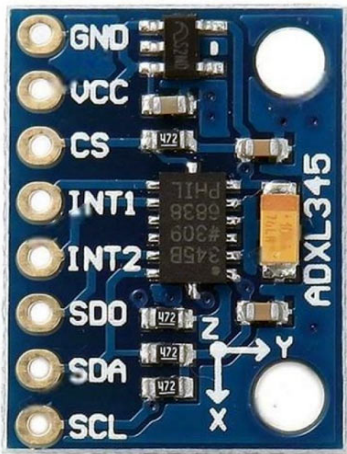


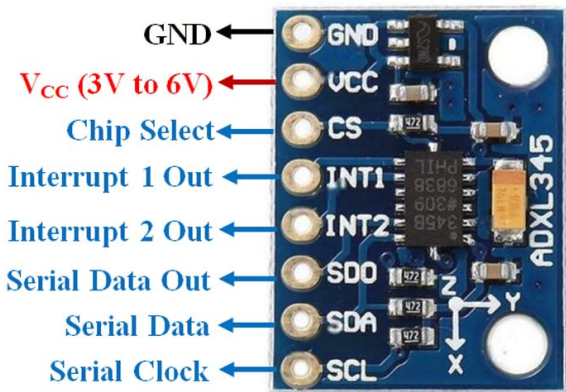
ADXL345 Accelerometer Module

19 May 2020 - 0 Comments



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ADXL345 Accelerometer Module



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ADXL345 Module Pinout

The **ADXL345** is a small, low power, complete 3-axis MEMS accelerometer modules with both I2C and SPI interfaces. The ADXL345 board feature on-board 3.3V voltage regulator and level shifter, which makes it simple to interface with 5V microcontrollers such as the Arduino.

ADXL345 Module Pin Configuration

Pin Name	Pin Configuration
GND	Ground Pin
VCC	Power Supply pin (3V to 6V)
CS	Chip Select Pin

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SDO	Serial Data Output
SDA	Serial Data Input & Output
SDL	Serial Communication Clock

ADXL345 Module Features & Specifications

- 3V-6V DC Supply Voltage
- On-board LDO Voltage regulator
- Built-in Voltage level convertor (MOSFET based)
- It can be interface with 3.3V or 5V Microcontroller.
- Ultra-Low Power: 40uA in measurement mode, 0.1uA in standby@ 2.5V
- Tap/Double Tap Detection
- Free-Fall Detection
- SPI and I2C interfaces
- Measuring Range: $\pm 16g$
- Measuring Values (-16g to +16g):
- X: -235 to +270
- Y: -240 to +260
- Z: -240 to +270

Alternate Sensor Modules: ADXL335 Accelerometer Module
 (<https://components101.com/modules/adxl335-accelerometer-module>), HMC5883L
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 Moisture Sensor (<https://components101.com/modules/soil-moisture-sensor-module>)

Related Components: ADXL345, Resistors, Voltage Regulator IC, Level Shifter IC

Brief about Accelerometer Module

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ADXL345 IC from Analog Devices is the brain of this module. The ADXL345 is a small, thin, low power, complete 3-axis accelerometer with signal conditioned voltage outputs. The product measures acceleration with a minimum full-scale range of $\pm 16g$.



How to Use the ADXL345 Accelerometer Module

ADXL345 Accelerometer module consists of 8 pins. Using the ADXL345 module with a microcontroller is very easy. Connect VCC and GND pins to 5V and GND pins of Microcontroller. Also, connect SCL and SDA pins to the SCL and SDA pins of Arduino.

The basic structure of the accelerometer consists of fixed plates and moving plates. When the acceleration is applied on an axis capacitance between fixed plates and moving plates is changed. This results in a sensor output voltage amplitude, which is proportional to the acceleration.

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- Cost-sensitive, low power, motion- and tilt-sensing applications
- Mobile devices
- Gaming systems
- Disk drive protection
- Image stabilization
- Sports and health devices






Component Datasheet

ADXL345 Accelerometer Datasheet






(https://components101.com/sites/default/files/component_datasheet/ADXL345 Accelerometer Datasheet.pdf)

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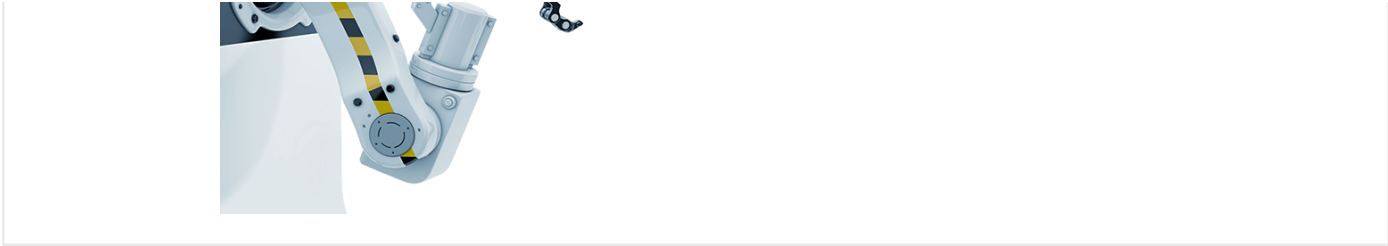
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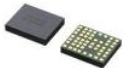
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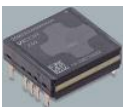
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