



## ADXL343 + ADT7410 Sensor FeatherWing

PRODUCT ID: 4147

Upgrade any Feather board with motion and precision temperature sensing, with this all-in-one sensing FeatherWing. It sports two fantastic sensors from Analog Devices: an ADXL343 triple-axis accelerometer and an ADT7410 precision temperature sensor.

Both sensors are connected over the shared I2C bus, so you can use it with any and all Feathers! We also break out the interrupt pins and address-selection jumpers in case you want multiple Feathers or have I2C address conflicts. We've got both Arduino (C/C++) and CircuitPython libraries available so you can use it with any Feather board and get data readings in under 5 minutes.

The Analog Devices ADXL343 has three axes of measurements, X Y Z. You can set the sensitivity level to either  $\pm 2g$ ,  $\pm 4g$ ,  $\pm 8g$  or  $\pm 16g$ . The lower range gives more resolution for slow movements, the higher range is good for high speed tracking. The ADXL343 is the latest and greatest from Analog Devices, known for their exceptional quality MEMS devices.

The Analog Devices ADT7410 is an I2C temperature sensor, with 16-bit 0.0078°C temperature resolution and 0.5°C temperature tolerance. Use with any microcontroller to get reliable temperature readings with ease.

Thanks to Digi-Key and Analog Devices for sponsoring the development of this breakout board – we've made the PCB "Digi-Key red" in their honor!

## TECHNICAL DETAILS

### ADT7410 Specifications:

- Up to 16-bit temperature resolution (0.0078°C per lsb), default is 13 bits (0.0625°C per lsb).
- Highly accurate temperature tolerances:
  - ±0.5°C from –40°C to +105°C (2.7 V to 3.6 V)
  - ±0.4°C from –40°C to +105°C (3.0 V)
- Configurable I2C address allows up to four sensors on the I2C bus

### ADXL343 Specifications:

- 3-axis MEMs digital accelerometer
- User-selectable output resolution:
  - +/- 2 g (10-bit data, or +/- 512)
  - +/- 4 g (11-bit data, or +/- 1024)
  - +/- 8g (12-bit data, or +/- 2048)
  - +/- 16 g (13-bit data, or +/- 4096)
- User-selectable data rate (0.1 .. 3200 Hz)
- Hardware support for free-fall detection, tap detection, and activity/inactivity