```
                    ┌─────────────────────┐
                    │    QMainWindow      │
                    ├─────────────────────┤
                    │                     │
                    ├─────────────────────┤
                    │                     │
                    └─────────────────────┘
                              △
                              │
```

MainWindow
- ui
- _startUpDialog
- _measuringInterface
- _screen
- _screenGeometry
- _videoFPSTimer
- _ardSerial
- _camObj
- _usrOptions
- _globalFrame
- _globalQPixmap
- _camPort
- _savePreferences
- _fullScreen
- _res_Width
- _res_Height
- _fps
- _calibrationInProgress
- _liveLensCorrection

+ MainWindow()
+ ~MainWindow()
+ init()
+ receiveData()
- resizeWindowToScreenSize()
- resizeLabelToWindow()
- centerWindow()
- loadGUISettings()
- saveGUISettings()
- defaultCamOpt()
- defaultUIVals()
- setOptionsButtons()
- setMeasurementButtons()
- drawCalibrationLines()
- listenToKeyPress()
- switchAlgToGantry()
- captureImage()
- on_focusButton_pressed()
- on_actionFull_screen _triggered()
- on_actionCenter_window _triggered()
- on_actionSet_to_defaults _triggered()
- on_modeButton_pressed()
- on_positionCalibrationButton _pressed()
- on_focusSlider_sliderMoved()
- on_zoomSlider_sliderMoved()
- on_saturationSlider _sliderMoved()
- on_brightnessSlider _sliderMoved()
- on_contrastSlider_slider Moved()
- on_contrastOptionsBtn _pressed()
- on_brightnessOptionsBtn _pressed()
- on_saturationOptionsBtn _pressed()
- on_zoomOptionsBtn_pressed()
- on_focusOptionsBtn _pressed()
- on_captureButton_pressed()
- on_measureButton_pressed()
- on_distortionButton _pressed()
- on_lensCorrectioncheckBox _stateChanged()
- on_actionEnumerate _Ports_triggered()
- on_actionAttempt_to _connect_triggered()
- setRingLighGUI()
- on_actionCheck_connection _status_triggered()
- on_gantryUpButton_pressed()
- on_gantryDownButton _pressed()
- on_gantryLeftButton _pressed()
- on_gantryRightButton _pressed()
- on_ringLightOnButton _pressed()
- on_ringLightOffButton _pressed()
- on_ringLeftUpBut_pressed()
- on_ringLeftDownBut _pressed()
- on_ringRightUpBut_pressed()
- on_ringRightDownBut _pressed()
- on_actionDisconnect _Serial_triggered()
- on_actionRe_Establish _the_connection_triggered()