

Sharp Memory Display BoosterPack Library Reference Manual

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Contents

1	Sharp BoosterPackLCD SPI	1
1.1	history	1
2	Hierarchical Index	3
2.1	Class Hierarchy	3
3	Data Structure Index	5
3.1	Data Structures	5
4	Data Structure Documentation	7
4.1	LCD_SharpBoosterPack_SPI Class Reference	7
4.1.1	Detailed Description	8
4.1.2	Constructor & Destructor Documentation	9
4.1.2.1	LCD_SharpBoosterPack_SPI() [1/2]	9
4.1.2.2	LCD_SharpBoosterPack_SPI() [2/2]	9
4.1.3	Member Function Documentation	9
4.1.3.1	drawImage()	10
4.1.3.2	flush()	10
4.1.3.3	flushReversed()	10
4.1.3.4	getSize()	10
4.1.3.5	reverseFlush()	11
4.1.3.6	setCharXY()	11
4.1.3.7	setFont()	11
4.1.3.8	setLineSpacing()	11
4.1.3.9	setOrientation()	12
4.1.3.10	setReverse()	12
4.1.3.11	setXY()	12
4.1.3.12	text() [1/2]	13
4.1.3.13	text() [2/2]	13
4.1.3.14	WhoAmI()	13
4.2	OneMsTaskTimer_t Struct Reference	14
	Index	15

Chapter 1

Sharp BoosterPackLCD SPI

Library for 430BOOST-SHARP96 and BOOSTXL-SHARP128

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Date

05 Mar 2015

Version

1.0.2

Copyright

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See also

ReadMe.txt for references

1.1 history

- Based on the LCD5110 Library
Created by Rei VILO on 28 May 2012
Copyright (c) 2012 <http://embeddedcomputing.weebly.com>
- Edited 11 Jul 2015 by Rei Vilo
Added setOrientation(), setReverse() and flushReverse()
Unchanged #include <[OneMsTaskTimer.h](#)>
- Edited 15 Oct 2018 by Rei Vilo
Added support for Sharp 128 with minimal change
Added flushReversed() for reversed display and preserved buffer

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

OneMsTaskTimer_t	14
Print	
LCD_SharpBoosterPack_SPI	7

Chapter 3

Data Structure Index

3.1 Data Structures

Here are the data structures with brief descriptions:

LCD_SharpBoosterPack_SPI	
Class for Sharp Memory Display BoosterPack	7
OneMsTaskTimer_t	14

Chapter 4

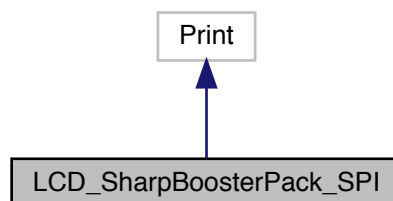
Data Structure Documentation

4.1 LCD_SharpBoosterPack_SPI Class Reference

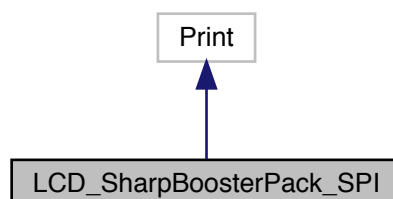
Class for Sharp Memory Display BoosterPack.

```
#include <LCD_SharpBoosterPack_SPI.h>
```

Inheritance diagram for LCD_SharpBoosterPack_SPI:



Collaboration diagram for LCD_SharpBoosterPack_SPI:



Public Member Functions

- [LCD_SharpBoosterPack_SPI](#) (uint8_t model=96)
Constructor.
- [LCD_SharpBoosterPack_SPI](#) (uint8_t pinChipSelect, uint8_t pinDISP, uint8_t pinVCC, uint8_t model=96)
Constructor with selected pins.
- **LCD_SharpBoosterPack_SPI** (uint8_t pinChipSelect, uint8_t pinDISP, uint8_t pinVCC, bool autoVCOM, uint8_t model=96)
- void [begin](#) ()
Initialise the screen.
- void [end](#) ()
Stop screen access.
- String [WhoAmI](#) ()
Return a Who Am I string.
- void [clear](#) ()
Clear the screen.
- void [clearBuffer](#) ()
Clear the buffer.
- void [setOrientation](#) (uint8_t orientation=0)
Set the orientation.
- void [setReverse](#) (bool reverse=true)
Set the reverse mode.
- void [reverseFlush](#) ()
Reverse and display the screen.
- void [setFont](#) (tNumOfFontsType font=0)
Set the font.
- uint8_t [getSize](#) ()
Get size of the screen.
- void [setLineSpacing](#) (uint8_t pixel)
Set line spacing.
- void [setXY](#) (uint8_t x, uint8_t y, uint8_t ulValue)
Draw point.
- void [text](#) (uint8_t x, uint8_t y, String s, tLCDWrapType wrap=LCDWrapNextLine)
Print a string.
- void [text](#) (uint8_t x, uint8_t y, uint8_t c)
Print a character.
- void [flush](#) ()
Send the buffer to the screen.
- void [flushReversed](#) ()
Send the buffer to the screen with reversed colours.
- void [setCharXY](#) (uint8_t x, uint8_t y)
Set text coordinates.
- void [drawImage](#) (const uint8_t *image, uint8_t x, uint8_t y)
Draw an image.
- virtual size_t [write](#) (uint8_t c)

4.1.1 Detailed Description

Class for Sharp Memory Display BoosterPack.

The screen uses a buffer in RAM.

Note

The class doesn't manage touch.

4.1.2 Constructor & Destructor Documentation

4.1.2.1 LCD_SharpBoosterPack_SPI() [1/2]

```
LCD_SharpBoosterPack_SPI::LCD_SharpBoosterPack_SPI (
    uint8_t model = 96 )
```

Constructor.

Note

For Sharp Memory LCD BoosterPack

Parameters

<i>model</i>	default=SHARP_96 for compatibility, SHARP_128 <code>LCD_SharpBoosterPack_SPI myScreen (SHARP_96);</code>
--------------	---

4.1.2.2 LCD_SharpBoosterPack_SPI() [2/2]

```
LCD_SharpBoosterPack_SPI::LCD_SharpBoosterPack_SPI (
    uint8_t pinChipSelect,
    uint8_t pinDISP,
    uint8_t pinVCC,
    uint8_t model = 96 )
```

Constructor with selected pins.

Parameters

<i>pinChipSelect</i>	SPI chip select
<i>pinDISP</i>	Display pin
<i>pinVCC</i>	VCC pin
<i>model</i>	default=SHARP_96 for compatibility, SHARP_128

Note

For SensorTag CC2650

```
LCD_SharpBoosterPack_SPI myScreen(7, 10, 1, SHARP_96);
LCD_SharpBoosterPack_SPI myScreen(7, 10, 1, true, SHARP_128);
```

4.1.3 Member Function Documentation

4.1.3.1 drawImage()

```
void LCD_SharpBoosterPack_SPI::drawImage (
    const uint8_t * image,
    uint8_t x,
    uint8_t y )
```

Draw an image.

Parameters

<i>image</i>	array of the image
<i>x</i>	graphic coordinate
<i>y</i>	graphic coordinate

4.1.3.2 flush()

```
void LCD_SharpBoosterPack_SPI::flush (
    void )
```

Send the buffer to the screen.

Note

[flush\(\)](#) preserves the buffer

4.1.3.3 flushReversed()

```
void LCD_SharpBoosterPack_SPI::flushReversed (
    void )
```

Send the buffer to the screen with reversed colours.

Note

[flushReversed\(\)](#) preserves the buffer

4.1.3.4 getSize()

```
uint8_t LCD_SharpBoosterPack_SPI::getSize ( )
```

Get size of the screen.

Returns

96 for 96x96, 128 for 128x128

4.1.3.5 reverseFlush()

```
void LCD_SharpBoosterPack_SPI::reverseFlush ( )
```

Reverse and display the screen.

Note

`reverseFlush()` alters the buffer

4.1.3.6 setCharXY()

```
void LCD_SharpBoosterPack_SPI::setCharXY (
    uint8_t x,
    uint8_t y )
```

Set text coordinates.

Parameters

<i>x</i>	row coordinate
<i>y</i>	line coordinate

4.1.3.7 setFont()

```
void LCD_SharpBoosterPack_SPI::setFont (
    tNumOfFontsType font = 0 )
```

Set the font.

Parameters

<i>font</i>	default=0, 0..1
-------------	-----------------

4.1.3.8 setLineSpacing()

```
void LCD_SharpBoosterPack_SPI::setLineSpacing (
    uint8_t pixel )
```

Set line spacing.

Parameters

<i>pixel</i>	number
--------------	--------

4.1.3.9 setOrientation()

```
void LCD_SharpBoosterPack_SPI::setOrientation (
    uint8_t orientation = 0 )
```

Set the orientation.

Parameters

<i>orientation</i>	0=0°, 1=90°, 2=180°, 3=-90°
--------------------	-----------------------------

Note

Screen initialised at 0=0°.

4.1.3.10 setReverse()

```
void LCD_SharpBoosterPack_SPI::setReverse (
    bool reverse = true )
```

Set the reverse mode.

Parameters

<i>reverse</i>	false=silver on white, default=true=white on silver
----------------	---

Note

Screen initialised with false=silver on white.

4.1.3.11 setXY()

```
void LCD_SharpBoosterPack_SPI::setXY (
    uint8_t x,
    uint8_t y,
    uint8_t ulValue )
```

Draw point.

Parameters

<i>x</i>	x coordinate
<i>y</i>	y coordinate
<i>ulValue</i>	colour, 0 or 1

4.1.3.12 `text()` [1/2]

```
void LCD_SharpBoosterPack_SPI::text (
    uint8_t x,
    uint8_t y,
    String s,
    tLCDWrapType wrap = LCDWrapNextLine )
```

Print a string.

Parameters

<i>x</i>	graphic coordinate
<i>y</i>	graphic coordinate
<i>s</i>	text to print
<i>wrap</i>	wrap mode, default=LCDWrapNextLine

4.1.3.13 `text()` [2/2]

```
void LCD_SharpBoosterPack_SPI::text (
    uint8_t x,
    uint8_t y,
    uint8_t c )
```

Print a character.

Parameters

<i>x</i>	graphic coordinate
<i>y</i>	graphic coordinate
<i>c</i>	character

4.1.3.14 `WhoAmI()`

```
String LCD_SharpBoosterPack_SPI::WhoAmI ( )
```

Return a Who Am I string.

Returns

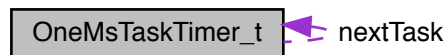
Who Am I string

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

- LCD_SharpBoosterPack_SPI.h
- LCD_SharpBoosterPack_SPI.cpp

4.2 OneMsTaskTimer_t Struct Reference

Collaboration diagram for OneMsTaskTimer_t:



Data Fields

- `uint32_t msec`s
- `void(* func)()`
- `uint32_t count`
- `OneMsTaskTimer_t * nextTask`

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

- OneMsTaskTimer.h

Index

- drawImage
 - LCD_SharpBoosterPack_SPI, [9](#)
- flush
 - LCD_SharpBoosterPack_SPI, [10](#)
- flushReversed
 - LCD_SharpBoosterPack_SPI, [10](#)
- getSize
 - LCD_SharpBoosterPack_SPI, [10](#)
- LCD_SharpBoosterPack_SPI, [7](#)
 - drawImage, [9](#)
 - flush, [10](#)
 - flushReversed, [10](#)
 - getSize, [10](#)
 - LCD_SharpBoosterPack_SPI, [9](#)
 - reverseFlush, [10](#)
 - setCharXY, [11](#)
 - setFont, [11](#)
 - setLineSpacing, [11](#)
 - setOrientation, [12](#)
 - setReverse, [12](#)
 - setXY, [12](#)
 - text, [13](#)
 - WhoAmI, [13](#)
- OneMsTaskTimer_t, [14](#)
- reverseFlush
 - LCD_SharpBoosterPack_SPI, [10](#)
- setCharXY
 - LCD_SharpBoosterPack_SPI, [11](#)
- setFont
 - LCD_SharpBoosterPack_SPI, [11](#)
- setLineSpacing
 - LCD_SharpBoosterPack_SPI, [11](#)
- setOrientation
 - LCD_SharpBoosterPack_SPI, [12](#)
- setReverse
 - LCD_SharpBoosterPack_SPI, [12](#)
- setXY
 - LCD_SharpBoosterPack_SPI, [12](#)
- text
 - LCD_SharpBoosterPack_SPI, [13](#)
- WhoAmI
 - LCD_SharpBoosterPack_SPI, [13](#)