
AdafruitBMP3XX Library Documentation

Release 1.0

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Oct 22, 2019

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CircuitPython driver from BMP3XX Temperature and Barometric Pressure sensor.

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](#).

1.1 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-bmp3xx
```

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

```
sudo pip3 install adafruit-circuitpython-bmp3xx
```

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-bmp3xx
```


CHAPTER 2

Usage Example

See usage examples in the examples folder.

CHAPTER 3

Contributing

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

CHAPTER 4

Building locally

4.1 Zip release files

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-bmp3xx --library_
↪location .
```

4.2 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.

5.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/bmp3xx_simpletest.py

```
1 import time
2 import board
3 import busio
4 import adafruit_bmp3xx
5
6 # I2C setup
7 i2c = busio.I2C(board.SCL, board.SDA)
8 bmp = adafruit_bmp3xx.BMP3XX_I2C(i2c)
9
10 # SPI setup
11 # from digitalio import DigitalInOut, Direction
12 # spi = busio.SPI(board.SCK, board.MOSI, board.MISO)
13 # cs = DigitalInOut(board.D5)
14 # bmp = adafruit_bmp3xx.BMP3XX_SPI(spi, cs)
15
16 bmp.pressure_oversampling = 8
17 bmp.temperature_oversampling = 2
18
19 while True:
20     print("Pressure: {:.1f} Temperature: {:.2f}".format(bmp.pressure, bmp.
21         ↪temperature))
22     time.sleep(1)
```

5.2 adafruit_bmp3xx

CircuitPython driver from BMP3XX Temperature and Barometric Pressure sensor.

- Author(s): Carter Nelson

5.2.1 Implementation Notes

Hardware:

- [Adafruit BMP388](#)

Software and Dependencies:

- Adafruit CircuitPython firmware for the supported boards: <https://github.com/adafruit/circuitpython/releases>

* Adafruit's Bus Device library: https://github.com/adafruit/Adafruit_CircuitPython_BusDevice

class adafruit_bmp3xx.**BMP3XX**

Base class for BMP3XX sensor.

altitude

The altitude in meters based on the currently set sea level pressure.

filter_coefficient

The IIR filter coefficient.

pressure

The pressure in hPa.

pressure_oversampling

The pressure oversampling setting.

reset ()

Perform a power on reset. All user configuration settings are overwritten with their default state.

sea_level_pressure = None

Sea level pressure in hPa.

temperature

The temperature in deg C.

temperature_oversampling

The temperature oversampling setting.

class adafruit_bmp3xx.**BMP3XX_I2C** (*i2c*, *address=119*)

Driver for I2C connected BMP3XX. Default address is 0x77 but another address can be passed in as an argument

class adafruit_bmp3xx.**BMP3XX_SPI** (*spi*, *cs*)

Driver for SPI connected BMP3XX.

CHAPTER 6

Indices and tables

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