
AdafruitLPS2x Library Documentation

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Library for the ST LPS2x family of barometric pressure sensors

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](#).

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-lps2x
```

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

```
sudo pip3 install adafruit-circuitpython-lps2x
```

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-lps2x
```


CHAPTER 3

Usage Example

```
import time
import board
import busio
import adafruit_lps2x

i2c = busio.I2C(board.SCL, board.SDA)
# uncomment and comment out the line after to use with the LPS22
# lps = adafruit_lps2x.LPS22(i2c)
lps = adafruit_lps2x.LPS25(i2c)
while True:
    print("Pressure: %.2f hPa" % lps.pressure)
    print("Temperature: %.2f C" % lps.temperature)
    time.sleep(1)
```


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 Simple test

Ensure your device works with this simple test.

Listing 1: examples/lps2x_simpletest.py

```
1 import time
2 import board
3 import busio
4 import adafruit_lps2x
5
6 i2c = busio.I2C(board.SCL, board.SDA)
7 # uncomment and comment out the line after to use with the LPS22
8 # lps = adafruit_lps2x.LPS22(i2c)
9 lps = adafruit_lps2x.LPS25(i2c)
10 while True:
11     print("Pressure: %.2f hPa" % lps.pressure)
12     print("Temperature: %.2f C" % lps.temperature)
13     time.sleep(1)
```

6.2 adafruit_lps2x

Library for the ST LPS2X family of pressure sensors

- Author(s): Bryan Siepert

6.2.1 Implementation Notes

Hardware:

- LPS25HB Breakout <https://www.adafruit.com/products/4530>

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_lps2x.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_lps2x.LPS22` (*i2c_bus*, *address=93*)
Library for the ST LPS22 pressure sensors

Parameters

- **`i2c_bus`** (*I2C*) – The I2C bus the LPS22HB is connected to.
- **`address`** – The I2C device address for the sensor. Default is 0x5d but will accept 0x5c when the SDO pin is connected to Ground.

initialize ()
Configure the sensor with the default settings. For use after calling `reset` ()

class `adafruit_lps2x.LPS25` (*i2c_bus*, *address=93*)
Library for the ST LPS25 pressure sensors

Parameters

- **`i2c_bus`** (*I2C*) – The I2C bus the LPS25HB is connected to.
- **`address`** – The I2C device address for the sensor. Default is 0x5d but will accept 0x5c when the SDO pin is connected to Ground.

enabled
Controls the power down state of the sensor. Setting to `False` will shut the sensor down

initialize ()
Configure the sensor with the default settings. For use after calling `reset` ()

class `adafruit_lps2x.LPS2X` (*i2c_bus*, *address=93*, *chip_id=None*)
Base class ST LPS2x family of pressure sensors

Parameters

- **`i2c_bus`** (*I2C*) – The I2C bus the sensor is connected to.
- **`address`** – The I2C device address for the sensor. Default is 0x5d but will accept 0x5c when the SDO pin is connected to Ground.

data_rate
The rate at which the sensor measures pressure and temperature. `data_rate` should be set to one of the values of `adafruit_lps2x.Rate`.

initialize ()
Configure the sensor with the default settings. For use after calling `reset` ()

pressure
The current pressure measurement in hPa

reset ()

Reset the sensor, restoring all configuration registers to their defaults

temperature

The current temperature measurement in degrees C

class adafruit_lps2x.**Rate**

Options for `data_rate`

| Rate | Description |
|-------------------------|---|
| Rate.LSP25_SHUTDOWN | Setting <code>data_rate</code> to Rate.LSP25_SHUTDOWN stops measurements from being taken |
| Rate.LSP25_RATE_1_HZ | 1 Hz |
| Rate.LSP25_RATE_7_HZ | 7 Hz |
| Rate.LSP25_RATE_12_5_HZ | 12.5 Hz |
| Rate.LSP25_RATE_25_HZ | 25 Hz |
| Rate.LSP22_SHUTDOWN | Setting <code>data_rate</code> to Rate.LSP22_SHUTDOWN stops measurements from being taken |
| Rate.LSP22_RATE_1_HZ | 1 Hz |
| Rate.LSP22_RATE_10_HZ | 10 Hz |
| Rate.LSP22_RATE_25_HZ | 25 Hz |
| Rate.LSP22_RATE_50_HZ | 50 Hz |

CHAPTER 7

Indices and tables

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