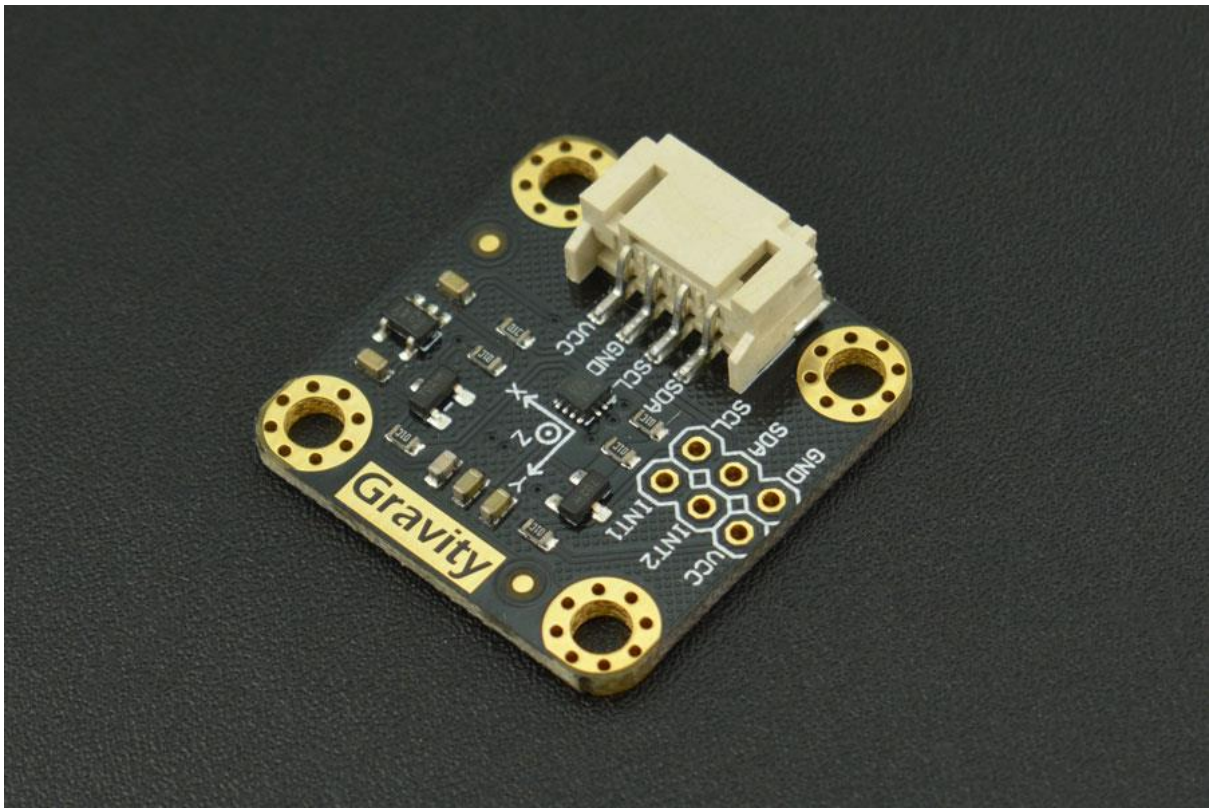
Gravity: I2C Triple Axis Accelerometer - LIS2DH

SKU:SEN0224



INTRODUCTION

DFRobot presents the ultra low-power Arduino triple axis accelerometer! This device is based around a MEMS LIS2DH chip solution and has high-performance ultra-low power mode. The module is fitted with a Gravity I2C interface for easy plug and play integration in to your projects. The build in LDO power management chip gives you a wide range of input voltages, from 3.3 – 5V. The on-board I2C level conversion also makes it compatible with 3.3 and 5V devices.

Compared to traditional ADXL345, The LIS2DH accelerometer has advantages such as extra stability and more efficient power consumption. Low power mode requires only 2µA, while normal mode requires 11µA. At maximum the module supports an output frequency of 5.3KHz. Sensitivity levels are adjustable to either +-2g, +-4g, +-8g or +-16g and the module supports 16-bit data outputs. There are 2 independent programmable interrupt generators for free-fall and motion detection, that will activate interrupt wake-up. This module has many potential applications including wearable tech, display orientation and impact recognition.

FEATURES

- Gravity plug and play interface
- Ultra-low power (2uA)
- Fast response rate (up to 400KHz)
- Low price
- Compact and easy to install

APPLICATIONS

- Motion-activated
- Display orientation
- Shake control
- Pedometer
- Gaming and virtual reality input devices
- Impact recognition and logging

SPECIFICATION

- Operating Voltage: 3.3V ~ 5V
- Operating Current: 2uA (low-power mode 50Hz ODR) / 11uA (normal mode 50Hz ODR)
- Interface: Gravity-I2C interface
- Adjustable Sensitivity: ± 2g / ± 4g / ± 8g / ± 16g
- Frequency: 1Hz ~ 5.3KHz
- 16-bit data output
- 2 independent programmable interrupt generators for free-fall and motion detection
- 6D/4D orientation detection
- Embedded Temperature Sensor
- Embedded FIFO
- 1 million grams of high impact resistance
- Operating Temperature: -40 ℃ ~ +85 ℃
- Module Size: 26.2 × 26.2 (mm) /1.03 x 1.03 (inches)
- Weight: 12 g