
AdafruitPIOASM Library Documentation

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Simple assembler to convert pioasm to bytes

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](#).

INSTALLING FROM PYPI

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

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-pioasm
```

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

```
sudo pip3 install adafruit-circuitpython-pioasm
```

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-pioasm
```


USAGE EXAMPLE

```
import time
import rp2pio
import board
import adafruit_pioasm

squarewave = """
.program squarewave
    set pins 1 [1] ; Drive pin high and then delay for one cycle
    set pins 0     ; Drive pin low
"""

assembled = adafruit_pioasm.assemble(squarewave)

sm = rp2pio.StateMachine(
    assembled,
    frequency=2000,
    init=adafruit_pioasm.assemble("set pindirs 1"),
    first_set_pin=board.LED,
)
print("real frequency", sm.frequency)

time.sleep(120)
```


CONTRIBUTING

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

DOCUMENTATION

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

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6.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/pioasm_simpletest.py

```
1 # SPDX-FileCopyrightText: 2021 Scott Shawcroft, written for Adafruit Industries
2 #
3 # SPDX-License-Identifier: MIT
4
5 import time
6 import rp2pio
7 import board
8 import adafruit_pioasm
9
10 squarewave = """
11 .program squarewave
12     set pins 1      ; Drive pin high and then delay for one cycle
13     set pins 0      ; Drive pin low
14 """
15
16 assembled = adafruit_pioasm.assemble(squarewave)
17
18 sm = rp2pio.StateMachine(
19     assembled,
20     frequency=1000 * 2,
21     first_set_pin=board.D13,
22 )
23 print("real frequency", sm.frequency)
24
25 time.sleep(120)
```

6.2 adafruit_pioasm

Simple assembler to convert pioasm to bytes

- Author(s): Scott Shawcroft

`adafruit_pioasm.assemble(text_program)`

Converts pioasm text to encoded instruction bytes

`adafruit_pioasm.mov_splitter(string, maxsplit=0)`

Split string by the occurrences of pattern.

`adafruit_pioasm.splitter(string, maxsplit=0)`

Split string by the occurrences of pattern.

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