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# **Chapter 1**

# **GTKTerm: A GTK+ Serial Port Terminal**

GTKTerm is a simple, graphical serial port terminal emulator for Linux and possibly other POSIX-compliant operating systems. It can be used to communicate with all kinds of devices with a serial interface, such as embedded computers, microcontrollers, modems, GPS receivers, CNC machines and more.

# 1.1 Usage

# 1.1.1 Keyboard Shortcuts

As GTKTerm is often used like a terminal emulator, the shortcut keys are assigned to <ctrl><shift>, rather than just <ctrl>X and not have GTKTerm intercept them.

Key Combination	Effect
<ctrl><shift>L</shift></ctrl>	Clear screen
<ctrl><shift>R</shift></ctrl>	Send file
<ctrl><shift>Q</shift></ctrl>	Quit
<ctrl><shift>S</shift></ctrl>	Configure port
<ctrl><shift>V</shift></ctrl>	Paste
<ctrl><shift>C</shift></ctrl>	Сору
<ctrl><shift>F</shift></ctrl>	Find
<ctrl><shift>K</shift></ctrl>	Clear Scrollback
<ctrl><shift>A</shift></ctrl>	Select All
<ctrl><shift>B</shift></ctrl>	Send Break
<ctrl>B</ctrl>	Send break
F5	Open Port
F6	Close Port
F7	Toggle DTR
F8	Toggle RTS

# 1.1.2 Command Line Options

See man gtkterm or gtkterm --help for more information on available command line interface options.

#### 1.1.3 Notes on RS485:

The RS485 flow control is a software user-space emulation and therefore may not work for all configurations (won't respond quickly enough). If this is the case for your setup, you will need to either use a dedicated RS232 to RS485 converter, or look for a kernel level driver. This is an inherent limitation to user space programs.

# 1.1.4 Scriptability with Signals

Some microcontrollers and other embedded devices are flashed using the same serial interface that is also used for outputting debug information. To facilitate rapid development on these platforms, GTKTerm supports the following UNIX signals:

Signal	Action	Usage Example		
SIGUSR1	Open Port	killall -USR1 gtkterm		
SIGUSR2	Close Port	killall -USR2 gtkterm		

You may find it useful to send these signals in your own firmware flashing scripts.

# 1.2 Installation

GTKTerm has a few dependencies-

- Gtk+4.0 (version 4.6 or higher)
- · vte-gtk4 (version 0.68 or higher)
- intltool (version 0.40.0 or higher)
- · libgudev (version 229 or higher)

Once these dependencies are installed, most people should simply run:

```
meson build
ninja -C build
```

To install GTKTerm system-wide, run:

```
ninja -C build install
gtk-update-icon-cache
```

If you wish to install GTKTerm someplace other than the default directory, e.g. in /usr, use:

```
meson build -Dprefix=/usr
```

Then build and install as usual.

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# 1.3 Uninstallation

To uninstall GTKTerm, run:

ninja -C build uninstall

If you already deleted the build directory, just compile and install GTKTerm again as explained in the previous
section with the same target location prefix (-Dprefix) and perform the uninstall step afterwards.

# 1.4 License

Original Code by: Julien Schmitt

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# Chapter 2

# **Class Index**

# 2.1 Class List

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# **Chapter 3**

# File Index

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# **Chapter 4**

# **Class Documentation**

# 4.1 display\_config\_t Struct Reference

#include <term\_config.h>

Collaboration diagram for display\_config\_t:

# display\_config\_t

- + block\_cursor
- + show\_cursor
- + char\_queue
- + echo
- + crlfauto
- + timestamp
- + delay
- + rows
- + columns
- + scrollback
- + visual\_bell
- + foreground\_color
- + background\_color
- + font
- + active\_section

# **Public Attributes**

- gboolean block\_cursor
- gboolean show\_cursor
- char char\_queue

- · gboolean echo
- · gboolean crlfauto
- · gboolean timestamp
- int delay
- · int rows
- int columns
- int scrollback
- gboolean visual\_bell
- GdkRGBA foreground\_color
- GdkRGBA background\_color
- PangoFontDescription \* font
- char \* active\_section

# 4.1.1 Member Data Documentation

#### 4.1.1.1 active\_section

char\* display\_config\_t::active\_section

Referenced by check\_configuration\_file(), hard\_default\_configuration(), load\_configuration\_from\_file(), and remove\_section().

#### 4.1.1.2 background\_color

GdkRGBA display\_config\_t::background\_color

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), and load\_configuration\_from\_file().

# 4.1.1.3 block\_cursor

gboolean display\_config\_t::block\_cursor

Referenced by dump\_configuration\_to\_cli(), and hard\_default\_configuration().

#### 4.1.1.4 char\_queue

char display\_config\_t::char\_queue

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), load\_configuration\_from\_file(), and read\_command\_line().

#### 4.1.1.5 columns

int display\_config\_t::columns

 $Referenced \ by \ copy\_configuration(), \ dump\_configuration\_to\_cli(), \ hard\_default\_configuration(), \ and \ load\_configuration\_from\_file().$ 

#### 4.1.1.6 crlfauto

gboolean display\_config\_t::crlfauto

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), and load\_configuration\_from\_file().

#### 4.1.1.7 delay

int display\_config\_t::delay

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), load\_configuration\_from\_file(), read\_command\_line(), and validate\_configuration().

#### 4.1.1.8 echo

gboolean display\_config\_t::echo

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), load\_configuration\_from\_file(), and read\_command\_line().

#### 4.1.1.9 font

PangoFontDescription\* display\_config\_t::font

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), load\_configuration\_from\_file(), and validate configuration().

#### 4.1.1.10 foreground\_color

GdkRGBA display\_config\_t::foreground\_color

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), and load\_configuration\_from\_file().

#### 4.1.1.11 rows

int display\_config\_t::rows

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), and load\_configuration\_from\_file().

#### 4.1.1.12 scrollback

 $\verb"int display_config_t::scrollback"$ 

 $Referenced \ by \ copy\_configuration(), \ dump\_configuration\_to\_cli(), \ hard\_default\_configuration(), \ and \ load\_configuration\_from\_file().$ 

#### 4.1.1.13 show\_cursor

gboolean display\_config\_t::show\_cursor

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), and load\_configuration\_from\_file().

# 4.1.1.14 timestamp

gboolean display\_config\_t::timestamp

Referenced by dump\_configuration\_to\_cli(), and hard\_default\_configuration().

#### 4.1.1.15 visual bell

gboolean display\_config\_t::visual\_bell

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), and load\_configuration\_from\_file().

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

· term\_config.h

# 4.2 GtkTermWindow Struct Reference

Collaboration diagram for GtkTermWindow:

# GtkTermWindow

- + parent instance
- + message
- + infobar
- + status
- + menubutton
- + toolmenu
- + scrolled\_window
- + buffer
- + width
- + height
- + maximized
- + fullscreen

#### **Public Attributes**

- GtkApplicationWindow parent\_instance
- GtkWidget \* message
- GtkWidget \* infobar
- GtkWidget \* status
- GtkWidget \* menubutton
- GMenuModel \* toolmenu
- GtkScrolledWindow \* scrolled\_window
- GtkWidget \* buffer
- int width
- int height
- gboolean maximized
- gboolean fullscreen

#### 4.2.1 Member Data Documentation

#### 4.2.1.1 buffer

GtkWidget\* GtkTermWindow::buffer

# 4.2.1.2 fullscreen

gboolean GtkTermWindow::fullscreen

# 4.2.1.3 height

int GtkTermWindow::height

#### 4.2.1.4 infobar

GtkWidget\* GtkTermWindow::infobar

#### 4.2.1.5 maximized

gboolean GtkTermWindow::maximized

# 4.2.1.6 menubutton

GtkWidget\* GtkTermWindow::menubutton

# 4.2.1.7 message

GtkWidget\* GtkTermWindow::message

# 4.2.1.8 parent\_instance

GtkApplicationWindow GtkTermWindow::parent\_instance

# 4.2.1.9 scrolled\_window

 ${\tt GtkScrolledWindow*} \ {\tt GtkTermWindow::scrolled\_window}$ 

#### 4.2.1.10 status

GtkWidget\* GtkTermWindow::status

#### 4.2.1.11 toolmenu

GMenuModel\* GtkTermWindow::toolmenu

#### 4.2.1.12 width

int GtkTermWindow::width

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

• gtkterm.c

# 4.3 macro\_t Struct Reference

Define macro structure type.

#include <macros.h>

Collaboration diagram for macro\_t:

macro\_t
+ shortcut
+ action
+ closure

# **Public Attributes**

- char \* shortcut
- char \* action

Shortcut of the macro.

• GClosure \* closure

Command to perform.

# 4.3.1 Detailed Description

Define macro structure type.

# 4.3.2 Member Data Documentation

# 4.3.2.1 action

char\* macro\_t::action

Shortcut of the macro.

Referenced by convert\_macros\_to\_string(), and convert\_string\_to\_macros().

# 4.3.2.2 closure

GClosure\* macro\_t::closure

Command to perform.

#### 4.3.2.3 shortcut

char\* macro\_t::shortcut

Referenced by convert\_macros\_to\_string(), and convert\_string\_to\_macros().

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

· macros.h

# 4.4 port\_config\_t Struct Reference

#include <serial.h>

Collaboration diagram for port\_config\_t:

# port\_config\_t + port + speed + bits + stops + parity + flow\_control + rs485\_rts\_time\_before \_transmit + rs485\_rts\_time\_after \_transmit + char\_queue + disable\_port\_lock

#### **Public Attributes**

- char port [256]
- long int speed
- int bits
- int stops
- · int parity
- · int flow control
- int rs485\_rts\_time\_before\_transmit
- int rs485\_rts\_time\_after\_transmit
- char char\_queue
- gboolean disable\_port\_lock

# 4.4.1 Member Data Documentation

#### 4.4.1.1 bits

int port\_config\_t::bits

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), get\_port\_string(), hard\_default\_configuration(), load\_configuration\_from\_file(), read\_command\_line(), and validate\_configuration().

#### 4.4.1.2 char\_queue

char port\_config\_t::char\_queue

# 4.4.1.3 disable\_port\_lock

gboolean port\_config\_t::disable\_port\_lock

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), load\_configuration\_from\_file(), and read\_command\_line().

#### 4.4.1.4 flow\_control

int port\_config\_t::flow\_control

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), load\_configuration\_from\_file(), and read\_command\_line().

#### 4.4.1.5 parity

int port\_config\_t::parity

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), get\_port\_string(), hard\_default\_configuration(), load\_configuration\_from\_file(), and read\_command\_line().

#### 4.4.1.6 port

char port\_config\_t::port[256]

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), get\_port\_string(), hard\_default\_configuration(), load\_configuration\_from\_file(), and read\_command\_line().

# 4.4.1.7 rs485\_rts\_time\_after\_transmit

int port\_config\_t::rs485\_rts\_time\_after\_transmit

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), load\_configuration\_from\_file(), and read\_command\_line().

#### 4.4.1.8 rs485\_rts\_time\_before\_transmit

int port\_config\_t::rs485\_rts\_time\_before\_transmit

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), load\_configuration\_from\_file(), and read\_command\_line().

#### 4.4.1.9 speed

long int port\_config\_t::speed

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), get\_port\_string(), hard\_default\_configuration(), load configuration from file(), read command line(), and validate configuration().

#### 4.4.1.10 stops

int port\_config\_t::stops

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), get\_port\_string(), hard\_default\_configuration(), load\_configuration\_from\_file(), read\_command\_line(), and validate\_configuration().

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

· serial.h

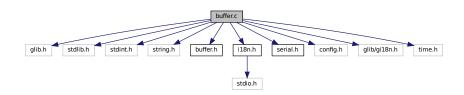
# **Chapter 5**

# **File Documentation**

# 5.1 buffer.c File Reference

```
#include <glib.h>
#include <stdlib.h>
#include <stdint.h>
#include <string.h>
#include "buffer.h"
#include "i18n.h"
#include "serial.h"
#include <config.h>
#include <glib/gi18n.h>
#include <time.h>
```

Include dependency graph for buffer.c:



#### **Macros**

• #define TIMESTAMP\_SIZE 50

#### **Functions**

- void create\_buffer (void)
- void delete\_buffer (void)
- unsigned int insert\_timestamp (char \*buffer)
- void put\_chars (const char \*chars, unsigned int size, gboolean crlf\_auto)
- void write buffer (void)
- void write buffer with func (void(\*func)(const char \*, unsigned int))
- void clear\_buffer (void)
- void set\_clear\_func (void(\*func)(void))
- void unset\_clear\_func (void(\*func)(void))
- void set\_display\_func (void(\*func)(const char \*, unsigned int))
- void unset\_display\_func (void(\*func)(const char \*, unsigned int))

22 File Documentation

# **Variables**

- gboolean timestamp\_on
- char overlapped
- guint virt\_col\_pos
- void(\* write\_func )(const char \*, unsigned int) = NULL
- void(\* clear\_func )(void) = NULL

# 5.1.1 Macro Definition Documentation

# 5.1.1.1 TIMESTAMP\_SIZE

```
#define TIMESTAMP_SIZE 50
```

# 5.1.2 Function Documentation

# 5.1.2.1 clear\_buffer()

```
void clear_buffer (
     void )
```

References clear\_func.

# 5.1.2.2 create\_buffer()

```
void create_buffer (
     void )
```

# 5.1.2.3 delete\_buffer()

```
void delete_buffer (
     void )
```

5.1 buffer.c File Reference 23

# 5.1.2.4 insert\_timestamp()

#### 5.1.2.5 put\_chars()

References RECEIVE\_BUFFER, timestamp\_on, and TIMESTAMP\_SIZE.

# 5.1.2.6 set\_clear\_func()

References clear\_func.

# 5.1.2.7 set\_display\_func()

References write\_func.

#### 5.1.2.8 unset\_clear\_func()

References clear\_func.

#### 5.1.2.9 unset\_display\_func()

References write\_func.

24 File Documentation

# 5.1.2.10 write\_buffer()

```
void write_buffer (
     void )
```

References overlapped, and write\_func.

Referenced by write\_buffer\_with\_func().

Here is the caller graph for this function:



# 5.1.2.11 write\_buffer\_with\_func()

References write\_buffer(), and write\_func.

Here is the call graph for this function:



# 5.1.3 Variable Documentation

#### 5.1.3.1 clear func

```
void(* clear_func) (void) (
     void ) = NULL
```

Referenced by clear\_buffer(), set\_clear\_func(), and unset\_clear\_func().

5.2 buffer.h File Reference 25

# 5.1.3.2 overlapped

```
char overlapped
```

Referenced by write\_buffer().

#### 5.1.3.3 timestamp\_on

```
gboolean timestamp_on [extern]
```

Referenced by put\_chars().

# 5.1.3.4 virt\_col\_pos

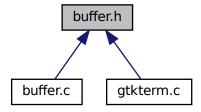
```
guint virt_col_pos [extern]
```

#### 5.1.3.5 write\_func

Referenced by set\_display\_func(), unset\_display\_func(), write\_buffer(), and write\_buffer\_with\_func().

# 5.2 buffer.h File Reference

This graph shows which files directly or indirectly include this file:



26 File Documentation

# **Macros**

• #define BUFFER\_SIZE (128 \* 1024)

#### **Functions**

- void create\_buffer (void)
- void delete buffer (void)
- void put\_chars (const char \*, unsigned int, gboolean)
- void clear\_buffer (void)
- void write\_buffer (void)
- void set\_display\_func (void(\*func)(const char \*, uint32\_t))
- void unset\_display\_func (void(\*func)(const char \*, uint32\_t))
- void set\_clear\_func (void(\*func)(void))
- void unset\_clear\_func (void(\*func)(void))
- void write\_buffer\_with\_func (void(\*func)(const char \*, uint32\_t))

# 5.2.1 Macro Definition Documentation

#### 5.2.1.1 BUFFER SIZE

```
#define BUFFER_SIZE (128 * 1024)
```

# 5.2.2 Function Documentation

#### 5.2.2.1 clear\_buffer()

```
void clear_buffer (
     void )
```

References clear\_func.

# 5.2.2.2 create\_buffer()

```
void create_buffer (
     void )
```

5.2 buffer.h File Reference 27

### 5.2.2.3 delete\_buffer()

```
void delete_buffer (
     void )
```

## 5.2.2.4 put\_chars()

References RECEIVE\_BUFFER, timestamp\_on, and TIMESTAMP\_SIZE.

### 5.2.2.5 set\_clear\_func()

References clear\_func.

## 5.2.2.6 set\_display\_func()

### 5.2.2.7 unset\_clear\_func()

References clear\_func.

### 5.2.2.8 unset\_display\_func()

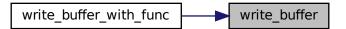
### 5.2.2.9 write\_buffer()

```
void write_buffer (
     void )
```

References overlapped, and write\_func.

Referenced by write\_buffer\_with\_func().

Here is the caller graph for this function:

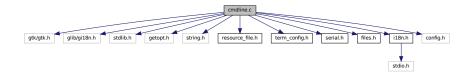


# 5.2.2.10 write\_buffer\_with\_func()

# 5.3 cmdline.c File Reference

```
#include <gtk/gtk.h>
#include <glib/gil8n.h>
#include <stdlib.h>
#include <getopt.h>
#include <string.h>
#include "resource_file.h"
#include "term_config.h"
#include "serial.h"
#include "files.h"
#include "il8n.h"
#include <config.h>
```

Include dependency graph for cmdline.c:



## **Functions**

- void display\_help (void)
- int read\_command\_line (int argc, char \*\*argv, char \*configuration\_to\_read)

## **Variables**

· struct configuration\_port config

## 5.3.1 Function Documentation

### 5.3.1.1 display\_help()

```
void display_help (
     void )
```

References i18n\_printf().

Referenced by read\_command\_line().

Here is the call graph for this function:



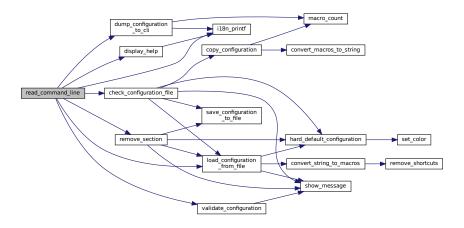


#### 5.3.1.2 read\_command\_line()

References port\_config\_t::bits, display\_config\_t::char\_queue, check\_configuration\_file(), default\_filename, display\_config\_t::delay, port\_config\_t::disable\_port\_lock, display\_help(), dump\_configuration\_to\_cli(), display\_config\_t::echo, port\_config\_t::flow\_control, i18n\_printf(), load\_configuration\_from\_file(), port\_config\_t::parity, port\_config\_t::port, port\_config\_t::rs485\_rts\_time\_after\_transmit, port\_config\_t::rs485\_rts\_time\_before\_transmit, port\_config\_t::speed, port\_config\_t::stops, term\_conf, and validate\_configuration().

Referenced by main().

Here is the call graph for this function:



Here is the caller graph for this function:



## 5.3.2 Variable Documentation

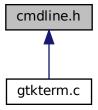
## 5.3.2.1 config

```
struct configuration_port config [extern]
```

Referenced by check\_configuration\_file(), remove\_section(), and save\_configuration\_to\_file().

## 5.4 cmdline.h File Reference

This graph shows which files directly or indirectly include this file:



#### **Functions**

int read\_command\_line (int, char \*\*)

### 5.4.1 Function Documentation

# 5.4.1.1 read\_command\_line()

```
int read_command_line (
    int ,
    char ** )
```

# 5.5 files.c File Reference

```
#include <gtk/gtk.h>
#include <stdio.h>
#include <unistd.h>
#include <fcntl.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <errno.h>
#include <string.h>
#include <glib.h>
#include <config.h>
#include <glib/gil8n.h>
Include dependency graph for files.c:
```



## **Variables**

• char \* default\_filename = NULL

# 5.5.1 Variable Documentation

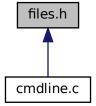
### 5.5.1.1 default\_filename

```
char* default_filename = NULL
```

Referenced by read\_command\_line().

## 5.6 files.h File Reference

This graph shows which files directly or indirectly include this file:



## **Functions**

- void send\_raw\_file (GAction \*action, gpointer data)
- void save\_raw\_file (GAction \*action, gpointer data)
- void add\_input (void)

# **Variables**

- gboolean waiting\_for\_char
- char \* default\_filename

## 5.6.1 Function Documentation

5.6 files.h File Reference 33

## 5.6.1.1 add\_input()

```
void add_input (
    void )
```

## 5.6.1.2 save\_raw\_file()

# 5.6.1.3 send\_raw\_file()

## 5.6.2 Variable Documentation

### 5.6.2.1 default\_filename

```
char* default_filename [extern]
```

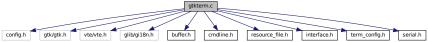
Referenced by read\_command\_line().

# 5.6.2.2 waiting\_for\_char

```
gboolean waiting_for_char [extern]
```

# 5.7 gtkterm.c File Reference

```
#include "config.h"
#include <gtk/gtk.h>
#include <vte/vte.h>
#include <glib/gil8n.h>
#include "buffer.h"
#include "cmdline.h"
#include "resource_file.h"
#include "interface.h"
#include "term_config.h"
#include "serial.h"
Include dependency graph for gtkterm.c:
```



#### **Classes**

struct GtkTermWindow

# **Typedefs**

- typedef GtkApplication GtkTerm
- typedef GtkApplicationClass GtkTermClass
- typedef GtkApplicationWindowClass GtkTermWindowClass

## **Functions**

- void set window title (GtkTermWindow \*)
- int main (int argc, char \*argv[])

# 5.7.1 Typedef Documentation

#### 5.7.1.1 GtkTerm

 ${\tt typedef~GtkApplication~GtkTerm}$ 

### 5.7.1.2 GtkTermClass

 $\verb|typedef| GtkApplicationClass| GtkTermClass|$ 

#### 5.7.1.3 GtkTermWindowClass

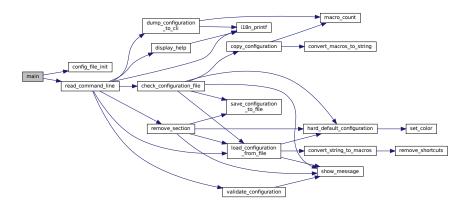
typedef GtkApplicationWindowClass GtkTermWindowClass

## 5.7.2 Function Documentation

### 5.7.2.1 main()

```
int main (
     int argc,
     char * argv[] )
```

References config\_file\_init(), and read\_command\_line().



#### 5.7.2.2 set\_window\_title()

References get\_port\_string().

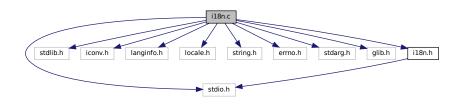
Here is the call graph for this function:



# 5.8 i18n.c File Reference

```
#include <stdio.h>
#include <stdlib.h>
#include <iconv.h>
#include <langinfo.h>
#include <locale.h>
#include <string.h>
#include <errno.h>
#include <stdarg.h>
#include <glib.h>
#include "i18n.h"
```

Include dependency graph for i18n.c:



### **Functions**

- int i18n printf (const char \*format,...)
- int i18n\_fprintf (FILE \*stream, const char \*format,...)
- void i18n\_perror (const char \*s)
- char \* strerror\_utf8 (int errornum)

# 5.8.1 Function Documentation

5.8 i18n.c File Reference 37

## 5.8.1.1 i18n\_fprintf()

```
int i18n_fprintf (
    FILE * stream,
    const char * format,
    ... )
```

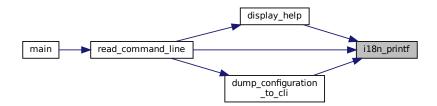
### 5.8.1.2 i18n\_perror()

```
void i18n_perror ( {\rm const~char~*}~s~)
```

## 5.8.1.3 i18n\_printf()

Referenced by display\_help(), dump\_configuration\_to\_cli(), and read\_command\_line().

Here is the caller graph for this function:

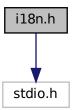


## 5.8.1.4 strerror\_utf8()

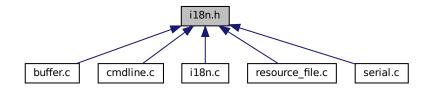
# 5.9 i18n.h File Reference

#include <stdio.h>

Include dependency graph for i18n.h:



This graph shows which files directly or indirectly include this file:



### **Macros**

• #define I18N\_H

## **Functions**

- int i18n\_printf (const char \*,...)
- int i18n\_fprintf (FILE \*, const char \*,...)
- void i18n\_perror (const char \*)
- char \* strerror\_utf8 (int)

## 5.9.1 Macro Definition Documentation

# 5.9.1.1 I18N\_H

#define I18N\_H

5.9 i18n.h File Reference

# 5.9.2 Function Documentation

## 5.9.2.1 i18n\_fprintf()

```
int i18n_fprintf (
     FILE * stream,
     const char * format,
     ... )
```

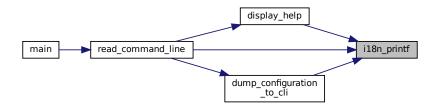
## 5.9.2.2 i18n\_perror()

```
void i18n_perror ( {\rm const~char~*}~s~)
```

# 5.9.2.3 i18n\_printf()

Referenced by display\_help(), dump\_configuration\_to\_cli(), and read\_command\_line().

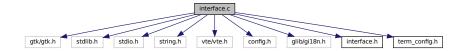
Here is the caller graph for this function:



## 5.9.2.4 strerror\_utf8()

## 5.10 interface.c File Reference

```
#include <gtk/gtk.h>
#include <stdlib.h>
#include <stdio.h>
#include <string.h>
#include <vte/vte.h>
#include <config.h>
#include <glib/gi18n.h>
#include "interface.h"
#include "term_config.h"
Include dependency graph for interface.c:
```



#### **Functions**

• void show message (char \*message, int type msg)

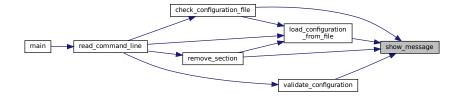
### **Variables**

- gboolean timestamp\_on = 0
- · struct configuration\_port config
- int virt\_col\_pos = 0

### 5.10.1 Function Documentation

### 5.10.1.1 show\_message()

 $Referenced \ by \ check\_configuration\_file(), \ load\_configuration\_from\_file(), \ remove\_section(), \ and \ validate\_configuration().$ 



## 5.10.2 Variable Documentation

# 5.10.2.1 config

struct configuration\_port config [extern]

### 5.10.2.2 timestamp\_on

gboolean timestamp\_on = 0

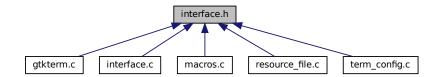
Referenced by put\_chars().

## 5.10.2.3 virt\_col\_pos

int virt\_col\_pos = 0

# 5.11 interface.h File Reference

This graph shows which files directly or indirectly include this file:



## **Macros**

- #define MSG\_WRN 0
- #define MSG\_ERR 1
- #define ASCII\_VIEW 0
- #define HEXADECIMAL\_VIEW 1

# **Functions**

void show\_message (char \*, int)

## **Variables**

- GtkWidget \* Text
- GtkWidget \* display

#### 5.11.1 Macro Definition Documentation

# 5.11.1.1 ASCII\_VIEW

```
#define ASCII_VIEW 0
```

#### 5.11.1.2 HEXADECIMAL VIEW

```
#define HEXADECIMAL_VIEW 1
```

## 5.11.1.3 MSG\_ERR

```
#define MSG_ERR 1
```

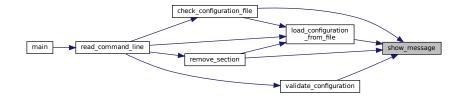
### 5.11.1.4 MSG\_WRN

```
#define MSG_WRN 0
```

### 5.11.2 Function Documentation

## 5.11.2.1 show\_message()

 $Referenced \ by \ check\_configuration\_file(), \ load\_configuration\_from\_file(), \ remove\_section(), \ and \ validate\_configuration().$ 



### 5.11.3 Variable Documentation

## 5.11.3.1 display

```
GtkWidget* display [extern]
```

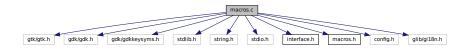
#### 5.11.3.2 Text

```
GtkWidget* Text [extern]
```

## 5.12 macros.c File Reference

```
#include <gtk/gtk.h>
#include <gdk/gdk.h>
#include <gdk/gdkkeysyms.h>
#include <stdlib.h>
#include <string.h>
#include <stdio.h>
#include "interface.h"
#include "macros.h"
#include <config.h>
#include <glib/gi18n.h>
```

Include dependency graph for macros.c:



### **Enumerations**

enum { COLUMN\_SHORTCUT , COLUMN\_ACTION , NUM\_COLUMNS }

### **Functions**

- int macro\_count ()
- void convert\_string\_to\_macros (char \*\*string\_list, int size)

Convert the array of strings to macros.

int convert\_macros\_to\_string (char \*\*string\_list)

Convert the in memory macros to an array of strings for storage in file.

- macro\_t \* get\_shortcuts (int \*size)
- void remove\_shortcuts (void)

## **Variables**

```
• macro_t * macros = NULL
```

```
• int nr_of_macros = 0
```

# **5.12.1 Enumeration Type Documentation**

### 5.12.1.1 anonymous enum

```
anonymous enum
```

#### Enumerator

COLUMN_SHORTCUT	
COLUMN_ACTION	
NUM_COLUMNS	

### 5.12.2 Function Documentation

### 5.12.2.1 convert\_macros\_to\_string()

Convert the in memory macros to an array of strings for storage in file.

Must be NULL terminated

Number of strings is 2x the macros (shortcut and action)

References macro\_t::action, macros, nr\_of\_macros, and macro\_t::shortcut.

Referenced by copy\_configuration().



## 5.12.2.2 convert\_string\_to\_macros()

Convert the array of strings to macros.

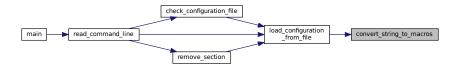
References macro\_t::action, macros, nr\_of\_macros, remove\_shortcuts(), and macro\_t::shortcut.

Referenced by load\_configuration\_from\_file().

Here is the call graph for this function:



Here is the caller graph for this function:



## 5.12.2.3 get\_shortcuts()

References macros.

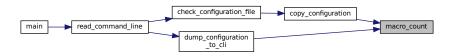
#### 5.12.2.4 macro\_count()

```
int macro_count ( )
```

References nr\_of\_macros.

Referenced by copy\_configuration(), and dump\_configuration\_to\_cli().

Here is the caller graph for this function:



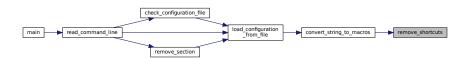
### 5.12.2.5 remove\_shortcuts()

Clean up all macros

References macros.

Referenced by convert\_string\_to\_macros().

Here is the caller graph for this function:



### 5.12.3 Variable Documentation

### 5.12.3.1 macros

```
macro_t* macros = NULL
```

 $Referenced \ by \ convert\_macros\_to\_string(), \ convert\_string\_to\_macros(), \ dump\_configuration\_to\_cli(), \ get\_shortcuts(), \ and \ remove\_shortcuts().$ 

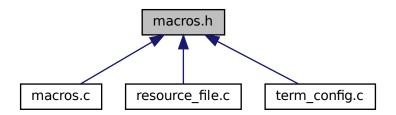
### 5.12.3.2 nr\_of\_macros

```
int nr_of_macros = 0
```

Referenced by convert\_macros\_to\_string(), convert\_string\_to\_macros(), and macro\_count().

# 5.13 macros.h File Reference

This graph shows which files directly or indirectly include this file:



### **Classes**

· struct macro\_t

Define macro structure type.

### **Functions**

- void remove\_shortcuts (void)
- void add\_shortcuts (void)

Remove shortcuts from accel\_group and free memory.

- macro\_t \* get\_shortcuts (gint \*)
- void convert\_string\_to\_macros (char \*\*, int)

Convert the array of strings to macros.

int convert\_macros\_to\_string (char \*\*)

Convert the in memory macros to an array of strings for storage in file.

• int macro\_count ()

## **Variables**

• macro t \* macros

### 5.13.1 Function Documentation

#### 5.13.1.1 add\_shortcuts()

```
void add_shortcuts (
     void )
```

Remove shortcuts from accel\_group and free memory.

#### 5.13.1.2 convert\_macros\_to\_string()

Convert the in memory macros to an array of strings for storage in file.

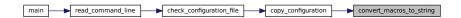
Must be NULL terminated

Number of strings is 2x the macros (shortcut and action)

References macro\_t::action, macros, nr\_of\_macros, and macro\_t::shortcut.

Referenced by copy\_configuration().

Here is the caller graph for this function:



## 5.13.1.3 convert\_string\_to\_macros()

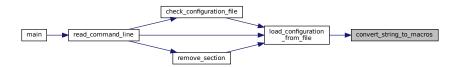
Convert the array of strings to macros.

References macro\_t::action, macros, nr\_of\_macros, remove\_shortcuts(), and macro\_t::shortcut.

Referenced by load\_configuration\_from\_file().



Here is the caller graph for this function:



## 5.13.1.4 get\_shortcuts()

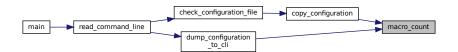
## 5.13.1.5 macro\_count()

```
int macro_count ( )
```

References nr\_of\_macros.

Referenced by copy\_configuration(), and dump\_configuration\_to\_cli().

Here is the caller graph for this function:



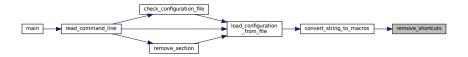
## 5.13.1.6 remove\_shortcuts()

```
void remove_shortcuts ( \mbox{void} \mbox{ )}
```

Clean up all macros

References macros.

Referenced by convert\_string\_to\_macros().



### 5.13.2 Variable Documentation

#### 5.13.2.1 macros

```
macro_t* macros [extern]
```

Referenced by convert\_macros\_to\_string(), convert\_string\_to\_macros(), dump\_configuration\_to\_cli(), get\_shortcuts(), and remove shortcuts().

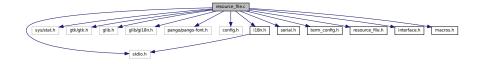
### 5.14 README.md File Reference

## 5.15 README.source File Reference

# 5.16 resource file.c File Reference

```
#include <stdio.h>
#include <sys/stat.h>
#include <gtk/gtk.h>
#include <glib.h>
#include <glib/gi18n.h>
#include <pango/pango-font.h>
#include <config.h>
#include "i18n.h"
#include "serial.h"
#include "term_config.h"
#include "resource_file.h"
#include "interface.h"
#include "macros.h"
```

Include dependency graph for resource\_file.c:



## **Macros**

- #define CONFIGURATION\_FILENAME ".gtktermrc"
   Default configuration filename.
- #define DEFAULT\_SECTION "default"

#### **Enumerations**

```
    enum {
        CONF_ITEM_PORT, CONF_ITEM_SPEED, CONF_ITEM_BITS, CONF_ITEM_STOPBITS,
        CONF_ITEM_PARITY, CONF_ITEM_FLOW_CONTROL, CONF_ITEM_WAIT_DELAY, CONF_ITEM_WAIT_CHAR
        ,
        CONF_ITEM_RS485_RTS_TIME_BEFORE_TX, CONF_ITEM_RS485_RTS_TIME_AFTER_TX, CONF_ITEM_MACROS
        , CONF_ITEM_ECHO,
        CONF_ITEM_CRLF_AUTO, CONF_ITEM_DISABLE_PORT_LOCK, CONF_ITEM_FONT, CONF_ITEM_TERM_SHOW_CUF
        ,
        CONF_ITEM_TERM_ROWS , CONF_ITEM_TERM_COLS , CONF_ITEM_TERM_SCROLLBACK ,
        CONF_ITEM_TERM_VISUAL_BELL ,
        CONF_ITEM_TERM_FOREGROUND_RED , CONF_ITEM_TERM_FOREGROUND_GREEN , CONF_ITEM_TERM_FOREGROUND_ALPHA ,
        CONF_ITEM_TERM_BACKGROUND_RED , CONF_ITEM_TERM_BACKGROUND_GREEN , CONF_ITEM_TERM_BACKGROUND_ALPHA }
```

Define all configuration items which are used in the resource file.

#### **Functions**

- void config\_file\_init (void)
- void dump\_configuration\_to\_cli (char \*section)
- void save\_configuration\_to\_file (GKeyFile \*config)
- int load configuration from file (char \*section)
- · int check configuration file (void)

This checks if the configuration file exists.

void copy\_configuration (GKeyFile \*configrc, const char \*section)

Copy the active configuration into < section> of the Key file.

• int remove\_section (char \*section)

Remove a section from the GKeyFile If it is the active section then switch back to default.

void hard\_default\_configuration (void)

Create a new < default> configuration.

· void validate\_configuration (void)

validate the active configuration

· void set color (GdkRGBA \*color, float R, float G, float B, float A)

Convert the colors RGB to internal color scheme.

#### **Variables**

• GFile \* config file

The key file.

• char ConfigurationItem [][32]

#### 5.16.1 Macro Definition Documentation

# 5.16.1.1 CONFIGURATION\_FILENAME

#define CONFIGURATION\_FILENAME ".gtktermrc"

Default configuration filename.

## 5.16.1.2 DEFAULT\_SECTION

#define DEFAULT\_SECTION "default"

# **5.16.2 Enumeration Type Documentation**

### 5.16.2.1 anonymous enum

anonymous enum

Define all configuration items which are used in the resource file.

it is an index to ConfigurationItem.

### Enumerator

CONF_ITEM_PORT	
CONF_ITEM_SPEED	
CONF_ITEM_BITS	
CONF_ITEM_STOPBITS	
CONF_ITEM_PARITY	
CONF_ITEM_FLOW_CONTROL	
CONF_ITEM_WAIT_DELAY	
CONF_ITEM_WAIT_CHAR	
CONF_ITEM_RS485_RTS_TIME_BEFORE_TX	
CONF_ITEM_RS485_RTS_TIME_AFTER_TX	
CONF_ITEM_MACROS	
CONF_ITEM_ECHO	
CONF_ITEM_CRLF_AUTO	
CONF_ITEM_DISABLE_PORT_LOCK	
CONF_ITEM_FONT	
CONF_ITEM_TERM_SHOW_CURSOR	
CONF_ITEM_TERM_ROWS	
CONF_ITEM_TERM_COLS	
CONF_ITEM_TERM_SCROLLBACK	
CONF_ITEM_TERM_VISUAL_BELL	
CONF_ITEM_TERM_FOREGROUND_RED	
CONF_ITEM_TERM_FOREGROUND_GREEN	
CONF_ITEM_TERM_FOREGROUND_BLUE	
CONF_ITEM_TERM_FOREGROUND_ALPHA	
CONF_ITEM_TERM_BACKGROUND_RED	
CONF_ITEM_TERM_BACKGROUND_GREEN	
CONF_ITEM_TERM_BACKGROUND_BLUE	

CONF ITEM TERM BACKGROUND ALPHA

Generated by Doxygen

## 5.16.3 Function Documentation

## 5.16.3.1 check\_configuration\_file()

This checks if the configuration file exists.

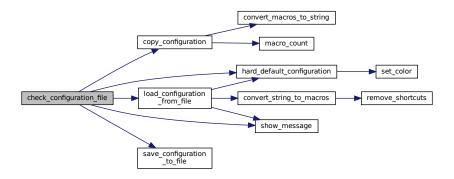
If not it creates a new [default] Put the new default in the key file

And save the config to file

References display\_config\_t::active\_section, config, config\_file, copy\_configuration(), DEFAULT\_SECTION, hard\_default\_configuration(), load\_configuration\_from\_file(), MSG\_WRN, save\_configuration\_to\_file(), show\_message(), and term conf.

Referenced by read\_command\_line().

Here is the call graph for this function:





#### 5.16.3.2 config\_file\_init()

References config\_file, and CONFIGURATION\_FILENAME.

Referenced by main().

Here is the caller graph for this function:



#### 5.16.3.3 copy\_configuration()

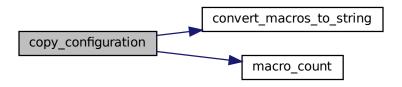
Copy the active configuration into <section> of the Key file.

Macros are an array of strings, so we have to convert it All macros ends up in the string\_list

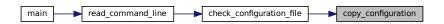
References display\_config\_t::background\_color, port\_config\_t::bits, display\_config\_t::char\_queue, display\_config\_t::columns, CONF\_ITEM\_BITS, CONF\_ITEM\_CRLF\_AUTO, CONF\_ITEM\_DISABLE\_PORT\_LOCK, CONF\_ITEM\_ECHO, CONF\_ITEM\_FLOW\_CONTROL, CONF\_ITEM\_FONT, CONF\_ITEM\_MACROS, CONF\_ITEM\_PARITY, CONF\_ITEM\_PORT, CONF\_ITEM\_RS485\_RTS\_TIME\_AFTER\_TX, CONF\_ITEM\_RS485\_RTS\_TIME\_BEFORE\_TX, CONF ITEM SPEED, CONF ITEM STOPBITS, CONF ITEM TERM BACKGROUND ALPHA, CONF ITEM TERM BACKGROU CONF ITEM TERM BACKGROUND GREEN, CONF ITEM TERM BACKGROUND RED, CONF ITEM TERM COLS, CONF ITEM TERM FOREGROUND ALPHA, CONF ITEM TERM FOREGROUND BLUE, CONF ITEM TERM FOREGROUND CONF ITEM TERM FOREGROUND RED, CONF ITEM TERM ROWS, CONF ITEM TERM SCROLLBACK, CONF ITEM TERM SHOW CURSOR, CONF ITEM TERM VISUAL BELL, CONF ITEM WAIT CHAR, CONF\_ITEM\_WAIT\_DELAY, ConfigurationItem, convert\_macros\_to\_string(), display\_config\_t::crlfauto, display\_config\_t::delay, display\_config\_t::echo, port\_config\_t::flow\_control, port config t::disable port lock, display config t::font, display config t::foreground color, macro count(), port config t::parity, port config t::port, port conf, display config t::rows, port config t::rs485 rts time after transmit, port config t::rs485 rts time before transmit, display config t::scrollback, display\_config\_t::show\_cursor, port\_config\_t::speed, port\_config\_t::stops, term\_conf, and display\_config\_t::visual\_bell.

Referenced by check\_configuration\_file().

Here is the call graph for this function:



Here is the caller graph for this function:



### 5.16.3.4 dump\_configuration\_to\_cli()

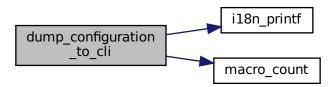
Print the serial port items

Print the terminal items

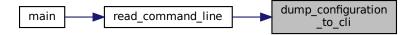
... and the macro's

References display\_config\_t::background\_color, port\_config\_t::bits, display\_config\_t::block\_cursor, display\_config\_t::char\_queue, display\_config\_t::columns, display\_config\_t::crlfauto, display\_config\_t::delay, port\_config\_t::disable\_port\_lock, display\_config\_t::echo, port\_config\_t::flow\_control, display\_config\_t::font, display\_config\_t::foreground\_color, i18n\_printf(), macro\_count(), macros, port\_config\_t::parity, port\_config\_t::port, port\_conf, display\_config\_t::rows, port\_config\_t::rs485\_rts\_time\_after\_transmit, port\_config\_t::rs485\_rts\_time\_before\_transmit, display\_config\_t::scrollback, display\_config\_t::show\_cursor, port\_config\_t::speed, port\_config\_t::stops, term\_conf, display\_config\_t::timestamp, and display\_config\_t::visual\_bell.

Referenced by read\_command\_line().



Here is the caller graph for this function:



#### 5.16.3.5 hard\_default\_configuration()

Create a new <default> configuration.

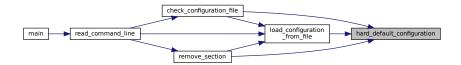
Store session, so we know in which active section we are

References display\_config\_t::active\_section, display\_config\_t::background\_color, port\_config\_t::bits, display\_config\_t::block\_cursor, display\_config\_t::char\_queue, display\_config\_t::columns, display\_config\_t::crlfauto, DEFAULT\_BITS, DEFAULT\_CHAR, DEFAULT\_DELAY, DEFAULT\_DELAY\_RS485, DEFAULT\_ECHO, DEFAULT\_FLOW, DEFAULT\_FONT, DEFAULT\_PARITY, DEFAULT\_SCROLLBACK, DEFAULT\_SECTION, DEFAULT\_SPEED, DEFAULT\_STOP, display\_config\_t::delay, port\_config\_t::disable\_port\_lock, display\_config\_t::echo, port\_config\_t::flow\_control, display\_config\_t::font, display\_config\_t::foreground\_color, port\_config\_t::parity, port\_config\_t::port, port\_config\_tisplay\_config\_t::rs485\_rts\_time\_after\_transmit, port\_config\_t::rs485\_rts\_time\_before\_transmit, display\_config\_t::scrollback, set\_color(), display\_config\_t::show\_cursor, port\_config\_t::speed, port\_config\_t::stops, term\_conf, display\_config\_t::timestamp, and display\_config\_t::visual\_bell.

Referenced by check\_configuration\_file(), load\_configuration\_from\_file(), and remove\_section().

Here is the call graph for this function:





#### 5.16.3.6 load\_configuration\_from\_file()

Load the key file Note: all sections are loaded into memory.

Check if the <section> exists in the key file.

First initialize with a default structure. Not really needed but good practice.

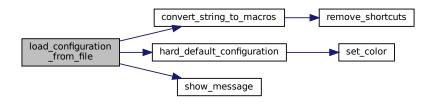
The Font is a Pango structure. This only can be added to a terminal So we have to convert it.

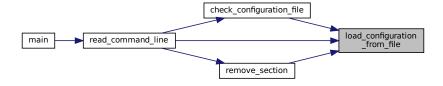
Convert the stringlist to macros. Existing shortcuts will be delete from convert\_string\_to\_macros

References display config t::active section, display config t::background color, port config t::bits, display config t::char queue, display\_config\_t::columns, CONF\_ITEM\_BITS, CONF\_ITEM\_CRLF\_AUTO, CONF\_ITEM\_DISABLE\_PORT\_LOCK, CONF\_ITEM\_ECHO, CONF\_ITEM\_FLOW\_CONTROL, CONF\_ITEM\_FONT, CONF\_ITEM\_MACROS, CONF\_ITEM\_PARITY, CONF ITEM PORT, CONF ITEM RS485 RTS TIME AFTER TX, CONF ITEM RS485 RTS TIME BEFORE TX, CONF ITEM SPEED, CONF ITEM STOPBITS, CONF ITEM TERM BACKGROUND ALPHA, CONF ITEM TERM BACKGROU CONF ITEM TERM BACKGROUND GREEN, CONF ITEM TERM BACKGROUND RED, CONF ITEM TERM COLS, CONF ITEM TERM FOREGROUND ALPHA, CONF ITEM TERM FOREGROUND BLUE, CONF ITEM TERM FOREGROUND CONF ITEM TERM FOREGROUND RED, CONF ITEM TERM ROWS, CONF ITEM TERM SCROLLBACK, CONF ITEM TERM SHOW CURSOR, CONF ITEM TERM VISUAL BELL, CONF ITEM WAIT CHAR. CONF\_ITEM\_WAIT\_DELAY, config\_file, ConfigurationItem, convert\_string\_to\_macros(), display\_config\_t::crlfauto, display\_config\_t::delay, port\_config\_t::disable\_port\_lock, display\_config\_t::echo, port\_config\_t::flow\_control, display config t::fort, display config t::foreground color, hard default configuration(), MSG ERR, port config t::parity, port\_config\_t::port\_port\_config\_t::rows, port\_config\_t::rs485\_rts\_time\_after\_transmit, port\_config\_t::rs485\_rts\_time\_be display\_config\_t::scrollback, display\_config\_t::show\_cursor, show\_message(), port\_config\_t::speed, port\_config\_t::stops, term\_conf, and display\_config\_t::visual\_bell.

Referenced by check\_configuration\_file(), read\_command\_line(), and remove\_section().

Here is the call graph for this function:





#### 5.16.3.7 remove\_section()

Remove a section from the GKeyFile If it is the active section then switch back to default.

If it is the default section then create a new 'default' default section Load the key file Note: all sections are loaded into memory. TODO: make it a own function if this works.....

If we remove the DEFAULT\_SECTION then create a new one

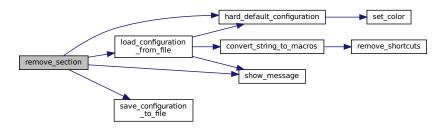
We remove the active session? Switch back to DEFAULT\_SECTION

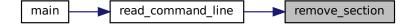
Remove the group from GKeyFile

References display\_config\_t::active\_section, config, config\_file, DEFAULT\_SECTION, hard\_default\_configuration(), load\_configuration\_from\_file(), MSG\_WRN, save\_configuration\_to\_file(), show\_message(), and term\_conf.

Referenced by read\_command\_line().

Here is the call graph for this function:





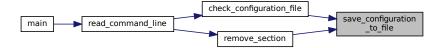
### 5.16.3.8 save\_configuration\_to\_file()

```
void save_configuration_to_file ( {\tt GKeyFile} \ * \ config\ )
```

References config, and config\_file.

Referenced by check\_configuration\_file(), and remove\_section().

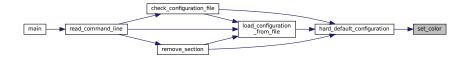
Here is the caller graph for this function:



## 5.16.3.9 set\_color()

Convert the colors RGB to internal color scheme.

Referenced by hard\_default\_configuration().



### 5.16.3.10 validate\_configuration()

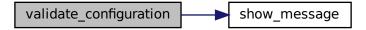
```
void validate_configuration ( \mbox{void} \mbox{ } \mbox{)}
```

validate the active configuration

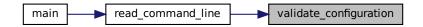
References port\_config\_t::bits, DEFAULT\_BITS, DEFAULT\_DELAY, DEFAULT\_FONT, DEFAULT\_STOP, display\_config\_t::delay, display\_config\_t::font, MSG\_ERR, port\_conf, show\_message(), port\_config\_t::speed, port\_config\_t::stops, and term\_conf.

Referenced by read\_command\_line().

Here is the call graph for this function:



Here is the caller graph for this function:



### 5.16.4 Variable Documentation

#### 5.16.4.1 config\_file

GFile\* config\_file

The key file.

Referenced by check\_configuration\_file(), config\_file\_init(), load\_configuration\_from\_file(), remove\_section(), and save\_configuration\_to\_file().

#### 5.16.4.2 ConfigurationItem

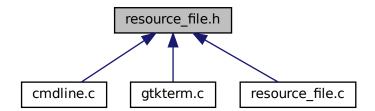
```
char ConfigurationItem[][32]
```

```
Initial value:
          "speed",
          "bits",
          "stopbits",
"parity",
         "flow_control",
         "wait_delay",
          "wait_char",
          "rs485_rts_time_before_tx",
          "rs485_rts_time_after_tx",
"macros",
          "echo",
          "crlfauto",
          "disable_port_lock",
          "term_font",
         "term_show_cursor",
"term_rows",
          "term_columns",
         "term_scrollback",
         "term_visual_bell",
         "term_foreground_red",
          "term_foreground_green",
         "term_foreground_blue",
"term_foreground_alpha",
          "term_background_red",
         "term_background_green",
          "term_background_blue"
         "term_background_alpha"
```

Referenced by copy\_configuration(), and load\_configuration\_from\_file().

# 5.17 resource\_file.h File Reference

This graph shows which files directly or indirectly include this file:



## **Functions**

- void config\_file\_init (void)
- void save\_configuration\_to\_file (GKeyFile \*)
- int load\_configuration\_from\_file (char \*)
- int check\_configuration\_file ()

This checks if the configuration file exists.

- void dump\_configuration\_to\_cli (char \*)
- void hard\_default\_configuration (void)

Create a new < default> configuration.

· void validate\_configuration (void)

validate the active configuration

void copy\_configuration (GKeyFile \*, const char \*)

Copy the active configuration into < section> of the Key file.

• int remove\_section (char \*)

Remove a section from the GKeyFile If it is the active section then switch back to default.

void set color (GdkRGBA \*color, float, float, float, float)

Convert the colors RGB to internal color scheme.

#### **Variables**

• GFile \* config\_file

The key file.

#### 5.17.1 Function Documentation

### 5.17.1.1 check\_configuration\_file()

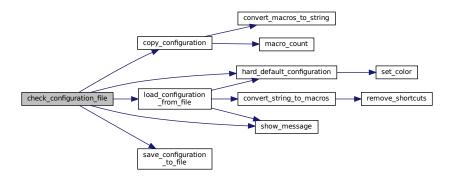
This checks if the configuration file exists.

If not it creates a new [default] Put the new default in the key file

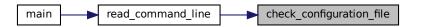
And save the config to file

References display\_config\_t::active\_section, config, config\_file, copy\_configuration(), DEFAULT\_SECTION, hard\_default\_configuration(), load\_configuration\_from\_file(), MSG\_WRN, save\_configuration\_to\_file(), show\_message(), and term\_conf.

Referenced by read command line().



Here is the caller graph for this function:



# 5.17.1.2 config\_file\_init()

References config\_file, and CONFIGURATION\_FILENAME.

Referenced by main().

Here is the caller graph for this function:



#### 5.17.1.3 copy\_configuration()

Copy the active configuration into <section> of the Key file.

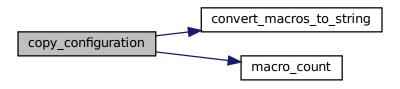
Macros are an array of strings, so we have to convert it All macros ends up in the string\_list

References display\_config\_t::background\_color, port\_config\_t::bits, display\_config\_t::char\_queue, display\_config\_t::columns, CONF\_ITEM\_BITS, CONF\_ITEM\_CRLF\_AUTO, CONF\_ITEM\_DISABLE\_PORT\_LOCK, CONF\_ITEM\_ECHO, CONF\_ITEM\_FLOW\_CONTROL, CONF\_ITEM\_FONT, CONF\_ITEM\_MACROS, CONF\_ITEM\_PARITY, CONF\_ITEM\_PORT, CONF\_ITEM\_RS485\_RTS\_TIME\_AFTER\_TX, CONF\_ITEM\_RS485\_RTS\_TIME\_BEFORE\_TX, CONF\_ITEM\_SPEED, CONF\_ITEM\_STOPBITS, CONF\_ITEM\_TERM\_BACKGROUND\_ALPHA, CONF\_ITEM\_TERM\_BACKGROUND\_CONF\_ITEM\_TERM\_BACKGROUND\_RED, CONF\_ITEM\_TERM\_COLS, CONF\_ITEM\_TERM\_FOREGROUND\_ALPHA, CONF\_ITEM\_TERM\_FOREGROUND\_BLUE, CONF\_ITEM\_TERM\_FOREGROUND\_CONF\_IT

CONF\_ITEM\_TERM\_FOREGROUND\_RED, CONF\_ITEM\_TERM\_ROWS, CONF\_ITEM\_TERM\_SCROLLBACK, CONF\_ITEM\_TERM\_SHOW\_CURSOR, CONF\_ITEM\_TERM\_VISUAL\_BELL, CONF\_ITEM\_WAIT\_CHAR, CONF\_ITEM\_WAIT\_DELAY, ConfigurationItem, convert\_macros\_to\_string(), display\_config\_t::crlfauto, display\_config\_t::delay, port\_config\_t::disable\_port\_lock, display\_config\_t::echo, port\_config\_t::flow\_control, display\_config\_t::font, display\_config\_t::rs485\_rts\_time\_after\_transmit, port\_config\_t::rs485\_rts\_time\_before\_transmit, display\_config\_t::scrollback, display\_config\_t::show cursor, port\_config\_t::speed, port\_config\_t::stops, term\_conf, and display\_config\_t::visual\_bell.

Referenced by check configuration file().

Here is the call graph for this function:



Here is the caller graph for this function:



#### 5.17.1.4 dump\_configuration\_to\_cli()

Print the serial port items

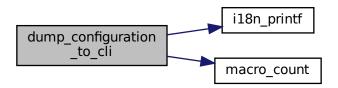
Print the terminal items

... and the macro's

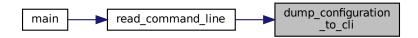
References display\_config\_t::background\_color, port\_config\_t::bits, display\_config\_t::block\_cursor, display\_config\_t::char\_queue, display\_config\_t::columns, display\_config\_t::crlfauto, display\_config\_t::delay, port\_config\_t::disable\_port\_lock, display\_config\_t::echo, port\_config\_t::flow\_control, display\_config\_t::font, display\_config\_t::foreground\_color, i18n\_printf(), macro\_count(), macros, port\_config\_t::parity, port\_config\_t::port, port\_conf, display\_config\_t::rows, port\_config\_t::rs485\_rts\_time\_after\_transmit, port\_config\_t::rs485\_rts\_time\_before\_transmit, display\_config\_t::scrollback, display\_config\_t::show\_cursor, port\_config\_t::speed, port\_config\_t::stops, term\_conf, display\_config\_t::timestamp, and display\_config\_t::visual\_bell.

Referenced by read\_command\_line().

Here is the call graph for this function:



Here is the caller graph for this function:



### 5.17.1.5 hard\_default\_configuration()

Create a new <default> configuration.

Store session, so we know in which active section we are

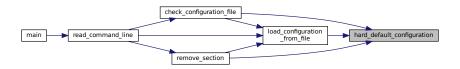
References display\_config\_t::active\_section, display\_config\_t::background\_color, port\_config\_t::bits, display\_config\_t::block\_cursor, display\_config\_t::char\_queue, display\_config\_t::columns, display\_config\_t::crlfauto, DEFAULT\_BITS, DEFAULT\_CHAR, DEFAULT\_DELAY, DEFAULT\_DELAY\_RS485, DEFAULT\_ECHO, DEFAULT\_FLOW, DEFAULT\_FONT, DEFAULT\_PARITY, DEFAULT\_PORT, DEFAULT\_SCROLLBACK, DEFAULT\_SECTION, DEFAULT\_SPEED, DEFAULT\_STOP, display\_config\_t::delay, port\_config\_t::disable\_port\_lock, display\_config\_t::echo, port\_config\_t::flow\_control, display\_config\_t::font, display\_config\_t::foreground\_color, port\_config\_t::parity, port\_config\_t::port, port\_conf, display\_config\_t::rows, port\_config\_t::rs485\_rts\_time\_after\_transmit, port\_config\_t::rs485\_rts\_time\_before\_transmit, display\_config\_t::scrollback, set\_color(), display\_config\_t::show\_cursor, port\_config\_t::speed, port\_config\_t::stops, term\_conf, display\_config\_t::timestamp, and display\_config\_t::visual\_bell.

Referenced by check\_configuration\_file(), load\_configuration\_from\_file(), and remove\_section().

Here is the call graph for this function:



Here is the caller graph for this function:



#### 5.17.1.6 load\_configuration\_from\_file()

Load the key file Note: all sections are loaded into memory.

Check if the <section> exists in the key file.

term\_conf, and display\_config\_t::visual\_bell.

First initialize with a default structure. Not really needed but good practice.

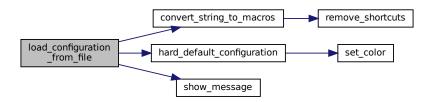
The Font is a Pango structure. This only can be added to a terminal So we have to convert it.

Convert the stringlist to macros. Existing shortcuts will be delete from convert string to macros

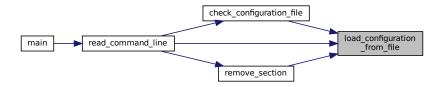
References display config t::active section, display config t::background color, port config t::bits, display config t::char queue, display\_config\_t::columns, CONF\_ITEM\_BITS, CONF\_ITEM\_CRLF\_AUTO, CONF\_ITEM\_DISABLE\_PORT\_LOCK, CONF\_ITEM\_ECHO, CONF\_ITEM\_FLOW\_CONTROL, CONF\_ITEM\_FONT, CONF\_ITEM\_MACROS, CONF\_ITEM\_PARITY, CONF\_ITEM\_PORT, CONF\_ITEM\_RS485\_RTS\_TIME\_AFTER\_TX, CONF\_ITEM\_RS485\_RTS\_TIME\_BEFORE\_TX, CONF ITEM SPEED, CONF ITEM STOPBITS, CONF ITEM TERM BACKGROUND ALPHA, CONF ITEM TERM BACKGROU CONF\_ITEM\_TERM\_BACKGROUND\_GREEN, CONF\_ITEM\_TERM\_BACKGROUND\_RED, CONF\_ITEM\_TERM\_COLS, CONF\_ITEM\_TERM\_FOREGROUND\_ALPHA, CONF\_ITEM\_TERM\_FOREGROUND\_BLUE, CONF\_ITEM\_TERM\_FOREGROUND CONF ITEM TERM FOREGROUND RED, CONF ITEM TERM ROWS, CONF ITEM TERM SCROLLBACK, CONF\_ITEM\_TERM\_SHOW\_CURSOR, CONF ITEM TERM VISUAL BELL, CONF ITEM WAIT CHAR, CONF\_ITEM\_WAIT\_DELAY, config\_file, ConfigurationItem, convert\_string\_to\_macros(), display\_config\_t::crlfauto, display\_config\_t::delay, port\_config\_t::disable\_port\_lock, display\_config\_t::echo, port\_config\_t::flow\_control, display config t::font, display config t::foreground color, hard default configuration(), MSG ERR, port config t::parity, port config t::port, port conf, display config t::rows, port config t::rs485 rts time after transmit, port config t::rs485 rts time be display\_config\_t::scrollback, display\_config\_t::show\_cursor, show\_message(), port\_config\_t::speed, port\_config\_t::stops,

Referenced by check\_configuration\_file(), read\_command\_line(), and remove\_section().

Here is the call graph for this function:



Here is the caller graph for this function:



#### 5.17.1.7 remove section()

Remove a section from the GKeyFile If it is the active section then switch back to default.

If it is the default section then create a new 'default' default section Load the key file Note: all sections are loaded into memory. TODO: make it a own function if this works.....

If we remove the DEFAULT\_SECTION then create a new one

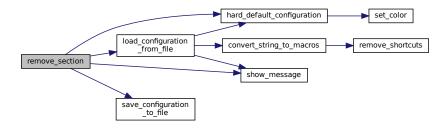
We remove the active session? Switch back to DEFAULT\_SECTION

Remove the group from GKeyFile

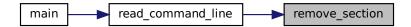
References display\_config\_t::active\_section, config, config\_file, DEFAULT\_SECTION, hard\_default\_configuration(), load\_configuration\_from\_file(), MSG\_WRN, save\_configuration\_to\_file(), show\_message(), and term\_conf.

Referenced by read\_command\_line().

Here is the call graph for this function:



Here is the caller graph for this function:

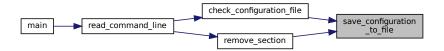


# 5.17.1.8 save\_configuration\_to\_file()

References config, and config\_file.

Referenced by check\_configuration\_file(), and remove\_section().

Here is the caller graph for this function:

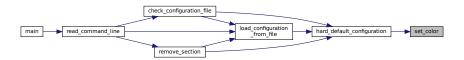


#### 5.17.1.9 set\_color()

Convert the colors RGB to internal color scheme.

Referenced by hard\_default\_configuration().

Here is the caller graph for this function:



### 5.17.1.10 validate\_configuration()

```
\begin{array}{c} \mbox{void validate\_configuration (} \\ \mbox{void )} \end{array}
```

validate the active configuration

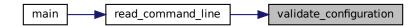
References port\_config\_t::bits, DEFAULT\_BITS, DEFAULT\_DELAY, DEFAULT\_FONT, DEFAULT\_STOP, display\_config\_t::delay, display\_config\_t::font, MSG\_ERR, port\_conf, show\_message(), port\_config\_t::speed, port\_config\_t::stops, and term\_conf.

Referenced by read\_command\_line().

Here is the call graph for this function:



Here is the caller graph for this function:



### 5.17.2 Variable Documentation

# 5.17.2.1 config\_file

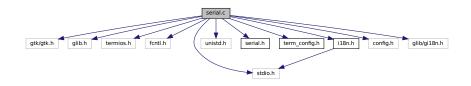
```
GFile* config_file [extern]
```

The key file.

Referenced by check\_configuration\_file(), config\_file\_init(), load\_configuration\_from\_file(), remove\_section(), and save\_configuration\_to\_file().

# 5.18 serial.c File Reference

```
#include <gtk/gtk.h>
#include <glib.h>
#include <termios.h>
#include <fcntl.h>
#include <stdio.h>
#include <unistd.h>
#include "serial.h"
#include "term_config.h"
#include "il8n.h"
#include <config.h>
#include <glib/gil8n.h>
Include dependency graph for serial.c:
```



# **Functions**

char \* get\_port\_string (void)

# **Variables**

- port\_config\_t port\_conf
- struct termios termios\_save
- int serial port fd = -1

### 5.18.1 Function Documentation

5.18 serial.c File Reference 71

### 5.18.1.1 get\_port\_string()

References port\_config\_t::bits, port\_config\_t::parity, port\_config\_t::port, port\_conf, serial\_port\_fd, port\_config\_t::speed, and port\_config\_t::stops.

Referenced by set\_window\_title().

Here is the caller graph for this function:



### 5.18.2 Variable Documentation

### 5.18.2.1 port conf

```
port_config_t port_conf
```

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), get\_port\_string(), hard\_default\_configuration(), load\_configuration\_from\_file(), read\_command\_line(), and validate\_configuration().

### 5.18.2.2 serial\_port\_fd

```
int serial_port_fd = -1
```

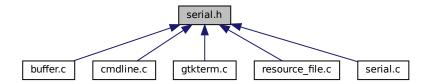
Referenced by get\_port\_string().

#### 5.18.2.3 termios\_save

struct termios termios\_save

# 5.19 serial.h File Reference

This graph shows which files directly or indirectly include this file:



### **Classes**

struct port\_config\_t

### **Macros**

- #define DEFAULT\_PORT "/dev/ttyS0"
- #define DEFAULT\_SPEED 115200
- #define DEFAULT\_PARITY 0
- #define DEFAULT\_BITS 8
- #define DEFAULT\_STOP 1
- #define DEFAULT FLOW 0
- #define RECEIVE\_BUFFER 8192
- #define TRANSMIT BUFFER 4096
- #define LINE\_FEED 0x0A
- #define POLL\_DELAY 100 /\* in ms (for control signals) \*/

### **Functions**

char \* get\_port\_string (void)

# **Variables**

- int serial\_port\_fd
- port\_config\_t port\_conf

# 5.19.1 Macro Definition Documentation

5.19 serial.h File Reference 73

# 5.19.1.1 DEFAULT\_BITS

#define DEFAULT\_BITS 8

# 5.19.1.2 DEFAULT\_FLOW

#define DEFAULT\_FLOW 0

# 5.19.1.3 DEFAULT\_PARITY

#define DEFAULT\_PARITY 0

### 5.19.1.4 DEFAULT\_PORT

#define DEFAULT\_PORT "/dev/ttyS0"

# 5.19.1.5 DEFAULT\_SPEED

#define DEFAULT\_SPEED 115200

# 5.19.1.6 DEFAULT\_STOP

#define DEFAULT\_STOP 1

# 5.19.1.7 LINE\_FEED

#define LINE\_FEED 0x0A

# 5.19.1.8 **POLL\_DELAY**

 $\#define\ POLL\_DELAY\ 100\ /*\ in\ ms\ (for\ control\ signals)\ */$ 

# 5.19.1.9 RECEIVE\_BUFFER

```
#define RECEIVE_BUFFER 8192
```

# 5.19.1.10 TRANSMIT\_BUFFER

```
#define TRANSMIT_BUFFER 4096
```

# 5.19.2 Function Documentation

#### 5.19.2.1 get port string()

References port\_config\_t::bits, port\_config\_t::parity, port\_config\_t::port, port\_conf, serial\_port\_fd, port\_config\_t::speed, and port\_config\_t::stops.

Referenced by set\_window\_title().

Here is the caller graph for this function:



#### 5.19.3 Variable Documentation

### 5.19.3.1 port\_conf

```
port_config_t port_conf [extern]
```

Referenced by copy\_configuration(), dump\_configuration\_to\_cli(), get\_port\_string(), hard\_default\_configuration(), load configuration from file(), read command line(), and validate configuration().

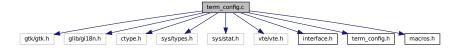
#### 5.19.3.2 serial\_port\_fd

```
int serial_port_fd [extern]
Referenced by get_port_string().
```

# 5.20 term config.c File Reference

```
#include <gtk/gtk.h>
#include <glib/gil8n.h>
#include <ctype.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <vte/vte.h>
#include "interface.h"
#include "term_config.h"
#include "macros.h"
```

Include dependency graph for term\_config.c:



### **Variables**

· display\_config\_t term\_conf

#### 5.20.1 Variable Documentation

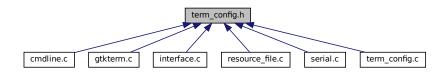
### 5.20.1.1 term\_conf

```
display_config_t term_conf
```

Referenced by check\_configuration\_file(), copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), load\_configuration\_from\_file(), read\_command\_line(), remove\_section(), and validate\_configuration().

# 5.21 term config.h File Reference

This graph shows which files directly or indirectly include this file:



# **Classes**

struct display\_config\_t

#### **Macros**

- #define DEFAULT\_FONT "Monospace 12"
- #define DEFAULT SCROLLBACK 10000
- #define DEFAULT\_DELAY 0
- #define DEFAULT\_CHAR -1
- #define DEFAULT\_DELAY\_RS485 30
- #define DEFAULT\_ECHO FALSE

### **Variables**

· display\_config\_t term\_conf

#### 5.21.1 Macro Definition Documentation

# 5.21.1.1 DEFAULT\_CHAR

#define DEFAULT\_CHAR -1

# 5.21.1.2 DEFAULT\_DELAY

#define DEFAULT\_DELAY 0

# 5.21.1.3 DEFAULT\_DELAY\_RS485

#define DEFAULT\_DELAY\_RS485 30

# 5.21.1.4 DEFAULT\_ECHO

#define DEFAULT\_ECHO FALSE

# 5.21.1.5 DEFAULT\_FONT

#define DEFAULT\_FONT "Monospace 12"

# 5.21.1.6 DEFAULT\_SCROLLBACK

#define DEFAULT\_SCROLLBACK 10000

# 5.21.2 Variable Documentation

# 5.21.2.1 term\_conf

display\_config\_t term\_conf [extern]

Referenced by check\_configuration\_file(), copy\_configuration(), dump\_configuration\_to\_cli(), hard\_default\_configuration(), load\_configuration\_from\_file(), read\_command\_line(), remove\_section(), and validate\_configuration().

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