AdafruitAPDS9500 Library Documentation

Release 1.0

Bryan Siepert

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Library for the APDS9500 Gesture Sensor

CHAPTER

ONE

DEPENDENCIES

This driver depends on:

- Adafruit CircuitPython
- Bus Device
- Register

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

CHAPTER

TWO

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-apds9500
```

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

```
sudo pip3 install adafruit-circuitpython-apds9500
```

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-apds9500
```

CHAPTER

THREE

USAGE EXAMPLE

```
import time
import board
import busio
import adafruit_apds9500
from adafruit_apds9500 import Gesture

i2c = busio.I2C(board.SCL, board.SDA)

apds = adafruit_apds9500.APDS9500(i2c)
while True:
    gesture_reading = apds.gestures
    if len(gesture_reading) == 0:
        continue
    for gesture in gesture_reading:
        print("\t", Gesture.string[gesture], "Gesture Detected")
    print("")
time.sleep(.1)
```

CHAPTER

FOUR

CONTRIBUTING

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

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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/apds9500_simpletest.py

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

import time
import board
import busio
import adafruit_apds9500
from adafruit_apds9500 import Gesture

i2c = busio.I2C(board.SCL, board.SDA)

apds = adafruit_apds9500.APDS9500(i2c)
print("Gesture demo started!")
while True:
    gesture_reading = apds.gestures
    if not gesture_reading:
        continue
    for gesture in gesture_reading:
        print("\t", Gesture.string[gesture], "Gesture Detected")
    print("")
    time.sleep(0.1)
```

6.2 adafruit_apds9500

Library for the APDS9500 Gesture Sensor

- Author(s): Bryan Siepert

6.2.1 Implementation Notes

Hardware:

- Adafruit's APDS9500 Breakout: https://adafruit.com/product/44XX

Software and Dependencies:

- Adafruit CircuitPython firmware for the supported boards: https://circuitpython.org/downloads
- Adafruit's Bus Device library: https://github.com/adafruit/Adafruit_CircuitPython_BusDevice
- Adafruit's Register library: https://github.com/adafruit/Adafruit_CircuitPython_Register

class adafruit_apds9500.**APDS9500**(*i2c_bus*, *address=115*)

Library for the APDS9500 Gesture Sensor.

Parameters

- **i2c_bus** (*I2C*) – The I2C bus the APDS9500 is connected to.
- **address** – The I2C slave address of the sensor

property gestures

Returns a list of gestures that were detected. Results are *Gesture* types

class adafruit_apds9500.**CV**

struct helper

classmethod add_values(*value_tuples*)

creates CV entires

classmethod is_valid(*value*)

Returns true if the given value is a member of the CV

class adafruit_apds9500.**Gesture**

Possible results for `gesture`

class adafruit_apds9500.**GestureResult**

Possible results for `gesture`

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