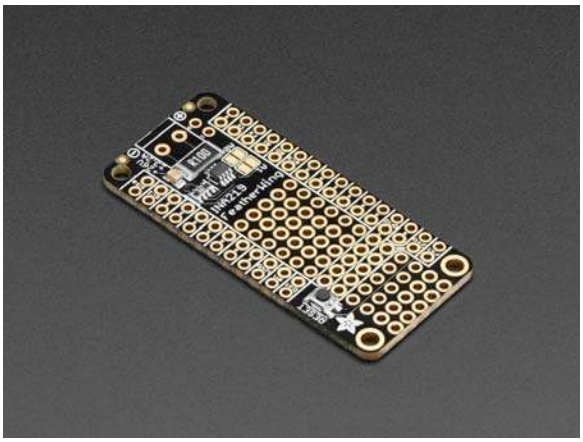
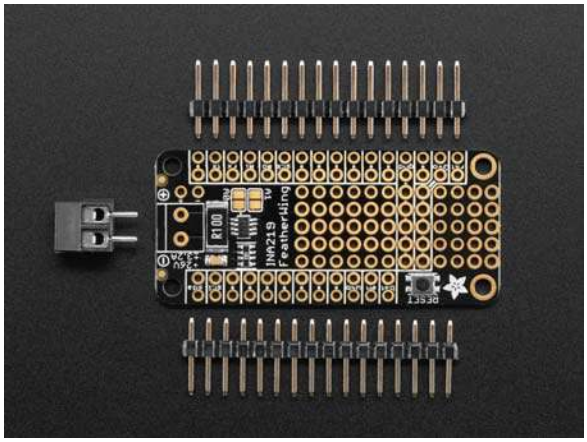
Adafruit INA219 FeatherWing

PRODUCT ID: 3650





Description

The INA219 FeatherWing makes power-monitoring problems a thing of the past. Instead of struggling with two multimeters, you can just use the handy INA219B chip on this breakout to both measure both the high side voltage and DC current draw over I2C with 1% precision. Works with any and all Feathers! Communicates over I2C so its super-simple to use, you can even change the I2C address to have up to 4 of these Wings on one Feather.

Many current-measuring devices are only good for *low side* measuring. That means that unless you want to get a battery involved, you have to stick the measurement resistor between the target ground and true ground. This can cause problems with circuits since electronics tend to not like it when the ground references change and move with varying current draw. This chip is much smarter - it can handle high side current measuring, up to +26VDC, even though it is powered with 3.3V. It will also report back that high side voltage, which is great for tracking battery life or solar panels.

A precision amplifier measures the voltage across the 0.1 ohm, 1% sense resistor. Since the amplifier maximum input difference is ±320mV this means it can measure up to ±3.2 Amps. With the internal 12 bit ADC, the resolution at ±3.2A range is 0.8mA. With the internal gain set at the minimum of div-8, the max current is ±400mA and the resolution is 0.1mA. Advanced hackers can remove the 0.1 ohm current sense resistor and replace it with their own to change the range (say a 0.01 ohm to measure up 32 Amps with a resolution of 8mA)

Technical Details

Product Dimensions: 51.0mm x 22.8mm x 3.6mm / 2.0" x 0.9" x 0.1"

Product Weight: 3.4g / 0.1oz