

ADXL345 IIC/SPI Digital Angle Sensor Accelerometer Module



Features:

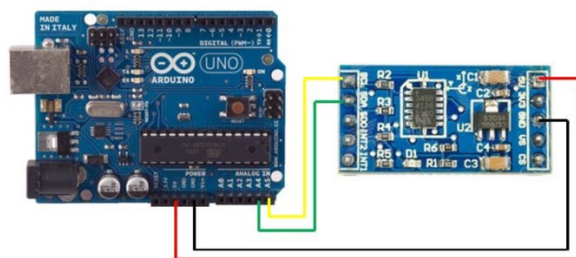
The ADXL345 is a digital, low-power, 3-axis MEMS accelerometer module featuring both I2C and SPI interfaces. With selectable measurement ranges from $\pm 2g$ to $\pm 16g$ and output data rates up to 3200Hz, it offers precision measurement with a resolution of 4mg/LSB. The module includes an onboard RT9161 regulator for stable performance in noisy environments and ensures compatibility with 3.3V and 5V systems. Its compact gold-plated PCB makes it ideal for integration into embedded systems, robotics, portable devices, and tilt/motion detection applications.

Specifications	
Chipset	ADXL345
Axes	3 (X, Y, Z)
Interface	I2C / SPI
Operating Voltage	3.3V – 5V
Voltage Regulator	RT9161 onboard
Measurement Range	$\pm 2g$ / $\pm 4g$ / $\pm 8g$ / $\pm 16g$
Resolution	4mg/LSB
Output Data Rate	10Hz – 3200Hz
Board Size	28mm × 14mm
PCB Type	Gold-plated
Operating Temperature	-40°C to +85°C
Applications	Tilt sensing, motion detection, vibration monitoring, robotics, portable electronics

Pinouts:

Pin Name	Type	Description
5V	Power	5V power input — use when powering the module from a 5V source (feeds onboard regulator)
3V3	Power	3.3V power input / regulator output — supply 3.3V directly here OR read as regulated 3.3V; DO NOT connect both 5V and 3V3 at the same time
GND	Power	Ground
VS	Power/Sensor VCC	Sensor VCC (connect to 3V3 if using 3.3V supply). On some boards VS is the ADXL345 VCC pin.
CS	Control	SPI chip select (active low). Use for SPI mode.
SCL	Clock	I2C clock (SCL) / SPI clock (SCLK)

SDA	Data	I2C data (SDA) / SPI MOSI (master out / slave in) for SPI writes
SDO	Data	SPI MISO (master in / slave out) / can indicate I2C address state
In2	Interrupt/Input	ADXL345 interrupt pin 2 (programmable interrupt output)
In1	Interrupt/Input	ADXL345 interrupt pin 1 (programmable interrupt output)



Product Pictures:

