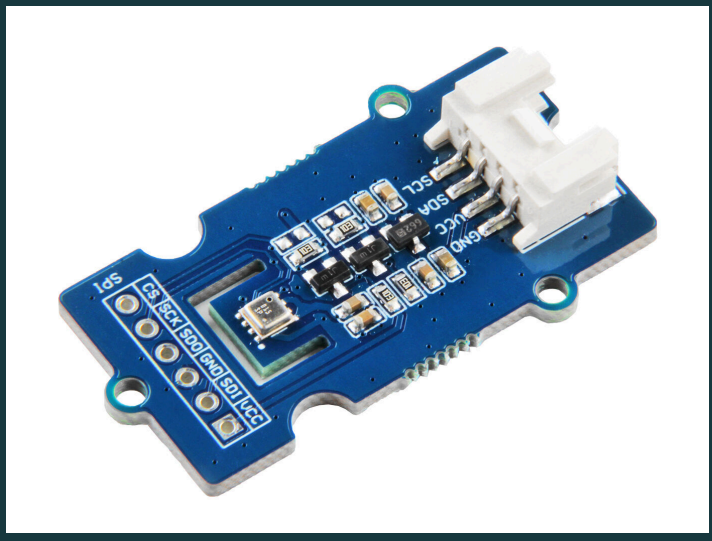
seeed studio

INDUSTRIAL PRODUCT DATASHEET

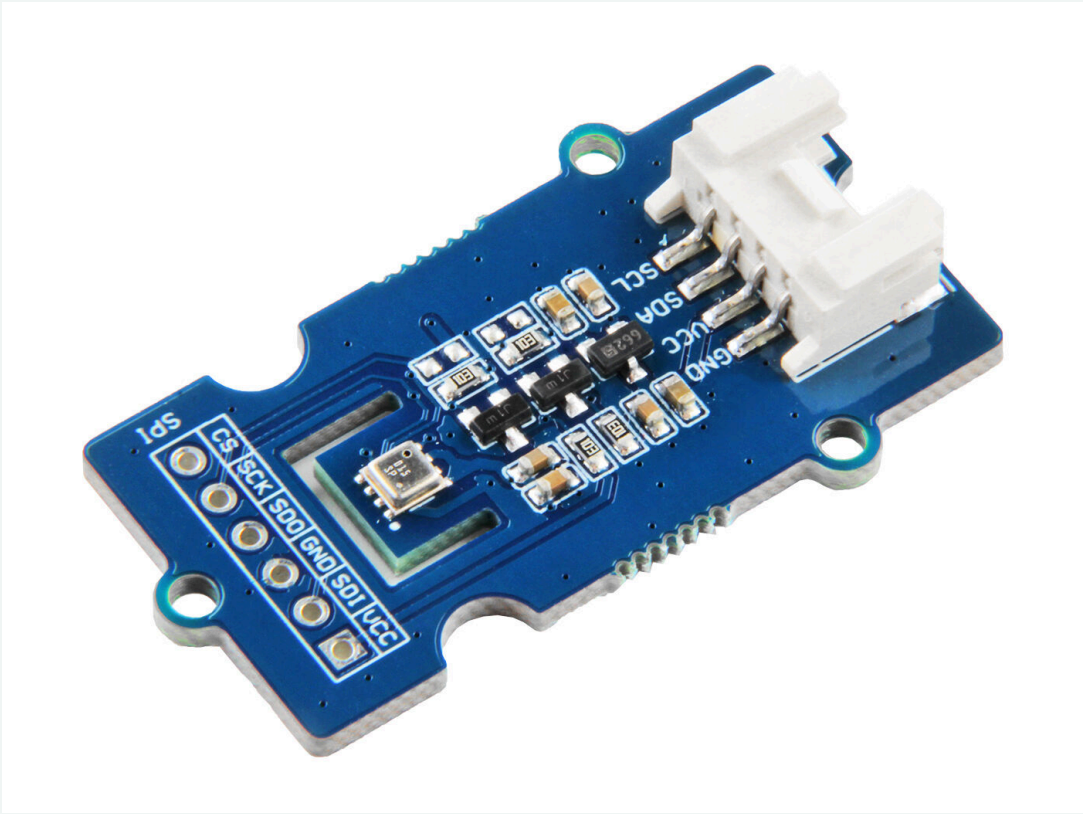
Grove - Temperature, Humidity, Pressure and Gas Sensor for Arduino - BME680

The Grove - BME680 sensor integrates temperature, humidity, pressure, and gas detection with high accuracy and RoHS-compliant plug-and-play Grove connectivity for indoor air quality, home automation, IoT, barometer, weather...

SKU	UPDATED	PRICE
101020513	2026-11-03 03:42:49	$22.60(Excl. VAT)



Overview



The Grove - Temperature, Humidity, Pressure and Gas Sensor for Arduino - BME680 is a high-performance module that simultaneously detects temperature, humidity, barometric pressure, and gas. It offers ±3% humidity accuracy, ±1°C temperature accuracy (0–65°C), ±0.6 hPa absolute/ ±0.12 hPa relative pressure accuracy, a wide operating range of -40 – +85 °C, 0–100% r.H, 300–1100 hPa, and is RoHS compliant, halogen-free, MSL1 with a Grove unified socket for plug-and-play use in applications such as indoor air quality monitoring, home automation, IoT devices, barometers, weather forecasting, GPS enhancement, indoor navigation, and vertical velocity indication.

Key Features

01 **High-performance environmental detection**

The powerful BME680 module can simultaneously detect temperature and humidity, barometric pressure and gas, to achieve a stronger detection effect

02 **Higher measurement accuracy**

Measure humidity with ±3% accuracy, absolute temperature (0-65℃) accuracy ±1℃ and absolute/relative pressure accuracy ±0.6hPa/±0.12hPa

03 **robust measurement range**

works at a wide operating range of -40 – +85 °C, 0–100% r.H, 300–1100 hPa

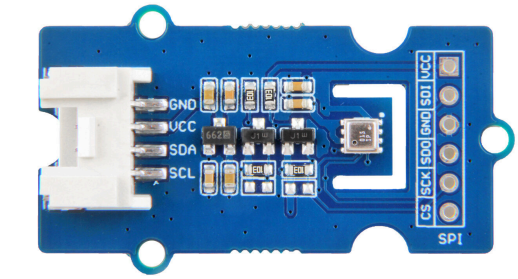
04 **Safety certificate**

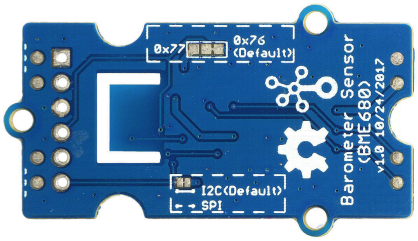
The product is RoHS compliant, halogen-free, MSL1

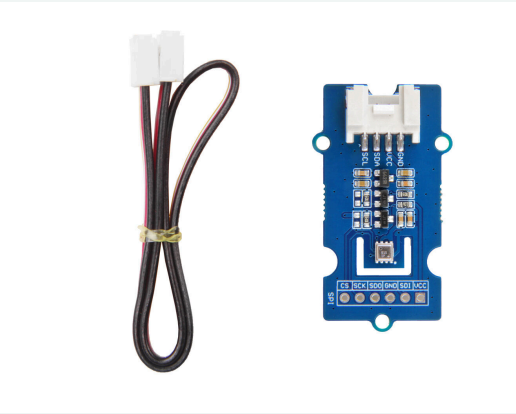
05 **Grove unified socket**

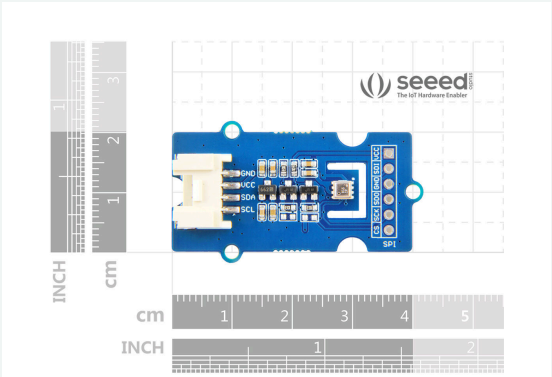
The sensor ensures "Plug and Play" and could be versatile for various applications

Product Gallery









Applications

- **Indoor air quality monitor**
- **Home automation and control**
- **IoT device**
- **Barometer**
- **Weather forecast system using Arduino**
- **GPS enhancement:** e.g. time-to-first-fix improvement, dead reckoning, slope detection
- **Indoor navigation:** change of floor detection, elevator detection
- **Vertical velocity indication:** rise/sink speed

Resource Links

- https://www.seeedstudio.com/Grove-Temperature-Humidity-Pressure-and-Gas-Sensor-for-Arduino-BME680.html
- Grove-BME680 Eagle file
- Seeed BME680 Library
- Datasheet of BME680

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