



ICM20948 9DoF Motion Sensor Breakout PIM448

This ICM20948 motion sensor is the bee's knees! Detect movement in nine different ranges of motion: 3-axis acceleration, 3-axis gyroscopic motion, and 3-axis compass heading.

Use this sensor in your DIY robot or drone builds to measure three different types of motion in three different axes accurately with 16-bit resolution. It's really low-power too, so it's ideal for embedding in battery-powered projects, and it's Raspberry Pi and Arduino-compatible.

It's compatible with our fancy Breakout Garden HAT (and pHAT), where using breakouts is as easy just popping it into one of the six slots and starting to grow your project, create, and code.

Features

- ICM20948 9DoF motion sensor (datasheet)
- $\pm 2/\pm 4/\pm 8/\pm 16$ g 3-axis accelerometer
- $\pm 250/\pm 500/\pm 1000/\pm 2000$ DPS (degrees per second) 3-axis gyroscope
- 3-axis compass with wide range up to ± 4900 μ T
- 16-bit data output
- I2C interface (address 0x68/0x69 (cut trace))
- 3.3V or 5V compatible
- Reverse polarity protection
- Compatible with all models of Raspberry Pi, and Arduino
- Python library

Kit includes

- ICM20948 9DoF breakout
- 1x5 male header
- 1x5 female right-angle header

We've designed this breakout board so that you can solder on the piece of right angle female header and pop it straight onto the bottom left 5 pins on your Raspberry Pi's GPIO header (pins 1, 3, 5, 6, 9).

Software

We've put together a Python library that you can use to read data from your ICM20948 9DoF Breakout, and an easy one-line installer to install everything.

Our software does not support Raspbian Wheezy.

Notes

Dimensions: 19x19x2.75mm



<https://shop.pimoroni.com/products/icm20948/6-13-19>