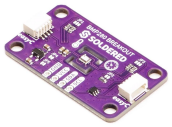
PRODUCT DATASHEET



BMP280 Pressure & Altitude Sensor Breakout

333315

The BMP280 Pressure & Altitude Sensor Breakout offers precise atmospheric measurements with ultra-low power consumption, ideal for portable projects.

Full product documentation, files and tutorials: **solde.red/333315**

CORE ATTRIBUTES

SKU **333315**

BARCODE **732388641505**

DESCRIPTION

Measure atmospheric pressure, altitude, and temperature with confidence using the **BMP280 Temperature & Altitude Sensor Breakout**. Built around Bosch Sensortec's proven BMP280 sensor, this breakout delivers reliable performance, low power consumption, and excellent accuracy for a wide range of embedded applications. With a simple I2C interface, dual Qwiic connectors, and standard header pins, it integrates effortlessly into Arduino, ESP32, RP2040, and other microcontroller-based projects.

The BMP280 operates over a pressure range of **300 hPa to 1100 hPa**, making it well suited for altitude estimation, weather monitoring, indoor navigation, and environmental sensing. It offers a **relative pressure accuracy of ±0.12 hPa**, corresponding to approximately **±1 meter altitude resolution**, and supports configurable oversampling and an internal IIR filter to reduce noise from short-term pressure fluctuations such as airflow or movement. Temperature measurements are provided alongside pressure data, allowing for accurate compensation and stable long-term readings.

This breakout board is designed for flexibility and ease of use. It features **two Qwiic connectors** for solder-free daisy-chaining, clearly labeled **I2C header pins**, and a dedicated **interrupt pin** for data-ready signaling or advanced low-power operation. Thanks to its ultra-low current consumption - as low as **2.7 µA at 1 Hz sampling** - the BMP280 breakout is an excellent choice for battery-powered devices, portable sensors, and always-on monitoring systems where efficiency matters.

TECHNICAL DETAILS

- Accurate barometric pressure and temperature sensing
- Pressure range: 300 - 1100 hPa
- High relative accuracy: ±0.12 hPa (≈ ±1 m altitude)
- Ultra-low power consumption: ~2.7 µA @ 1 Hz
- I2C interface with header pins
- 2× Qwiic connectors for fast, solder-free connections
- Built-in IIR filter for noise reduction
- Configurable interrupt pin for data-ready events

- Operating temperature range: -40 °C to +85 °C

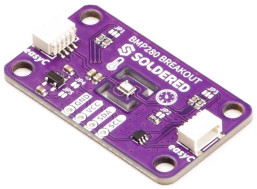
SPECIFICATIONS

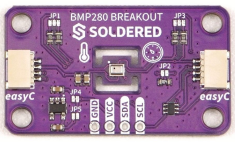
INTERFACE	I2C
QWIIC COMPATIBLE	Yes
I2C ADDRESS DEFAULT	0x76
I2C ADDRESS CHANGEABLE	Yes
BREADBOARD COMPATIBLE	Yes
MEASUREMENT TYPES	Pressure, Temperature
MEASUREMENT RANGE	Temperature -40 to 85 C; Pressure 300 to 1100 hPa
MEASUREMENT ACCURACY	Temperature 0.01 C resolution; Pressure 0.16 Pa resolution
IC PART NUMBER	BMP280
LOGIC LEVEL	3V3 Or 5V
OPERATING CURRENT (MA)	0.0027 mA

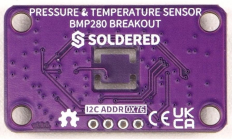
LINKS

Arduino Library	https://github.com/SolderedElectronics/Soldered-BMP280-Arduino-Library
Full Documentation	https://docs.soldered.com/bmp280/overview/
Hardware Details	https://docs.soldered.com/bmp280/hardware/
Arduino Library Documentation	https://docs.soldered.com/bmp280/arduino/geting-started/

GALLERY


BMP280 BREAKOUT
SOLDERED
easyC
easyC


BMP280 BREAKOUT
SOLDERED
JP1
JP3
JP2
JP4
JP5
easyC
easyC
GND
VCC
SDA
SCL


PRESSURE & TEMPERATURE SENSOR
BMP280 BREAKOUT
SOLDERED
I2C ADDR 0X76
UK CA