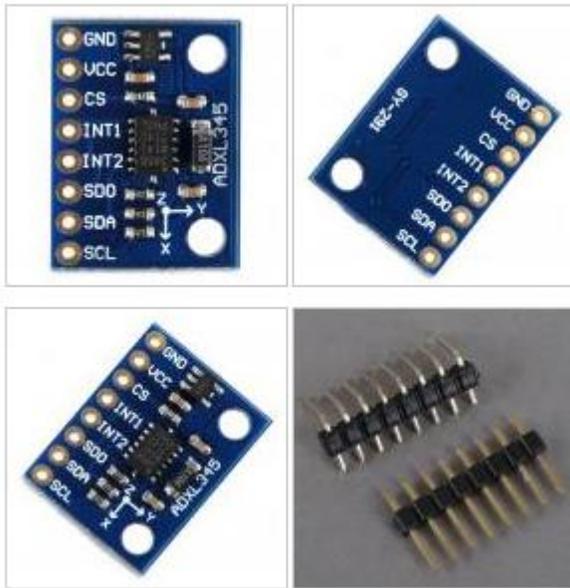# GY-291

ADXL345 Digital 3-Axis Acceleration of Gravity Tilt Module GY-291 for Arduino

Description:
- The ADXL345 is a small, thin, low power, well suited to measures the static acceleration of gravity in tilt-sensing applications, as well as dynamic acceleration resulting from motion or shock.
The GY-291 is a breakout board for the ADXL345. The ADXL345 is a small, thin, low power, well suited to measures the static acceleration of gravity in tilt-sensing applications, as well as dynamic acceleration resulting from motion or shock.

Digital acceleration module

Outline

The ADXL345 is a small, thin, low-power 3-axis accelerometer, can high
TAT ± 16 g acceleration measurement of the high resolution (13 bits). Number of digital outputs
It is for the 16-bit two's complement format

SPI (3-wire or 4-wire) or I2C digital interface.

ADXL345 is well suited for mobile device applications. It can tilt-sensing applications
Measuring the static acceleration of gravity can also measure the movement or shock lead dynamic plus
Speed. It has a high resolution (4 mg / LSB), measuring approximately 0.25 ° tilting
Angle changes. The accelerometer ADXL345 digital output, without the need for
The analog-to-digital conversion, which can save the system cost and board space. In addition,

ADXL345 is a small, thin, ultra-low-power 3-axis accelerometer, resolution
(13), the measurement range of ± 16g. The digital output data for the 16-bit binary

Complement format, via the SPI (3-wire or 4-wire) or I2C digital interface access.
ADXL345 is well suited for mobile device applications. It can be in tilt-sensing applications
To measure the static acceleration of gravity, can also measure the movement or shock lead dynamic
State acceleration. Its high resolution (3.9mg/LSB), capable of measuring less than 1.0 °
The inclination angle change.
The device offers a variety of special detection function. Activity and non-activity detection function through
By comparing any axis acceleration and a user-set threshold value to detect presence or absence of op
The action occurred. Percussion single vibration detection function can detect any direction and dual vibration
For. The freefall detection function can detect whether a device is falling. These
The function can be independently mapped to two interrupt output pin. Is the applicant
Please patented integrated memory management system with a 32 first-in, first-out
(FIFO) buffer that can be used to store data, so the host processor load
Minimize and reduce overall system power consumption.
Low-power mode to support motion-based intelligent power management, which extremely low
Power consumption threshold sensing and motion acceleration measurement.
ADXL345 3 mm x 5 mm x 1 mm, 14-pin small ultra-thin plastic
Package.

Description:

- ADXL345 digital 3-Axis acceleration of gravity tilt module
- Module type: GY-291
- Use the chip: ADXL345
- Power supply :3-5V
- Means of communication: the IIC/SPI communication protocol
- Measuring range: ± 2g ± 16g
- Schematics, manuals and reference documentation of relevant data
- 51, AVR, Arduino microcontroller test code
- 3-Axis, ± 2g / ± 4g / ± 8g / ± 16g
Package Includes:
- 1 x ADXL345 module

Dimensions

21 x 15 x 1 mm