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# **AdafruitSSD1327 Library Documentation**

*Release 1.0*

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DisplayIO drivers for grayscale OLEDs driven by SSD1327



# CHAPTER 1

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## Dependencies

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This driver depends on:

- [Adafruit CircuitPython](#)

Please ensure all dependencies are available on the CircuitPython filesystem. This is easily achieved by downloading the [Adafruit library and driver bundle](#).





## CHAPTER 2

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### Installing from PyPI

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**Note:** This library is not available on PyPI yet. Install documentation is included as a standard element. Stay tuned for PyPI availability!

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On supported GNU/Linux systems like the Raspberry Pi, you can install the driver locally [from PyPI](#). To install for current user:

```
pip3 install adafruit-circuitpython-ssd1327
```

To install system-wide (this may be required in some cases):

```
sudo pip3 install adafruit-circuitpython-ssd1327
```

To install in a virtual environment in your current project:

```
mkdir project-name && cd project-name
python3 -m venv .env
source .env/bin/activate
pip3 install adafruit-circuitpython-ssd1327
```



## CHAPTER 3

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### Usage Example

---

```
import board
import displayio
import adafruit_ssd1327
import busio
import time

displayio.release_displays()

# This pinout works on a Metro and may need to be altered for other boards.
spi = busio.SPI(board.SCL, board.SDA)
tft_cs = board.D6
tft_dc = board.D9
tft_reset = board.D5

display_bus = displayio.FourWire(spi, command=tft_dc, chip_select=tft_cs, reset=tft_
↪reset, baudrate=1000000)
time.sleep(1)
display = adafruit_ssd1327.SSD1327(display_bus, width=128, height=128)
```



## CHAPTER 4

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### Contributing

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Contributions are welcome! Please read our [Code of Conduct](#) before contributing to help this project stay welcoming.



## CHAPTER 5

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### Documentation

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For information on building library documentation, please check out [this guide](#).





### 6.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/ssd1327\_simpletest.py

```
1 import time
2 import board
3 import busio
4 import displayio
5 import adafruit_ssd1327
6
7 displayio.release_displays()
8
9 # This pinout works on a Metro and may need to be altered for other boards.
10 spi = busio.SPI(board.SCL, board.SDA)
11 tft_cs = board.D6
12 tft_dc = board.D9
13 tft_reset = board.D5
14
15 display_bus = displayio.FourWire(
16     spi, command=tft_dc, chip_select=tft_cs, reset=tft_reset, baudrate=1000000
17 )
18 time.sleep(1)
19 display = adafruit_ssd1327.SSD1327(display_bus, width=128, height=128)
```

### 6.2 Gamma test

Ensure your device works with this simple test.

Listing 2: examples/ssd1327\_gamma.py

```
1 import time
2 import board
3 import busio
4 import displayio
5 import adafruit_ssd1327
6
7 displayio.release_displays()
8
9 # This pinout works on a Metro and may need to be altered for other boards.
10 spi = busio.SPI(board.SCL, board.SDA)
11 tft_cs = board.D6
12 tft_dc = board.D9
13 tft_reset = board.D5
14
15 display_bus = displayio.FourWire(
16     spi, command=tft_dc, chip_select=tft_cs, reset=tft_reset, baudrate=1000000
17 )
18 time.sleep(1)
19 display = adafruit_ssd1327.SSD1327(display_bus, width=128, height=128)
20
21 g = displayio.Group()
22 dimension = min(display.width, display.height)
23 color_count = 16
24 gamma_pattern = displayio.Bitmap(dimension, dimension, color_count)
25 gamma_palette = displayio.Palette(color_count)
26 t = displayio.TileGrid(gamma_pattern, pixel_shader=gamma_palette)
27
28 pixels_per_step = dimension // color_count
29
30 for i in range(dimension):
31     if i % pixels_per_step == 0:
32         continue
33     gamma_pattern[i, i] = i // pixels_per_step
34
35 for i in range(color_count):
36     component = i * 255 // (color_count - 1)
37     print(component)
38     gamma_palette[i] = component << 16 | component << 8 | component
39
40 g.append(t)
41
42 display.show(g)
43
44 time.sleep(10)
```

## 6.3 adafruit\_ssd1327

DisplayIO drivers for grayscale OLEDs driven by SSD1327

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### 6.3.1 Implementation Notes

**Hardware:**

- 128x128, General 1.5inch OLED display Module: <https://www.waveshare.com/1.5inch-oled-module.htm>

**Software and Dependencies:**

- Adafruit CircuitPython firmware for the supported boards: <https://github.com/adafruit/circuitpython/releases>

**class** `adafruit_ssd1327.SSD1327` (*bus*, *\*\*kwargs*)  
SSD1327 driver



## CHAPTER 7

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### Indices and tables

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- `genindex`
- `modindex`
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