AdafruitSSD1322 Library Documentation

Release 1.0

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Contents

DisplayIO driver for grayscale OLEDs driven by SSD1322

CHAPTER 1

Dependencies

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

Installing from PyPI

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-ssd1322
```

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

```
sudo pip3 install adafruit-circuitpython-ssd1322
```

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-ssd1322
```

CHAPTER 3

Usage Example

```
import time
import board
import busio
import displayio
import adafruit_ssd1322

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_ssd1322.SSD1322(display_bus, width=256, height=64, colstart=28)
```

CHAPTER 4

Documentation

API documentation for this library can be found on Read the Docs.

CHAPTER 5

Contributing

Contributions are welcome! Please read our Code of Conduct before contributing to help this project stay welcoming.

CHAPTER 6

Documentation

For information on building library documentation, please check out this guide.

CHAPTER 7

Table of Contents

7.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/ssd1322_simpletest.py

```
# SPDX-FileCopyrightText: 2021 ladyada for Adafruit Industries
# SPDX-License-Identifier: MIT

import time
import board
import busio
import displayio
import adafruit_ssd1322

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_ssd1322.SSD1322(display_bus, width=256, height=64, colstart=28)
```

7.2 Gamma test

Ensure your device works with this simple test.

Listing 2: examples/ssd1322_gamma.py

```
# SPDX-FileCopyrightText: 2021 ladyada for Adafruit Industries
# SPDX-License-Identifier: MIT

import time
import board
import busio
import displayio
import adafruit_ssd1322

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_ssd1322.SSD1322(display_bus, width=256, height=64, colstart=28)

g = displayio.Group()
dimension = min(display.width, display.height)
color_count = 16
gamma_pattern = displayio.Bitmap(dimension, dimension, color_count)
gamma_palette = displayio.Palette(color_count)
t = displayio.TileGrid(gamma_pattern, pixel_shader=gamma_palette)

pixels_per_step = dimension // color_count

for i in range(dimension):
    if i % pixels_per_step == 0:
        continue
    gamma_pattern[i, i] = i // pixels_per_step

for i in range(color_count):
    component = i * 255 // (color_count - 1)
    print(component)
    gamma_palette[i] = component << 16 | component << 8 | component
    print(hex(gamma_palette[i]))

g.append(t)

display.show(g)

time.sleep(10)
```

7.3 adafruit_ssd1322

DisplayIO driver for grayscale OLEDs driven by SSD1322

- Author(s): Scott Shawcroft

7.3.1 Implementation Notes

Hardware:

- **3.12" Newhaven Display 256x64 Grayscale Blue OLED:** https://www.newhavendisplay.com/nhd31225664ucb2-p-3622.html

Software and Dependencies:

- Adafruit CircuitPython 5+ firmware for the supported boards: https://github.com/adafruit/circuitpython/releases

class adafruit_ssd1322.**SSD1322**(*bus*, ***kwargs*)
SSD1322 driver

Parameters

- **width** (*int*) – The width of the display
- **height** (*int*) – The height of the display
- **rotation** (*int*) – The rotation of the display in degrees. Default is 0. Must be one of (0, 90, 180, 270)

CHAPTER 8

Indices and tables

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- modindex
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