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# AdafruitST7735 Library Documentation

*Release 1.0*

**Scott Shawcroft**

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displayio driver for ST7735B TFT-LCD displays.



# CHAPTER 1

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## Hardware

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This driver does not work for any current Adafruit Displays. It is intended to be used with displays with an ST7735B or similar chipset and was created using initialization codes from the [Arduino Library](#). If you have a newer Adafruit Display with a ST7735R or ST7735S chip, please visit [the Adafruit ST7735R Driver](#).





## CHAPTER 2

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### Dependencies

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This driver depends on:

- [Adafruit CircuitPython 4.0.0-beta.0+](#)

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



## CHAPTER 3

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### Usage Example

---

```
import board
import displayio
from adafruit_st7735 import ST7735

spi = board.SPI()
tft_cs = board.D5
tft_dc = board.D6

displayio.release_displays()
display_bus = displayio.FourWire(spi, command=tft_dc, chip_select=tft_cs, reset=board.
↪D9)

display = ST7735(display_bus, width=128, height=128)

# Make the display context
splash = displayio.Group(max_size=10)
display.show(splash)

color_bitmap = displayio.Bitmap(128, 128, 1)
color_palette = displayio.Palette(1)
color_palette[0] = 0xFF0000

bg_sprite = displayio.TileGrid(color_bitmap,
                                pixel_shader=color_palette,
                                x=0, y=0)
splash.append(bg_sprite)

while True:
    pass
```



## 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/st7735\_simpletest.py

```
1 # SPDX-FileCopyrightText: 2021 ladyada for Adafruit Industries
2 # SPDX-License-Identifier: MIT
3
4 """
5 This test will initialize the display using displayio
6 and draw a solid red background
7 """
8
9 import board
10 import displayio
11 from adafruit_st7735 import ST7735
12
13 # Release any resources currently in use for the displays
14 displayio.release_displays()
15
16 spi = board.SPI()
17 tft_cs = board.D5
18 tft_dc = board.D6
19
20 display_bus = displayio.FourWire(
21     spi, command=tft_dc, chip_select=tft_cs, reset=board.D9
22 )
23
24 display = ST7735(display_bus, width=128, height=128)
25
26 # Make the display context
27 splash = displayio.Group(max_size=10)
```

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```
28 display.show(splash)
29
30 color_bitmap = displayio.Bitmap(128, 128, 1)
31 color_palette = displayio.Palette(1)
32 color_palette[0] = 0xFF0000
33
34 bg_sprite = displayio.TileGrid(color_bitmap, pixel_shader=color_palette, x=0, y=0)
35 splash.append(bg_sprite)
36
37 while True:
38     pass
```

## 6.2 adafruit\_st7735

Displayio driver for ST7735 based displays.

- Author(s): Melissa LeBlanc-Williams

### 6.2.1 Implementation Notes

**Hardware:**

**Software and Dependencies:**

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

**class** `adafruit_st7735.ST7735` (*bus, \*\*kwargs*)  
ST7735 driver

## CHAPTER 7

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### Indices and tables

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- `genindex`
- `modindex`
- `search`



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