

Qwiic 9DoF IMU Breakout Board

SEN-15335

Product Overview

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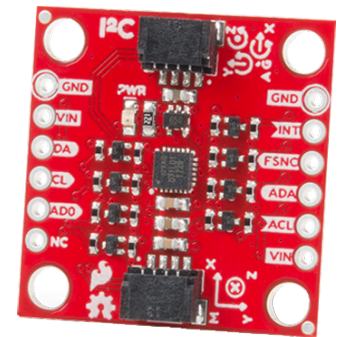
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Description

SparkFun Qwiic 9DoF IMU Breakout Board (SEN-15335) enables integration of the InvenSense ICM-20948 into the Qwiic prototyping environment. The ICM-20948 is a low-powered I²C and SPI enabled 9-Axis MEMS MotionTracking™ device ideal for smartphones, tablets, wearable sensors, and IoT applications. The Breakout Board also includes a logic shifter and broken out GPIO pins.

The ICM-20948 features 3-axis gyroscope, 3-axis accelerometer, 3-axis compass, and digital motion processor that offloads the computation of motion processing algorithms from the host processor, improving system power performance.

The SparkFun Qwiic Connect System is an ecosystem of I²C sensors, actuators, shields, and cables that make prototyping faster and less prone to error. The Qwiic-enabled boards use a common 1mm pitch, 4-pin JST connector to reduce the amount of required PCB space, and polarized connections mean users can't hook it up wrong.



Features

- Triple-axis MEMS gyroscope with user-programmable full-scale range of $\pm 250\text{dps}$, $\pm 500\text{dps}$, $\pm 1000\text{dps}$, and $\pm 2000\text{dps}$
- Triple-axis MEMS accelerometer with programmable full scale range of $\pm 2\text{g}$, $\pm 4\text{g}$, $\pm 8\text{g}$, and $\pm 16\text{g}$
- Triple-axis silicon monolithic Hall-effect magnetic sensor with full scale measurement range to $\pm 4900\mu\text{T}$
- I²C at up to 100kHz (standard-mode) or up to 400kHz (fast-mode) or SPI at up to 7MHz for communication with registers
- On-board Digital Motion Processor (DMP)
- Digital-output temperature sensor

Specifications

- 1.95V to 3.6V supply voltage range
- 2x Qwiic connection ports
- I²C Address: 0x69 (0x68 with jumper)

Mouser Part Number

[View Part](#)

To learn more, visit <https://www.mouser.com/new/sparkfun/sparkfun-quiic-9dufimu-breakout/>