



SGP30 Air Quality Sensor Breakout

PIM480

Measure indoor air quality—total volatile organic compounds (TVOC) and equivalent CO₂ (eCO₂)—with this digital sensor for Raspberry Pi and Arduino.

The SGP30 sensor measures two different types of gases: volatile organic compounds (like hydrocarbons) and equivalent carbon dioxide (H₂ level is used as a proxy for this). The sensor does some nifty real-time baseline compensation to give you the most accurate readings, with just a 10-15% margin of error and minimal drift through time.

It's also compatible with our fancy **Breakout Garden**, where using breakouts is as easy just popping it into one of the six slots and starting to grow your project, create, and code.

Important! The sensor has a PTFE membrane over it (it looks like a slightly translucent white film). Do not peel it off! This is a gas-permeable membrane that is required for the sensor to function as intended.

Features

- Sensiron SGP30 TVOC and eCO2 sensor
- TVOC sensing from 0-60,000 ppb (parts per billion)
- CO2 sensing from 400 to 60,000 ppm (parts per million)
- 1Hz sampling rate
- I2C interface(address 0x58)
- 3.3V or 5V compatible
- Reverse polarity protection
- Raspberry Pi-compatible pinout (pins 1, 3, 5, 7, 9)
- Compatible with all models of Raspberry Pi, and Arduino
- **Python library**
- **Datasheet**

Kit includes

- SGP30 breakout
- 1x5 male header
- 1x5 female right angle header

We've designed this breakout board so that you can solder on the piece of right angle female header and pop it straight onto the bottom left 5 pins on your Raspberry Pi's GPIO header (pins 1, 3, 5, 6, 9).

Software

We've put together a **Python library** that you can use to read data from your SGP30 breakout, and provided **an example** of how to use the library.

Notes

- When you first set the sensor running, it takes some time to warm up (up to a minute) before returning readings
- Dimensions: 19x19x3mm (LxWxH)

