

BAROMETRIC PRESSURE TINYSHIELD

ASD2511-R-P



DESCRIPTION

The Barometric Pressure TinyShield allows you to measure barometric pressure (and determine altitude) and temperature with your TinyDuino. Based around the Bosch BMP280 sensor, this allows you to measure barometric pressure with a $\pm 1\text{hPa}$ absolute accuracy, and temperature with a $\pm 1.0\text{C}$ accuracy. This is great for weather applications or accurate altitude measurements in projects such as small drones and rockets.

This TinyShield uses I2C communication and incorporates level shifters and a local power supply to ensure proper and safe operation over the entire TinyDuino operating voltage range up to 5V.

To learn more about the **TinyDuino Platform**, click [here](https://tinycircuits.com/pages/tinyduino-overview)
<https://tinycircuits.com/pages/tinyduino-overview>

TECHNICAL DETAILS

To see what other TinyShields this will work with or conflict with, check out the **TinyShield Compatibility Matrix**

Bosch BMP280 Barometric Pressure Sensor Specs

- Pressure Range: 300 -> 1100 hPa (equiv to +9000 to -500m above/below sea level)
- Relative Accuracy: +/- 0.12 hPa, equiv to +/- 1m
- Absolute Accuracy: +/- 1 hPa
- Absolute Accuracy Temperature: +/- 1.0C

TinyDuino Power Requirements

- Voltage: 3.0V - 5.5V
- Current: 139uA (Normal Mode). Due to the low current, this board can be run using the TinyDuino coin cell option

Pins Used

- A5/SCL - I2C Serial Clock line
- A4/SDA - I2C Serial Data line

Dimensions

- 20mm x 20mm (.787 inches x .787 inches)
 - Max Height (from lower bottom TinyShield Connector to upper top TinyShield Connector): 5.11mm (0.201 inches)
 - Weight: 1 gram (.04 ounces)
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NOTES

- You can also use this shield without the TinyDuino – there are 0.1" spaced connections for power, ground, and the two I2C signals along the side of the TinyShield to allow you to connect a different system. **Warning:** *Revision 4 boards have a mistake on the silkscreen, the pin marked VCC is actually SCL, the pin marked SCL is actually SDA, and the pin marked SDA is actually VCC. If you connect this up the way it is marked you will not damage the board.*