



Adafruit LSM303AGR Accelerometer Magnetometer – STEMMA QT Qwiic

PRODUCT ID: 4413

Do you know which way the wind blows? You will now, with this triple-axis accelerometer/magnetometer compass module. Inside are two sensors, one is a classic 3-axis accelerometer, which can tell you which direction is down towards the Earth (by measuring gravity). The other is a magnetometer that can sense where the strongest magnetic force is coming from, generally used to detect magnetic north. By combining this data you can then orient your project!

We based this breakout on the latest version of the popular LSM303 sensor, the LSM303AGR. This compact sensor uses I2C to communicate and its very easy to use. Simply download our library and connect the SCL pin to your I2C clock pin, and SDA pin to your I2C data pin and upload our test program to read out accelerometer and magnetic field data.

To make life easier so you can focus on your important work, we've taken the LSM303AGR and put it onto a breakout PCB along with support circuitry to let you use this little wonder with 3.3V (Feather/Raspberry Pi) or 5V (Arduino/Metro328) logic levels. Additionally since it speaks I2C you can easily connect it up with two wires (plus power and ground!). We've even included SparkFun qwiic compatible STEMMA QT connectors for the I2C bus so you don't even need to solder! Just wire up to your favorite micro and you can use our CircuitPython/Python or Arduino drivers to easily interface with the LSM303 and get compass measurements ASAP.

It's fully assembled and tested. Comes with a bit of 0.1" standard header in case you want to use it with a breadboard or perfboard. Four 2.5mm (0.1") mounting holes for easy attachment.

TECHNICAL DETAILS

This board/chip uses I2C 7-bit addresses 0x19 & 0x1E

- ± 50 gauss magnetic dynamic range
- 1.5 mGauss magnetic sensitivity
- Accelerometer ranges: $\pm 2/\pm 4/\pm 8/\pm 16$ g
- As little as 1mg accelerometer sensitivity

Product Dimensions: 25.4mm x 17.7mm x 4.6mm / 1.0" x 0.7" x 0.2"

Product Weight: 1.7g / 0.1oz



