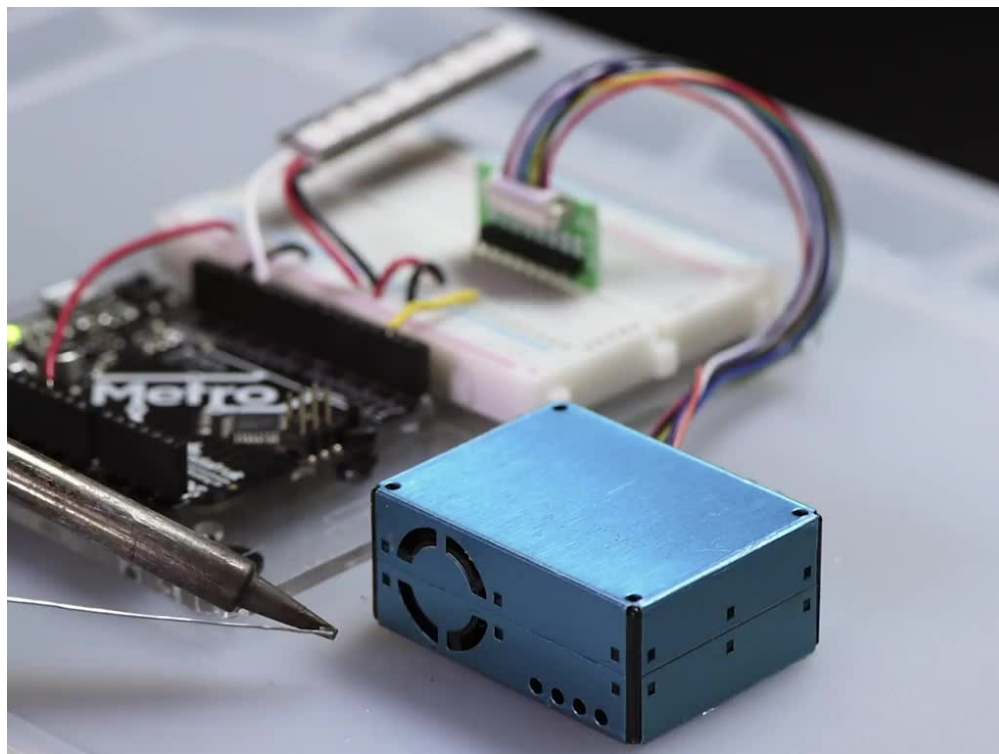




## PM2.5 Air Quality Sensor and Breadboard Adapter Kit - PMS5003

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DESCRIPTION

TECHNICAL DETAILS

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## DESCRIPTION

Breathe easy, knowing that you can track and sense the quality of the air around you with the **PM2.5 Air Quality Sensor with Breadboard Adapter** particulate sensor. [Mad Max & Furiosa definitely should have hooked up one of these in their truck while scavenging the dusty desert wilderness of post-apocalyptic Australia.](#) And for those of us not living in an Outback dystopia, this sensor + adapter kit is great for monitoring air quality, and super easy to use!

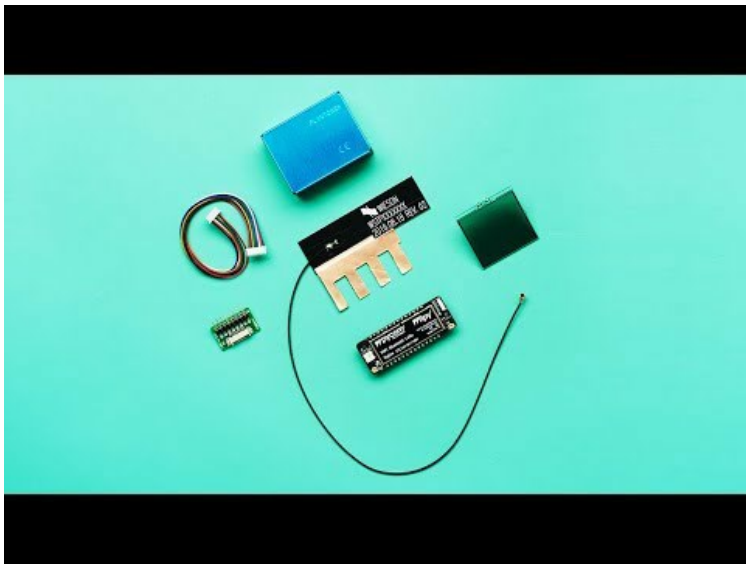
**WITNESS** real-time, reliable measurement of PM2.5 dust concentrations! (PM2.5 refers to particles that are 2.5 microns or smaller in diameter.) This sensor uses laser scattering to radiate suspending particles in the air, then collects scattering light to obtain the curve of scattering light change with time. The microprocessor calculates equivalent particle diameter and the number of particles with different diameter per unit volume.

You'll need to hook this up to a microcontroller with UART input ([or you could theoretically wire it up to a USB-Serial converter and parse the data on a computer](#)) - we have code for both Arduino and CircuitPython. 9600 baud data streams out once per second, you'll get:

- PM1.0, PM2.5 and PM10.0 concentration in both standard & environmental units
- Particulate matter per 0.1L air, categorized into 0.3um, 0.5um, 1.0um, 2.5um, 5.0um and 10um size bins

As well as checksum, in binary format (its fairly easy to parse the binary format, but it doesn't come out as pure readable ascii text)

We give you the sensor box as well as the cable and a 0.1" / 2.54mm breakout board so you can wire it easily. You only need power plus one data pin (for the UART TX). Power is 5V, logic is 3.3V



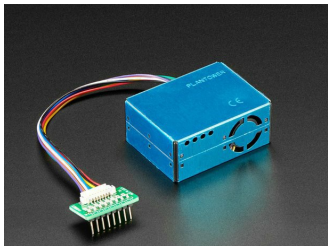
## TECHNICAL DETAILS

- Range of measurement: 0.3~1.0; 1.0~2.5; 2.5~10  $\mu\text{m}$
- Effective Range: 0~500  $\mu\text{g}/\text{m}^3$
- Maximum Range: \*  $\geq 1000 \mu\text{g}/\text{m}^3$
- Resolution: 1  $\mu\text{g}/\text{m}^3$
- Standard Volume: 0.1L
- DC Power Supply: Typ:5.0 / Min:4.5 / Max: 5.5V
- Active Current:  $\leq 100 \text{ mA}$
- Standby Current:  $\leq 200 \mu\text{A}$
- Working Temperature Range: -10~+60  $^{\circ}\text{C}$
- Working Humidity Range: 0~99%
- Storage Temperature Range: -40~+80  $^{\circ}\text{C}$
- Sensor Module Dimensions: 50 × 38 × 21mm
- Weight (incl. cable and adapter): 42.2g

As of March 1st, we are now shipping with straight headers on the JST breakout

[PM5003 Manual](#)

## LEARN



### PM2.5 Air Quality Sensor

This sensor is like a breath of fresh air

## MAY WE ALSO SUGGEST...



Adafruit CCS811 Air Quality



Adafruit ALS-PT19 Analog



Adafruit BME680 -



MCP9808 High Accuracy



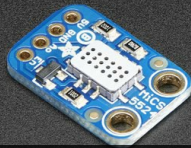
Adafruit BMP280 I2C or SPI



Adafruit VEML6070 UV



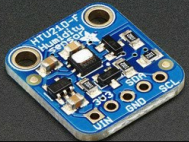
Mesh-protected Weather-



Adafruit MiCS5524 CO,



Adafruit Sensiron SHT31-D



Adafruit HTU21D-F



Adafruit SGP30 Air Quality

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