Adafruit SEESAW Library Documentation

Release 1.0

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Contents

CircuitPython module for use with the Adafruit ATSAMD09 seesaw.

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

Usage Example

See examples/seesaw_simpletest.py for usage example.

CHAPTER 3

Contributing

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

CHAPTER 4

Building locally

To build this library locally you'll need to install the circuitpython-build-tools package.

```
python3 -m venv .env
source .env/bin/activate
pip install circuitpython-build-tools
```

Once installed, make sure you are in the virtual environment:

```
source .env/bin/activate
```

Then run the build:

```
circuitpython-build-bundles --filename_prefix adafruit-circuitpython-seesaw --library_
↪location .
```

4.1 Sphinx documentation

Sphinx is used to build the documentation based on rST files and comments in the code. First, install dependencies (feel free to reuse the virtual environment from above):

```
python3 -m venv .env
source .env/bin/activate
pip install Sphinx sphinx-rtd-theme
```

Now, once you have the virtual environment activated:

```
cd docs
sphinx-build -E -W -b html . _build/html
```

This will output the documentation to `docs/_build/html`. Open the index.html in your browser to view them. It will also (due to -W) error out on any warning like Travis will. This is a good way to locally verify it will pass.

CHAPTER 5

Table of Contents

5.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/seesaw_simpletest.py

```python
# Simple seesaw test using an LED attached to Pin 15.
#
# See the seesaw Learn Guide for wiring details:
# https://learn.adafruit.com/adafruit-seesaw-atsamd09-breakout?view=all#circuitpython-wiring-and-test
import time

from board import SCL, SDA
import busio
from adafruit_seesaw.seesaw import Seesaw

i2c_bus = busio.I2C(SCL, SDA)

ss = Seesaw(i2c_bus)

ss.pin_mode(15, ss.OUTPUT)

while True:
    ss.digital_write(15, True)   # turn the LED on (True is the voltage level)
    time.sleep(1)                # wait for a second
    ss.digital_write(15, False)  # turn the LED off by making the voltage LOW
    time.sleep(1)
```

5.2 seesaw

An I2C to whatever helper chip.

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5.2.1 Implementation Notes

Hardware:

- Adafruit ATSAMD09 Breakout with seesaw (Product ID: 3657)

Software and Dependencies:

- Adafruit CircuitPython firmware for the ESP8622 and M0-based boards: https://github.com/adafruit/circuitpython/releases
- Adafruit's Bus Device library: https://github.com/adafruit/Adafruit_CircuitPython_BusDevice

class `adafruit_seesaw.seesaw.`**`Seesaw`**(*i2c_bus*, *addr=73*, *drdy=None*)

Driver for Seesaw i2c generic conversion trip

Parameters

- **i2c_bus** (*I2C*) – Bus the SeeSaw is connected to
- **addr** (*int*) – I2C address of the SeeSaw device

sw_reset()

Trigger a software reset of the SeeSaw chip

CHAPTER 6

Indices and tables

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