
Adafruit AMG88xx Library Documentation

Release 1.0

Dean Miller

May 21, 2021

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Adafruit CircuitPython module for the AMG88xx GRID-Eye IR 8x8 thermal camera.

CHAPTER 1

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 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-amg88xx
```

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

```
sudo pip3 install adafruit-circuitpython-amg88xx
```

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-amg88xx
```


CHAPTER 3

Usage Example

Of course, you must import the library to use it:

```
import busio
import adafruit_amg88xx
```

The way to create an I2C object depends on the board you are using. For boards with labeled SCL and SDA pins, you can:

```
import board
```

You can also use pins defined by the onboard microcontroller through the `microcontroller.pin` module.

Now, to initialize the I2C bus:

```
i2c_bus = busio.I2C(board.SCL, board.SDA)
```

Once you have created the I2C interface object, you can use it to instantiate the AMG88xx object

```
amg = adafruit_amg88xx.AMG88XX(i2c_bus)
```

You can also optionally use the alternate i2c address (make sure to solder the jumper on the back of the board if you want to do this)

```
amg = adafruit_amg88xx.AMG88XX(i2c_bus, addr=0x68)
```

Pixels can be then be read by doing:

```
print(amg.pixels)
```


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](#).

6.1 Pixel test

Ensure your device works with this test:

Listing 1: examples/amg88xx_simpletest.py

```
1  # SPDX-FileCopyrightText: 2021 ladyada for Adafruit Industries
2  # SPDX-License-Identifier: MIT
3
4  import time
5  import busio
6  import board
7  import adafruit_amg88xx
8
9  i2c = busio.I2C(board.SCL, board.SDA)
10 amg = adafruit_amg88xx.AMG88XX(i2c)
11
12 while True:
13     for row in amg.pixels:
14         # Pad to 1 decimal place
15         print("{0:.1f}".format(temp) for temp in row)
16         print("")
17     print("\n")
18     time.sleep(1)
```

6.2 adafruit_amg88xx - AMG88xx GRID-Eye IR 8x8 IR sensor

This library supports the use of the AMG88xx in CircuitPython.

Author(s): Dean Miller, Scott Shawcroft for Adafruit Industries. Date: June 2017 Affiliation: Adafruit Industries

6.2.1 Implementation Notes

Hardware:

Software and Dependencies: * Adafruit CircuitPython: <https://github.com/adafruit/circuitpython/releases> * Adafruit's Register library: https://github.com/adafruit/Adafruit_CircuitPython_Register * Adafruit's Bus Device library: https://github.com/adafruit/Adafruit_CircuitPython_BusDevice

Notes:

class adafruit_amg88xx.**AMG88XX** (*i2c, addr=105*)

Driver for the AMG88xx GRID-Eye IR 8x8 thermal camera.

pixels

Temperature of each pixel across the sensor in Celsius.

Temperatures are stored in a two dimensional list where the first index is the row and the second is the column. The first row is on the side closest to the writing on the sensor.

temperature

Temperature of the sensor in Celsius

CHAPTER 7

Indices and tables

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

a

adafruit_amg88xx, [13](#)

A

`adafruit_amg88xx` (*module*), [13](#)

`AMG88XX` (*class in adafruit_amg88xx*), [14](#)

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`pixels` (*adafruit_amg88xx.AMG88XX attribute*), [14](#)

T

`temperature` (*adafruit_amg88xx.AMG88XX attribute*), [14](#)