseCurrentFile, 1778
unzGetCurrentFileInfo, 1779
unzGetCurrentFileInfo64, 1780
unzGetCurrentFileZStreamPos64, 1781
unzGetFilePos, 1781
unzGetFilePos64, 1782
unzGetGlobalComment, 1782
unzGetGlobalInfo, 1783
unzGetGlobalInfo64, 1783
unzGetLocalExtrafield, 1784
unzGetOffset, 1784
unzGetOffset64, 1785
unzGoToFilePos, 1785
unzGoToFilePos64, 1786
unzGoToFirstFile, 1787
unzGoToNextFile, 1788
unzLocateFile, 1789
unzOpen, 1790
unzOpen2, 1790
unzOpen2_64, 1791
unzOpen64, 1792
unzOpenCurrentFile, 1792
unzOpenCurrentFile2, 1793
unzOpenCurrentFile3, 1793
unzOpenCurrentFilePassword, 1796
unzOpenInternal, 1797
unzReadCurrentFile, 1800
unzSetFlags, 1803
unzSetOffset, 1804
unzSetOffset64, 1804
unzStringFileNameCompare, 1805
unzeof, 1779
unztell, 1805
unztell64, 1806
z_crc_t, 1763
unzip.h
_Z_OF, 1817, 1818
tm_unz, 1817
UNZ_AUTO_CLOSE, 1815
UNZ_BADZIPFILE, 1815

UNZ_CRCERROR, 1815
UNZ_DEFAULT_FLAGS, 1815
UNZ_EOF, 1816
UNZ_ERRNO, 1816
UNZ_INTERNALERROR, 1816
UNZ_OK, 1816
UNZ_PARAMERROR, 1816
unz64_file_pos, 1817
unz_file_info, 1817
unz_file_info64, 1817
unz_file_pos, 1817
unz_global_info, 1817
unz_global_info64, 1817
unzClearFlags, 1818
unzFile, 1817
unzGetFilePos, 1818
unzGetFilePos64, 1819
unzGetOffset, 1819
unzGetOffset64, 1820
unzGoToFilePos, 1820
unzGoToFilePos64, 1821
unzOpenInternal, 1822
unzSetFlags, 1825
unzSetOffset, 1826
unzSetOffset64, 1826
Z_BZIP2ED, 1816
unztell
unzip.c, 1805
unztell64
unzip.c, 1806
update
KbBind, 391
KbPerf, 532
QuaAdler32, 806
QuaChecksum32, 808
QuaCrc32, 812
update_keys
crypt.h, 1708
updateBind
KbBindWidget, 410
updateFwButton
KbWidget, 587
updateImage
ColorButton, 149
GradientButton, 205
updateLayout
Kb, 305
updateLight
KbLightWidget, 474
updateMapper
AnimSettingDialog, 119
KPerfWidget, 712
updateModifiers
SettingsWidget, 1012
updateParam
AnimSettingDialog, 114
updateParams
KbAnim, 335
updatePresets
GradientDialog, 225
updateProfileList
KbWidget, 588
updateSelDisplay
KbBindWidget, 411
updateStops
AnimSettingDialog, 117
updateVersion
MainWindow, 745
updateconnected
devnode.c, 1254
devnode.h, 1262
updated
KbBind, 393
KbLight, 452
KbMode, 500
updatedpi
devcmd.__unnamed__, 162
dpi.c, 1267
dpi.h, 1272
updateindicators
devcmd.__unnamed__, 162
updateindicators_kb
input.c, 1293
input.h, 1302
updatergb
devcmd.__unnamed__, 162
updatergb_kb
led.h, 1329
led_keyboard.c, 1361
updatergb_mouse
led.h, 1331
led_mouse.c, 1366
url
KbFirmware::FW, 184
urlParam
animscript.cpp, 1582
urldecode
ckb-anim.h, 1611
urldecode2
profile.c, 1453
urlencode2
profile.c, 1454
usb.c
_resetusb, 1495
_setupusb, 1495
_usbrecv, 1497
_usbsend, 1498
closeusb, 1499
devmain, 1500
features_mask, 1504
get_vtable, 1501
hwload_mode, 1504
product_str, 1501
reset_stop, 1504
revertusb, 1502
setupusb, 1502

usb_tryreset, 1503
usbmutex, 1505
vendor_str, 1504
usb.h
_nk95cmd, 1515
_resetusb, 1515
_usbrecv, 1516
_usbsend, 1517
closeusb, 1517
DELAY_LONG, 1507
DELAY_MEDIUM, 1507
DELAY_SHORT, 1507
IS_FULLRANGE, 1508
IS_K65, 1508
IS_K70, 1508
IS_K95, 1508
IS_M65, 1508
IS_MONOCHROME, 1508
IS_MONOCHROME_DEV, 1508
IS_MOUSE, 1508
IS_MOUSE_DEV, 1509
IS_RGB, 1509
IS_RGB_DEV, 1509
IS_SABRE, 1509
IS_SCIMITAR, 1509
IS_STRAFE, 1509
NK95_HWOFF, 1509
NK95_HWON, 1509
NK95_M1, 1509
NK95_M2, 1510
NK95_M3, 1510
nk95cmd, 1510
os_closeusb, 1518
os_inputmain, 1519
os_resetusb, 1521
os_sendindicators, 1522
os_setupusb, 1522
os_usbrecv, 1523
os_usbsend, 1524
P_K65, 1510
P_K65_LUX, 1510
P_K65_LUX_STR, 1510
P_K65_NRGB, 1510
P_K65_NRGB_STR, 1510
P_K65_RFIRE, 1510
P_K65_RFIRE_STR, 1510
P_K65_STR, 1511
P_K70, 1511
P_K70_LUX, 1511
P_K70_LUX_NRGB, 1511
P_K70_LUX_NRGB_STR, 1511
P_K70_LUX_STR, 1511
P_K70_NRGB, 1511
P_K70_NRGB_STR, 1511
P_K70_RFIRE, 1511
P_K70_RFIRE_NRGB, 1511
P_K70_RFIRE_STR, 1512
P_K70_STR, 1512
P_K95, 1512
P_K95_NRGB, 1512
P_K95_NRGB_STR, 1512
P_K95_PLATINUM, 1512
P_K95_PLATINUM_STR, 1512
P_K95_STR, 1512
P_M65, 1512
P_M65_PRO, 1512
P_M65_PRO_STR, 1513
P_M65_STR, 1513
P_SABRE_L, 1513
P_SABRE_L_STR, 1513
P_SABRE_N, 1513
P_SABRE_N_STR, 1513
P_SABRE_O, 1513
P_SABRE_O2, 1513
P_SABRE_O2_STR, 1513
P_SABRE_O_STR, 1513
P_SCIMITAR, 1513
P_SCIMITAR_PRO, 1514
P_SCIMITAR_PRO_STR, 1514
P_SCIMITAR_STR, 1514
P_STRAFE, 1514
P_STRAFE_NRGB, 1514
P_STRAFE_NRGB_STR, 1514
P_STRAFE_STR, 1514
product_str, 1525
resetusb, 1514
revertusb, 1525
setupusb, 1526
USB_DELAY_DEFAULT, 1514
usb_tryreset, 1527
usbkill, 1528
usbmain, 1528
usbrecv, 1514
usbsend, 1515
V_CORSAIR, 1515
V_CORSAIR_STR, 1515
vendor_str, 1529
usb_add_device
usb_linux.c, 1540
usb_linux.c
_nk95cmd, 1532
kbsyspath, 1546
models, 1546
N_MODELS, 1532
os_closeusb, 1532
os_inputmain, 1533
os_resetusb, 1535
os_sendindicators, 1536
os_setupusb, 1536
os_usbrecv, 1537
os_usbsend, 1538
strtrim, 1539
TEST_RESET, 1532
udev, 1547
udev_enum, 1539
udevthread, 1547

usb_add_device, 1540
usb_rm_device, 1541
usbadd, 1542
usbclaim, 1543
usbkill, 1544
usbmain, 1544
usbthread, 1547
usbunclaim, 1546
usb_rm_device
usb_linux.c, 1541
usb_tryreset
usb.c, 1503
usb.h, 1527
UsbId, 1201
guid, 1205
guidString, 1202, 1203
hwModified, 1205
hwModifiedString, 1203
modified, 1205
modifiedString, 1204
newGuid, 1204
newModified, 1204
UsbId, 1202
UsbId, 1202
usbModel
Kb, 310
usbSerial
Kb, 311
usbadd
usb_linux.c, 1542
usbclaim
usb_linux.c, 1543
usbdevice, 1487
usbid, 1477
usbinput, 1486
usbkill
usb.h, 1528
usb_linux.c, 1544
usbmain
usb.h, 1528
usb_linux.c, 1544
usbmode, 1483
usbmutex
usb.c, 1505
usbprofile, 1484
usbrecv
usb.h, 1514
usbsend
usb.h, 1515
usbthread
usb_linux.c, 1547
usbunclaim
usb_linux.c, 1546
useopacity
ckb-random/main.c, 1410
ushort
includes.h, 1284
usize
QuaZipFile, 898
utf16to8
profile.c, 1455
utf8to16
profile.c, 1455

V_CORSAIR
usb.h, 1515
V_CORSAIR_STR
usb.h, 1515
VERSIONMADEBY
zip.c, 1835
value
CkbSettings, 137
KeyAction, 630
QuaAdler32, 806
QuaChecksum32, 808
QuaCrc32, 812
vendor_str
usb.c, 1504
usb.h, 1529
verifyFw
fwupgradedialog.cpp, 1624
version
AnimScript, 82
versionCreated
QuaZipFileInfo, 903
QuaZipFileInfo64, 910
versionForBoard
KbFirmware, 423
versionLabel
Ui::SettingsWidget, 1025
Ui_SettingsWidget, 1199
versionNeeded
QuaZipFileInfo, 903
QuaZipFileInfo64, 910
versionUpdated
KbManager, 487
verticalLayout
Ui::KbAnimWidget, 347
Ui::KbBindWidget, 401
Ui::KbLightWidget, 462
Ui::MPerfWidget, 772
Ui::RebindWidget, 994
Ui_KbAnimWidget, 1080
Ui_KbBindWidget, 1087
Ui_KbLightWidget, 1095
Ui_MPerfWidget, 1157
Ui_RebindWidget, 1187
verticalLayout_2
Ui::RebindWidget, 994
Ui_RebindWidget, 1187
verticalSpacer
Ui::AnimSettingDialog, 98
Ui::ExtraSettingsWidget, 173
Ui::GradientDialog, 213
Ui::KbAnimWidget, 347
Ui::KbBindWidget, 402
Ui::KbWidget, 599

Ui::KPerfWidget, 699
Ui::LayoutDialog, 717
Ui::MPerfWidget, 772
Ui::RebindWidget, 994
Ui::SettingsWidget, 1025
Ui_AnimSettingDialog, 1045
Ui_ExtraSettingsWidget, 1057
Ui_GradientDialog, 1071
Ui_KbAnimWidget, 1080
Ui_KbBindWidget, 1087
Ui_KbWidget, 1108
Ui_KPerfWidget, 1127
Ui_LayoutDialog, 1133
Ui_MPerfWidget, 1157
Ui_RebindWidget, 1187
Ui_SettingsWidget, 1199
verticalSpacer_10
Ui::ExtraSettingsWidget, 173
Ui::RebindWidget, 995
Ui::SettingsWidget, 1025
Ui_ExtraSettingsWidget, 1057
Ui_RebindWidget, 1187
Ui_SettingsWidget, 1200
verticalSpacer_11
Ui::ExtraSettingsWidget, 173
Ui::RebindWidget, 995
Ui_ExtraSettingsWidget, 1057
Ui_RebindWidget, 1188
verticalSpacer_2
Ui::AnimAddDialog, 48
Ui::AnimSettingDialog, 98
Ui::ExtraSettingsWidget, 174
Ui::GradientDialog, 214
Ui::KbAnimWidget, 347
Ui::KbLightWidget, 462
Ui::KPerfWidget, 699
Ui::LayoutDialog, 717
Ui::MPerfWidget, 772
Ui::RebindWidget, 995
Ui::SettingsWidget, 1025
Ui_AnimAddDialog, 1033
Ui_AnimSettingDialog, 1046
Ui_ExtraSettingsWidget, 1057
Ui_GradientDialog, 1071
Ui_KbAnimWidget, 1080
Ui_KbLightWidget, 1095
Ui_KPerfWidget, 1127
Ui_LayoutDialog, 1133
Ui_MPerfWidget, 1157
Ui_RebindWidget, 1188
Ui_SettingsWidget, 1200
verticalSpacer_3
Ui::AnimAddDialog, 48
Ui::AnimSettingDialog, 99
Ui::ExtraSettingsWidget, 174
Ui::KbAnimWidget, 347
Ui::KbLightWidget, 462
Ui::KPerfWidget, 699
Ui::LayoutDialog, 717
Ui::MPerfWidget, 772
Ui::RebindWidget, 995
Ui::SettingsWidget, 1025
Ui_AnimAddDialog, 1033
Ui_AnimSettingDialog, 1046
Ui_ExtraSettingsWidget, 1057
Ui_KbAnimWidget, 1081
Ui_KbLightWidget, 1095
Ui_KPerfWidget, 1128
Ui_LayoutDialog, 1133
Ui_MPerfWidget, 1157
Ui_RebindWidget, 1188
Ui_SettingsWidget, 1200
verticalSpacer_4
Ui::ExtraSettingsWidget, 174
Ui::KPerfWidget, 699
Ui::LayoutDialog, 717
Ui::RebindWidget, 995
Ui::SettingsWidget, 1025
Ui_ExtraSettingsWidget, 1057
Ui_KPerfWidget, 1128
Ui_LayoutDialog, 1133
Ui_RebindWidget, 1188
Ui_SettingsWidget, 1200
verticalSpacer_5
Ui::ExtraSettingsWidget, 174
Ui::RebindWidget, 995
Ui::SettingsWidget, 1025
Ui_ExtraSettingsWidget, 1058
Ui_RebindWidget, 1188
Ui_SettingsWidget, 1200
verticalSpacer_6
Ui::ExtraSettingsWidget, 174
Ui::RebindWidget, 995
Ui::SettingsWidget, 1025
Ui_ExtraSettingsWidget, 1058
Ui_RebindWidget, 1188
Ui_SettingsWidget, 1200
verticalSpacer_7
Ui::ExtraSettingsWidget, 174
Ui::RebindWidget, 995
Ui::SettingsWidget, 1026
Ui_ExtraSettingsWidget, 1058
Ui_RebindWidget, 1188
Ui_SettingsWidget, 1200
verticalSpacer_8
Ui::ExtraSettingsWidget, 174
Ui::RebindWidget, 995
Ui::SettingsWidget, 1026
Ui_ExtraSettingsWidget, 1058
Ui_RebindWidget, 1188
Ui_SettingsWidget, 1200
verticalSpacer_9
Ui::ExtraSettingsWidget, 174
Ui_ExtraSettingsWidget, 1058
vtable_keyboard
device_vtable.c, 1241

structures.h, 1493
vtable_keyboard_nonrgb
device_vtable.c, 1241
structures.h, 1493
vtable_mouse
device_vtable.c, 1241
structures.h, 1493

wheelBox
Ui::RebindWidget, 996
Ui_RebindWidget, 1188
wheelButton
Ui::RebindWidget, 996
Ui_RebindWidget, 1189
wheelKeys
RebindWidget, 966
widget
Ui::GradientDialog, 214
Ui::KbBindWidget, 402
Ui::KbLightWidget, 463
Ui_GradientDialog, 1071
Ui_KbBindWidget, 1087
Ui_KbLightWidget, 1095
width
ckb-wave/main.c, 1424
Key, 603
KeyMap, 655
winBox
Ui::SettingsWidget, 1026
Ui_SettingsWidget, 1200
winLabel
Ui::SettingsWidget, 1026
Ui_SettingsWidget, 1201
winLock
KbBind, 393
Write_EndOfCentralDirectoryRecord
zip.c, 1843
Write_GlobalComment
zip.c, 1844
Write_LocalFileHeader
zip.c, 1845
Write_Zip64EndOfCentralDirectoryLocator
zip.c, 1847
Write_Zip64EndOfCentralDirectoryRecord
zip.c, 1848
writeCache
CkbSettings, 139
writeData
QuaGzipFile, 818
QuaZIODevice, 826
QuaZipFile, 899
writePos
QuaZipFilePrivate, 915
writeProfileHeader
Kb, 306

x
ckb-pinwheel/main.c, 1398
Key, 603
x_offset
ckb-pinwheel/main.c, 1399
ckb-ripple/main.c, 1416
xBox0
Ui::MPerfWidget, 772
Ui_MPerfWidget, 1157
xBox1
Ui::MPerfWidget, 772
Ui_MPerfWidget, 1157
xBox2
Ui::MPerfWidget, 772
Ui_MPerfWidget, 1158
xBox3
Ui::MPerfWidget, 772
Ui_MPerfWidget, 1158
xBox4
Ui::MPerfWidget, 773
Ui_MPerfWidget, 1158
xBox5
Ui::MPerfWidget, 773
Ui_MPerfWidget, 1158
xSlider0
Ui::MPerfWidget, 773
Ui_MPerfWidget, 1158
xSlider1
Ui::MPerfWidget, 773
Ui_MPerfWidget, 1158
xSlider2
Ui::MPerfWidget, 773
Ui_MPerfWidget, 1158
xSlider3
Ui::MPerfWidget, 773
Ui_MPerfWidget, 1158
xSlider4
Ui::MPerfWidget, 773
Ui_MPerfWidget, 1158
xSlider5
Ui::MPerfWidget, 773
Ui_MPerfWidget, 1159
xyBox
Ui::MPerfWidget, 773
Ui_MPerfWidget, 1159
xyLinkPath
mperfwidget.cpp, 1703

y
ckb-pinwheel/main.c, 1399
Key, 603
YES
KbFirmware, 416
y_offset
ckb-pinwheel/main.c, 1399
ckb-ripple/main.c, 1416
yBox0
Ui::MPerfWidget, 774
Ui_MPerfWidget, 1159
yBox1
Ui::MPerfWidget, 774
Ui_MPerfWidget, 1159

yBox2
Ui::MPerfWidget, 774
Ui_MPerfWidget, 1159
yBox3
Ui::MPerfWidget, 774
Ui_MPerfWidget, 1159
yBox4
Ui::MPerfWidget, 774
Ui_MPerfWidget, 1159
yBox5
Ui::MPerfWidget, 774
Ui_MPerfWidget, 1159
ySlider0
Ui::MPerfWidget, 774
Ui_MPerfWidget, 1159
ySlider1
Ui::MPerfWidget, 774
Ui_MPerfWidget, 1160
ySlider2
Ui::MPerfWidget, 774
Ui_MPerfWidget, 1160
ySlider3
Ui::MPerfWidget, 775
Ui_MPerfWidget, 1160
ySlider4
Ui::MPerfWidget, 775
Ui_MPerfWidget, 1160
ySlider5
Ui::MPerfWidget, 775
Ui_MPerfWidget, 1160
year
AnimScript, 82

Z_BUFSIZE
zip.c, 1835
Z_BZIP2ED
unzip.h, 1816
zip.h, 1888
Z_MAXFILENAMEINZIP
zip.c, 1835
z_crc_t
unzip.c, 1763
zip.c, 1836
ZCALLBACK
ioapi.h, 1713
ZCLOSE64
ioapi.h, 1713
ZERROR64
ioapi.h, 1713
ZFAKECLOSE64
ioapi.h, 1713
ZIP64ENDHEADERMAGIC
zip.c, 1835
ZIP64ENDLOCHEADERMAGIC
zip.c, 1836
ZIP_AUTO_CLOSE
zip.h, 1888
ZIP_BADZIPFILE
zip.h, 1888
ZIP_DEFAULT_FLAGS
zip.h, 1888
ZIP_EOF
zip.h, 1888
ZIP_ERRNO
zip.h, 1888
ZIP_INTERNALERROR
zip.h, 1888
ZIP_OK
zip.h, 1888
ZIP_PARAMERROR
zip.h, 1889
ZIP_SEQUENTIAL
zip.h, 1889
ZOPEN64
ioapi.h, 1714
ZPOS64_T
ioapi.h, 1715
ZREAD64
ioapi.h, 1714
ZSEEK64
ioapi.h, 1714
ZTELL64
ioapi.h, 1715
ZWRITE64
ioapi.h, 1715
zdecode
crypt.h, 1707
zencode
crypt.h, 1707
zip
QuaZipFilePrivate, 915
zip.c
_Z_OF, 1836
ALLOC, 1833
add_data_in_datablock, 1836
allocate_new_datablock, 1837
BUFREADCOMMENT, 1834
CENTRALHEADERMAGIC, 1834
DESCRIPTORHEADERMAGIC, 1834
ENDHEADERMAGIC, 1834
free_datablock, 1838
free_linkedlist, 1838
init_linkedlist, 1839
LOCALHEADERMAGIC, 1834
linkedlist_data, 1836
linkedlist_datablock_internal, 1836
LoadCentralDirectoryRecord, 1840
local, 1834
MAKEULONG64, 1834
SEEK_CUR, 1835
SEEK_END, 1835
SEEK_SET, 1835
SIZECENTRALHEADER, 1835
SIZEDATA_INDATABLOCK, 1835
TRYFREE, 1835
VERSIONMADEBY, 1835
Write_EndOfCentralDirectoryRecord, 1843

Write_GlobalComment, 1844
Write_LocalFileHeader, 1845
Write_Zip64EndOfCentralDirectoryLocator, 1847
Write_Zip64EndOfCentralDirectoryRecord, 1848
Z_BUFSIZE, 1835
Z_MAXFILENAMEINZIP, 1835
z_crc_t, 1836
ZIP64ENDHEADERMAGIC, 1835
ZIP64ENDLOCHEADERMAGIC, 1836
zip64FlushWriteBuffer, 1849
zip64local_SearchCentralDir, 1855
zip64local_SearchCentralDir64, 1856
zip64local_TmzDateToDosDate, 1858
zip64local_getByte, 1850
zip64local_getLong, 1851
zip64local_getLong64, 1852
zip64local_getShort, 1853
zip64local_putValue, 1854
zip64local_putValue_inmemory, 1855
zip_copyright, 1883
zipClearFlags, 1859
zipClose, 1859
zipCloseFileInZip, 1861
zipCloseFileInZipRaw, 1862
zipCloseFileInZipRaw64, 1862
zipOpen, 1867
zipOpen2, 1867
zipOpen2_64, 1868
zipOpen3, 1869
zipOpen64, 1871
zipOpenNewFileInZip, 1872
zipOpenNewFileInZip2, 1872
zipOpenNewFileInZip2_64, 1873
zipOpenNewFileInZip3, 1873
zipOpenNewFileInZip3_64, 1874
zipOpenNewFileInZip4, 1874
zipOpenNewFileInZip4_64, 1875
zipOpenNewFileInZip64, 1879
zipRemoveExtraInfoBlock, 1879
zipSetFlags, 1880
zipWriteInFileInZip, 1881
zip.h
_Z_OF, 1889, 1890
DEF_MEM_LEVEL, 1888
tm_zip, 1889
Z_BZIP2ED, 1888
ZIP_AUTO_CLOSE, 1888
ZIP_BADZIPFILE, 1888
ZIP_DEFAULT_FLAGS, 1888
ZIP_EOF, 1888
ZIP_ERRNO, 1888
ZIP_INTERNALERROR, 1888
ZIP_OK, 1888
ZIP_PARAMERROR, 1889
ZIP_SEQUENTIAL, 1889
zipClearFlags, 1890
zipFile, 1889
zipOpen3, 1891
zipSetFlags, 1893
zipcharpc, 1889
zip64
QuaZipPrivate, 933
zip64_internal, 1833
zip64FlushWriteBuffer
zip.c, 1849
zip64local_SearchCentralDir
zip.c, 1855
zip64local_SearchCentralDir64
zip.c, 1856
zip64local_TmzDateToDosDate
zip.c, 1858
zip64local_getByte
zip.c, 1850
zip64local_getLong
zip.c, 1851
zip64local_getLong64
zip.c, 1852
zip64local_getShort
zip.c, 1853
zip64local_putValue
zip.c, 1854
zip64local_putValue_inmemory
zip.c, 1855
zip_fileinfo, 1886
zip_copyright
zip.c, 1883
zipClearFlags
zip.c, 1859
zip.h, 1890
zipClose
zip.c, 1859
zipCloseFileInZip
zip.c, 1861
zipCloseFileInZipRaw
zip.c, 1862
zipCloseFileInZipRaw64
zip.c, 1862
zipError
QuaZipFilePrivate, 915
QuaZipPrivate, 933
zipFile
zip.h, 1889
zipName
QuaZipPrivate, 933
zipOpen
zip.c, 1867
zipOpen2
zip.c, 1867
zipOpen2_64
zip.c, 1868
zipOpen3
zip.c, 1869
zip.h, 1891
zipOpen64
zip.c, 1871
zipOpenNewFileInZip

zip.c, 1872
zipOpenNewFileInZip2
zip.c, 1872
zipOpenNewFileInZip2_64
zip.c, 1873
zipOpenNewFileInZip3
zip.c, 1873
zipOpenNewFileInZip3_64
zip.c, 1874
zipOpenNewFileInZip4
zip.c, 1874
zipOpenNewFileInZip4_64
zip.c, 1875
zipOpenNewFileInZip64
zip.c, 1879
zipRemoveExtraInfoBlock
zip.c, 1879
zipSetFlags
zip.c, 1880
zip.h, 1893
zipWriteInFileInZip
zip.c, 1881
zipcharpc
zip.h, 1889
zlib_filefunc64_32_def_s, 1712
zlib_filefunc64_def_s, 1711
zlib_filefunc_def_s, 1711
zlib_filefunc64_32_def
ioapi.h, 1715
zlib_filefunc64_def
ioapi.h, 1715
zlib_filefunc_def
ioapi.h, 1715