

# temperature humidity and pressure meter to mqtt (bme280)

i wanted to log temperature and humidity values in my sons room as he caught a lot during the first winter and we had to buy a humidifier. i therefore ordered a BME280 module off Aliexpress for \$2.18 (i know, only the best for my kid ;)). The sensor actually measures both temperature and humidity at a good accuracy and as a "free" bonus it also measures the airpressure.

my plan is to connect it to a wemos D1 mini and then publish the values via mqtt so i can log them in Home Assistant, Node Red, thingboard or somewhere else.

## OpenMQTTGateway

first try was with the [OpenMQTTGateway](#) as i had the arduino IDE ready to go and the code configured and compiled from trying to set up an [ble\\_mqtt\\_gateway](#) which sadly did not work, probably due to a DOA module. however, read that article on setting up the OpenMQTTGateway software for flashing. for the BME280 to work you need to enable the ZsensorBME280 in `User_config.h`, the rest is identical.

the [hardware wiring](#) by default looks like this:

I2C Module	NodeMCU / ESP8266
Vcc	3.3V
GND	GND
SCL	D1
SDA	D2
ADD	N/C (Not Connected)

at least with this sensor it worked right out of the box and reported all sorts of measurements. i could track them using the serial console or via a mqtt client like so:

```
mosquitto_sub -h 192.168.168.1 -u myuser -P mypass -v -t home/#
```

i think OpenMQTTGateway is still rough around the edges, it works and all but for example the web interface to configure the device is only available if it can't connect to a wifi and therefore goes into setup mode.. this is not ideal as the mqtt parameters could also be managed in there.

so lets try also

## Tasmota

also check out my detailed description for the [sonoff](#) setup. basically download the latest [release](#) and then copy the lib folder into your arduino sketchbook/libraries folder. then edit the `my_user_config.h` file and make sure the `#define USE_BMP` is enabled. also set the `#define`

MODULE to WEMOS. as a side-note: this will be called "Generic" in the web-interface but in the source code it's still called WEMOS.

the [hardware setup](#) looks like this (note, the scl and sda lines could be changed to match OMG for example or vice versa, however, i have it on a breadbord, so i simply changed the patch wires):

I2C Module	NodeMCU / ESP8266
Vcc	3.3V
GND	GND
SCL	D4
SDA	D3
ADD	N/C (Not Connected)

despite selecting the WEMOS module we still have to log into the web interface once the firmware is flashed and booted and go to Configuration -> configure module and then set D3 GPIO0 Button 1 to I2C SDA(06) and D4 GPIO2 to I2C SCL (05).

now you get a new reading every 5 minutes via MQTT. if you want to change this interval you can either do this in the `my_user_config.h` file or via mqtt or the "console" in the web interface by publishing this mqtt topic and value:

```
tasmota/sonoff/cmd/TelePeriod 30
```

this will set it to 30 seconds

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