
Scroll pHAT Documentation

Release 0.1.2

Phil Howard

Sep 14, 2017

Contents

1	At A Glance	3
2	Set A Single Pixel In Buffer	5
3	Set All Pixels In Buffer	7
4	Write A Text String	9
5	Display Buffer	11
6	Clear Buffer	13
7	Clear Buffer And Display	15
8	Set The Brightness	17
9	Scroll The Buffer	19
10	Scroll To A Position	21
11	Rotate The Display	23
12	Constants	25
	Python Module Index	27

This documentation will guide you through the methods available in the Scroll pHAT python library.

The Scroll pHAT provides a matrix of 55 white LED pixels that is ideal for writing messages, showing graphs, and drawing pictures. Use it to output your IP address, show CPU usage, or just play pong!

- More information - <https://shop.pimoroni.com/products/scroll-phat>
- Get the code - <https://github.com/pimoroni/scroll-phat>
- GPIO pinout - https://pinout.xyz/pinout/scroll_phat
- Soldering - <https://learn.pimoroni.com/tutorial/sandyj/soldering-phats>
- Get help - <http://forums.pimoroni.com/c/support>

CHAPTER 1

At A Glance

```
scrollphat.buffer_len()
scrollphat.clear()
scrollphat.clear_buffer()
scrollphat.graph(values, low=None, high=None)
scrollphat.io_errors()
scrollphat.load_font(new_font)
scrollphat.scroll(delta=1)
scrollphat.scroll_to(pos=0)
scrollphat.set_brightness(brightness)
scrollphat.set_buffer(buf)
scrollphat.set_col(x, value)
scrollphat.set_pixel(x, y, value)
scrollphat.set_pixels(handler, auto_update=False)
scrollphat.set_rotate(value)
scrollphat.update()
scrollphat.write_string(chars, x=0)
```

Set A Single Pixel In Buffer

Scroll pHAT uses white LEDs which can be either on or off.

When you set a pixel it will not immediately display on Scroll pHAT, you must call `scrollphat.update()`.

`scrollphat.set_pixel(x, y, value)`

Turn a specific pixel on or off

Parameters

- **x** – The horizontal position of the pixel
- **y** – The vertical position of the pixel: 0 to 4
- **value** – On/Off state: True/False

Set All Pixels In Buffer

`scrollphat.set_pixels(handler, auto_update=False)`

Use a pixel shader function to set 11x5 pixels

Useful for displaying patterns and animations, or the result of simple functions. For example:

```
scrollphat.set_pixels(lambda x, y: (x + y) % 2, True)
```

Will display a check pattern.

Parameters

- **handler** – A function which accepts an x and y position, and returns True or False
- **auto_update** – Whether to update Scroll pHAT after setting all pixels (default False)

CHAPTER 4

Write A Text String

`scrollphat.write_string(chars, x=0)`

Write a text string to the buffer

Parameters

- **chars** – Text string to write
- **x** – Left offset in pixels

CHAPTER 5

Display Buffer

All of your changes to Scroll pHAT are stored in a Python buffer. To display them on Scroll pHAT you must call `scrollphat.update()`.

`scrollphat.update()`

Update Scroll pHAT with the current buffer

CHAPTER 6

Clear Buffer

```
scrollphat.clear_buffer()
```

Clear just the buffer, do not update Scroll pHAT

CHAPTER 7

Clear Buffer And Display

```
scrollphat.clear()
```

Clear the buffer, and then update Scroll pHAT

CHAPTER 8

Set The Brightness

`scrollphat.set_brightness(brightness)`

Set the brightness of Scroll pHAT

Parameters **brightness** – Brightness value: 0 to 255

CHAPTER 9

Scroll The Buffer

`scrollphat.scroll (delta=1)`

Scroll the offset

Scroll pHAT displays an 11 column wide window into the buffer, which starts at the left offset.

Parameters **delta** – Amount to scroll (default 1)

CHAPTER 10

Scroll To A Position

`scrollphat.scroll_to(pos=0)`

Set the internal offset to a specific position

Parameters **pos** – Position to set

CHAPTER 11

Rotate The Display

`scrollphat.set_rotate(value)`

Set the rotation of Scroll pHAT

Parameters **value** – Rotate 180 degrees: True/False

CHAPTER 12

Constants

```
ROTATE_OFF = False
```

```
ROTATE_180 = True
```


S

scrollphat, 3

B

`buffer_len()` (in module `scrollphat`), 3

C

`clear()` (in module `scrollphat`), 3

`clear_buffer()` (in module `scrollphat`), 3

G

`graph()` (in module `scrollphat`), 3

I

`io_errors()` (in module `scrollphat`), 3

L

`load_font()` (in module `scrollphat`), 3

S

`scroll()` (in module `scrollphat`), 3

`scroll_to()` (in module `scrollphat`), 3

`scrollphat` (module), 3

`set_brightness()` (in module `scrollphat`), 3

`set_buffer()` (in module `scrollphat`), 3

`set_col()` (in module `scrollphat`), 3

`set_pixel()` (in module `scrollphat`), 3

`set_pixels()` (in module `scrollphat`), 3

`set_rotate()` (in module `scrollphat`), 3

U

`update()` (in module `scrollphat`), 3

W

`write_string()` (in module `scrollphat`), 3