Adafruit CircuitPython DHT Library Documentation

Release 1.0

Mike McWethy

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Contents

CircuitPython support for the DHT11 and DHT22 temperature and humidity devices.

CHAPTER 1

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.

CHAPTER 2

Usage Example

2.1 Hardware Set-up

The DHT11 and DHT22 devices both need a pull-resistor on the data signal wire. This resistor is in the range of 1k to 5k. Please check your device datasheet for the appropriate value.

2.2 Basics

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

```
import adafruit_dht
```

The DHT type devices use single data wire, so import the board pin

```
from board import <pin>
```

Now, to initialize the DHT11 device:

```
dht_device = adafruit_dht.DHT11(<pin>)
```

OR initialize the DHT22 device:

```
dht_device = adafruit_dht.DHT22(<pin>)
```

2.3 Read temperature and humidity

Now get the temperature and humidity values

```
temperature = dht_device.temperature
humidity = dht_device.humidity
```

These properties may raise an exception if a problem occurs. You should use try/raise logic and catch RuntimeError and then retry getting the values after 1/2 second.

CHAPTER 3

Contributing

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

CHAPTER 4

API Reference

4.1 DHT Libary Documentation

4.1.1 adafruit_dhtlib

CircuitPython support for the DHT11 and DHT22 temperature and humidity devices.

- Author(s): Mike McWethy

class adafruit_dht.**DHT11**(*pin*)
Support for DHT11 device.

Parameters **pin** (*Pin*) – digital pin used for communication

class adafruit_dht.**DHT22**(*pin*)
Support for DHT22 device.

Parameters **pin** (*Pin*) – digital pin used for communication

class adafruit_dht.**DHTBase**(*dht11*, *pin*, *trig_wait*)
base support for DHT11 and DHT22 devices

humidity
humidity current reading. It makes sure a reading is available

Raises RuntimeError exception for checksum failure and for insuffcient data returned from the device (try again)

measure()
measure runs the communications to the DHT11/22 type device. if successful, the class properties temperature and humidity will return the reading returned from the device.

Raises RuntimeError exception for checksum failure and for insuffcient data returned from the device (try again)

temperature
temperature current reading. It makes sure a reading is available

Raises RuntimeError exception for checksum failure and for insuffcient data returned from the device (try again)

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