AdafruitFocalTouch Library Documentation

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CircuitPython driver for common low-cost FocalTech capacitive touch chips. Currently supports FT6206 & FT6236

CHAPTER 1

Dependencies

This driver depends on:

- Adafruit CircuitPython
- Bus Device

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-focaltouch
```

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

```
sudo pip3 install adafruit-circuitpython-focaltouch
```

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-focaltouch
```

CHAPTER 3

Usage Example

```
import time
import board
import busio
import adafruit_focaltouch

# Create library object (named "ft") using a Bus I2C port
i2c = busio.I2C(board.SCL, board.SDA)

ft = adafruit_focaltouch.Adafruit_FocalTouch(i2c, debug=False)

while True:
    # if the screen is being touched print the touches
    if ft.touched:
        print(ft.touches)
    else:
        print('no touch')

    time.sleep(.15)
```

CHAPTER 4

Contributing

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

CHAPTER 5

Documentation

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

CHAPTER 6

Table of Contents

6.1 Simple tests

Ensure your device works with these simple tests.

Listing 1: examples/focaltouch_print_touches.py

```python
"""
Example for getting touch data from an FT6206 or FT6236 capacitive
touch driver, over I2C
"""

import time
import busio
import board
import adafruit_focaltouch

# Create library object (named "ft") using a Bus I2C port
i2c = busio.I2C(board.SCL, board.SDA)

ft = adafruit_focaltouch.Adafruit_FocalTouch(i2c, debug=False)

while True:
    # if the screen is being touched print the touches
    if ft.touched:
        print(ft.touches)
    else:
        print("no touch")

    time.sleep(0.15)
```

Listing 2: examples/focaltouch_paint_simpletest.py

```
"""
Simple painting demo that draws on an Adafruit capacitive touch shield with
ILI9341 display and FT6206 captouch driver
"""

import busio
import board
import digitalio
import adafruit_focaltouch
from adafruit_rgb_display import ili9341, color565

# Create library object using our Bus I2C & SPI port
i2c = busio.I2C(board.SCL, board.SDA)
spi = busio.SPI(clock=board.SCK, MOSI=board.MOSI, MISO=board.MISO)

# Adafruit Metro M0 + 2.8" Capacitive touch shield
cs_pin = digitalio.DigitalInOut(board.D10)
dc_pin = digitalio.DigitalInOut(board.D9)

# Initialize display
display = ili9341.ILI9341(spi, cs=cs_pin, dc=dc_pin)
# Fill with black!
display.fill(color565(0, 0, 0))

ft = adafruit_focaltouch.Adafruit_FocalTouch(i2c)

while True:
    if ft.touched:
        ts = ft.touches
        point = ts[0]  # the shield only supports one point!
        # perform transformation to get into display coordinate system!
        y = 320 - point["y"]
        x = 240 - point["x"]
        display.fill_rectangle(x - 2, y - 2, 4, 4, color565(255, 255, 255))
```

6.2 adafruit_focaltouch

CircuitPython driver for common low-cost FocalTech capacitive touch chips. Currently supports FT6206 & FT6236.

- Author(s): ladyada

6.2.1 Implementation Notes

Hardware:

- Adafruit 2.8" TFT LCD with Cap Touch Breakout Board w/MicroSD Socket (Product ID: 2090)
- Adafruit 2.8" TFT Touch Shield for Arduino w/Capacitive Touch (Product ID: 1947)

Software and Dependencies:

- Adafruit CircuitPython firmware for the ESP8622 and M0-based boards: https://github.com/adafruit/circuitpython/releases

- Adafruit's Bus Device library (when using I2C/SPI): https://github.com/adafruit/Adafruit_CircuitPython_BusDevice

class `adafruit_focaltouch.`**`Adafruit_FocalTouch`**(*i2c*, *address=56*, *debug=False*)

A driver for the FocalTech capacitive touch sensor.

`touched`

Returns the number of touches currently detected

`touches`

Returns a list of touchpoint dicts, with 'x' and 'y' containing the touch coordinates, and 'id' as the touch # for multitouch tracking

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Indices and tables

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