

GY-BME280 Temperature, Humidity & Pressure Sensor



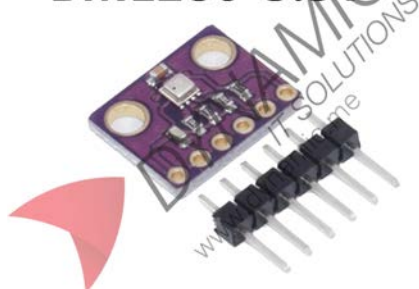
Features:

The GY-BME280 sensor integrates temperature, humidity, and pressure measurements using Bosch Sensortec MEMS technology. Designed for accurate environmental monitoring, it offers I²C and SPI connectivity with selectable 5V and 3.3V module options. The sensor's ultra-low current consumption, wide voltage range, and independent sensing functions make it ideal for IoT, weather tracking, and smart automation systems.

Specifications	
Model	GY-BME280
Manufacturer	Bosch Sensortec
Sensor Type	Temperature, Humidity, Pressure
Interface	I ² C (up to 3.4 MHz), SPI (up to 10 MHz)
Supply Voltage	VDD: 1.71V–3.6V, VDDIO: 1.2V–3.6V
Module Options	Available in 5V and 3.3V breakout versions
Current Consumption	1.8 μ A (Temp & Hum), 2.8 μ A (Temp & Press), 3.6 μ A (Full), 0.1 μ A (Sleep)
Operating Range	-40°C to +85°C, 0–100% RH, 300–1100 hPa
Humidity Accuracy	$\pm$ 3% RH
Pressure RMS Noise	0.2 Pa
Temperature Coefficient	$\pm$ 1.5 Pa/K
Package	2.5 × 2.5 × 0.93 mm metal lid LGA
Communication Pins	I ² C / SPI selectable
Compatibility	BMP280
Compliance	RoHS, Halogen-free, MSL1
Usage	IoT devices, Weather stations, HVAC control, GPS enhancement, Indoor navigation

Product Pictures:

BME280-3.3V

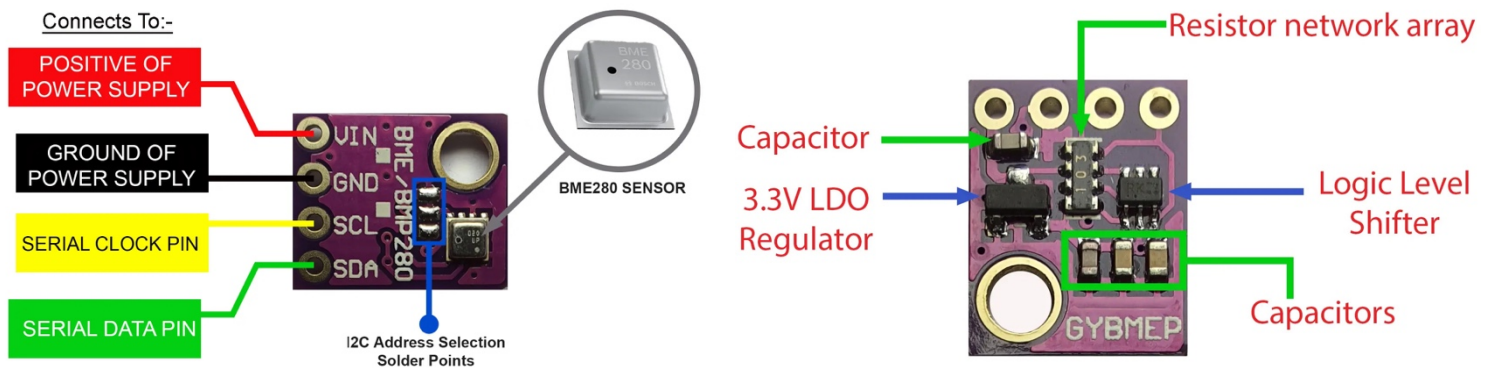


BME280-5V



Pinouts BME280-5V:

Pin Name	Type	Description
VIN	Power	Connect to 3.3V–5V power supply
GND	Ground	Connect to system ground
SCL	I ² C Clock	Serial Clock pin for I ² C communication
SDA	I ² C Data	Serial Data pin for I ² C communication



Pinouts BME280-3.3V:

Pin Name	Type	Description
VIN / VCC	Power	Connect to 3.3V power supply
GND	Ground	Connect to system ground
SCL / SCK	I ² C Clock / SPI Clock	Serial clock input for I ² C or SPI
SDA / MOSI	I ² C Data / SPI MOSI	Serial data input/output
CSB / CS	SPI Chip Select	Select line for SPI communication
SDO / MISO	SPI Output	Data output for SPI communication

