Adafruit MSA311 Triple Axis Accelerometer – STEMMA QT / Qwiic

Product ID: 5309

Description

The MSA311 is a super small and low-cost triple-axis accelerometer. It's inexpensive, but has just about every 'extra' you'd want in an accelerometer:

- Three-axis sensing, 14-bit resolution
- ±2g/±4g/±8g/±16g selectable scaling
- I2C interface on fixed I2C address 0x62
- Interrupt output
- Multiple data rate options 1 Hz to 500 Hz
- As low as 2uA current draw in low power mode (just the chip itself, not including any supporting circuitry)
- Tap, Double-tap, orientation & freefall detection

The MSA311 is *very similar* to the MSA301, but is not a drop-in replacement. The I2C address has changed from 0x26 to 0x62!

This sensor communicates over I2C or SPI (our library code supports both) so you can share it with a bunch of other sensors on the same I2C bus. There's an address selection pin so you can have two accelerometers share an I2C bus.

To get you going fast, we spun up a custom-made PCB in the STEMMA QT form factor, making them easy to interface with. The STEMMA QT connectors on either side are compatible with the SparkFun Qwiic I2C connectors. This allows you to make solderless connections between your development board and the MSA311 or to chain with a wide range of other sensors and accessories using a compatible cable. QT Cable is not included, but we have a variety in the shop

We've of course broken out all the pins to standard headers and added a voltage regulator and level shifting so allow you to use it with either 3.3V or 5V systems such as the Raspberry Pi + Feather series or Arduino Uno respectively.

Comes with a bit of 0.1" standard header in case you want to use it with a breadboard or perfboard. Four mounting holes for easy attachment.

Watch on YouTube

https://www.youtube.com/watch?v=6GXRRuFuFy0&feature=emb_imp_woyt

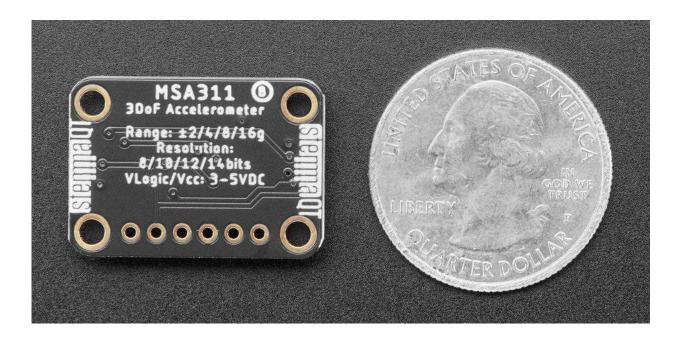https://www.youtube.com/watch?t=367&v=mg7_fhUGruQ&feature=emb_imp_woyt
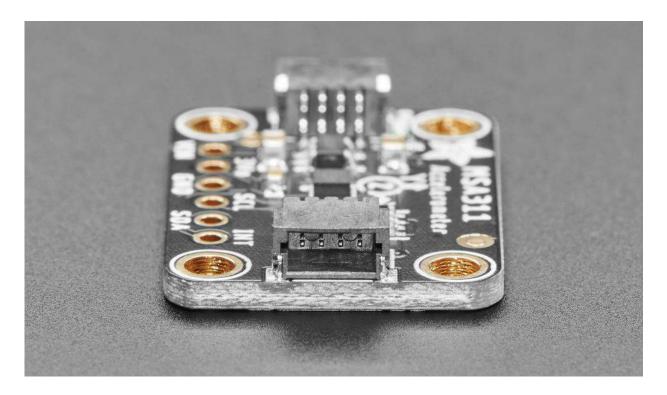
Technical Details

Product Dimensions: 25.2mm x 17.7mm x 4.6mm / 1.0" x 0.7" x 0.2"

Product Weight: 1.7g / 0.1oz

- MSA311 Datasheet

https://www.adafruit.com/product/5309/4-14-22