

Terminal library for AVR uC

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1 File Documentation

1.1 terminal.h File Reference

Various functions for a terminal session with an AVR.

```
#include <ctype.h>
#include <string.h>
#include <avr/pgmspace.h>
#include "usart/usart.h"
```

Defines

Useful codes

- `#define terminal_RESET "\033c"`
- `#define terminal_ERASE_EOL "\033[K"`
- `#define terminal_CLEARSCREEN "\033[2J"`
- `#define terminal_BACKSPACE "\033[1D"`

Useful characters

- `#define terminal_CR_LF "\r\n"`

Foreground color code

- `#define terminal_FG_BLACK "\033[30m"`
- `#define terminal_FG_RED "\033[31m"`
- `#define terminal_FG_GREEN "\033[32m"`
- `#define terminal_FG_YELLOW "\033[33m"`

- `#define terminal_FG_BLUE "\033[34"`
- `#define terminal_FG_MAGENTA "\033[35m"`
- `#define terminal_FG_CYAN "\033[36m"`
- `#define terminal_FG_WHITE "\033[37m"`

Background color code

- `#define terminal_BG_BLACK "\033[40m"`
- `#define terminal_BG_RED "\033[41m"`
- `#define terminal_BG_GREEN "\033[42m"`
- `#define terminal_BG_YELLOW "\033[43m"`
- `#define terminal_BG_BLUE "\033[44m"`
- `#define terminal_BG_MAGENTA "\033[45m"`
- `#define terminal_BG_CYAN "\033[46m"`
- `#define terminal_BG_WHITE "\033[47m"`

Attributes codes

- `#define terminal_ATTR_RESET "\033[0m"`
- `#define terminal_ATTR_BRIGHT "\033[1m"`

Functions

- static void `terminal_CLS` (void)
Clear the terminal screen.
- void `terminal_PlaceString` (uint8_t row, uint8_t col, const char *str, const char *foreground, const char *background, const char *attributes)
*Place *string at row col with foreground color, background color and attributes.*
- void `terminal_PlaceString_P` (uint8_t row, uint8_t col, const char *str, const char *foreground, const char *background, const char *attributes)
*Place PROGMEM *string at row col with foreground / background color and attributes.*
- void `terminal_Position` (uint8_t row, uint8_t column)
Place the cursor at row column.
- static void `terminal_ProcessStar` (void)
Show a star rotating.
- void `terminal_ReadStringMax` (char *str, uint8_t max)
*Read max characters into *str.*
- static void `terminal_Reset` (void)
Reset the terminal screen.

1.1.1 Detailed Description

Various functions for a terminal session with an AVR.

1.1.2 License

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1.1.3 Target

- ATmega with a USART port
- ATmega168 (Tested)
- ATmega8515 (Tested)

1.1.4 More informations

Datasheet

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1.1.5 Function Documentation

1.1.5.1 `static void terminal_CLS (void) [inline, static]`

Clear the terminal screen.

1.1.5.2 `void terminal_PlaceString (uint8_t row, uint8_t col, const char * str, const char * foreground, const char * background, const char * attributes)`

Place **string* at *row col* with *foreground* color, *background* color and *attributes*.

Parameters

in	<i>row</i>	Row on the screen
in	<i>col</i>	Column on the screen
in	<i>*str</i>	String to display
in	<i>*foreground</i>	Foreground color Possible values : • terminal_FG_xx
in	<i>*background</i>	Background color Possible values : • terminal_BG_xx
in	<i>*attributes</i>	Attributes of the string Possible values : • terminal_ATTR_XX

1.1.5.3 `void terminal_PlaceString_P (uint8_t row, uint8_t col, const char * str, const char * foreground, const char * background, const char * attributes)`

Place PROGMEM **string* at *row col* with *foreground / background* color and *attributes*.

Parameters

in	<i>row</i>	Row on the screen
in	<i>col</i>	Column on the screen
in	<i>*str</i>	PROGMEM string to display
in	<i>*foreground</i>	Foreground color Possible values : • terminal_FG_xx
in	<i>*background</i>	Background color Possible values : • terminal_BG_xx

in	<i>*attributes</i>	Attributes of the string Possible values : • terminal_ATTR_XX
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1.1.5.4 void terminal_Position (uint8_t *row*, uint8_t *column*)

Place the cursor at *row column*.

Parameters

in	<i>row</i>	Row
in	<i>column</i>	Column

1.1.5.5 static void terminal_ProcessStar (void) [inline, static]

Show a star rotating.

Note

Mostly for show since no work is done while executing.

1.1.5.6 void terminal_ReadStringMax (char * *str*, uint8_t *max*)

Read *max* characters into **str*.

Parameters

in	<i>max</i>	Maximum characters to read
out	<i>*str</i>	String

Note

The following keys are permitted

- ESC : erase the current line
- Backspace : go back one cursor left
- Enter : terminate the string

1.1.5.7 static void terminal_Reset (void) [inline, static]

Reset the terminal screen.

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