

IMU 10DOF L3G4200D+ADXL345+HMC5883L+BMP180

Model: GY-801

Description

This IMU 1DOF is based on the sensor L3G4200D, ADXL345, HMC5883L and BMP180.

The L3G4200D is a low-power three-axis angular rate sensor able to provide unprecedented stability of zero rate level and sensitivity over temperature and time. It includes a sensing element and an IC interface capable of providing the measured angular rate to the external world through a digital interface (I2C/SPI).

The ADXL345 is a small, thin, low power, three-axis accelerometer with high resolution (13-bit) measurement up to 16 g. The ADXL345 is well suited for mobile device applications. It measures the static acceleration of gravity in tilt-sensing applications, as well as dynamic acceleration resulting from motion or shock. Its high resolution (4mg/LSB) enables resolution of inclination changes of as little as 0.25°. The Honeywell HMC5883L is designed for low-field magnetic sensing with a digital interface for applications such as low-cost compassing and magnetometry

The HMC5883L includes high-resolution HMC118X series magneto-resistive sensors plus an ASIC containing amplification, automatic degaussing strap drivers, offset cancellation, and a 12-bit ADC that enables 1° to 2° compass heading accuracy.

The BMP180 is the function compatible successor of the BMP085, a new generation of high precision digital pressure sensors for consumer applications. The ultra-low power, low voltage electronics of the BMP180 is optimized for use in mobile phones, PDAs, GPS navigation devices and outdoor equipment.

Features

Three selectable full scales (250/500/2000dps)

Factor in all g-ranges, up to 13-bit resolution at ± 16 g

12-Bit ADC Coupled with Low Noise ARM Sensors Achieves 5 milli-gauss Resolution in ± 8 Gauss Fields

Pressure range: 300 to 1100hPa (+9000m to -500m above sea level)

I2C interfaces

Power supply: 3-5v

Applications

Gaming and virtual reality input devices

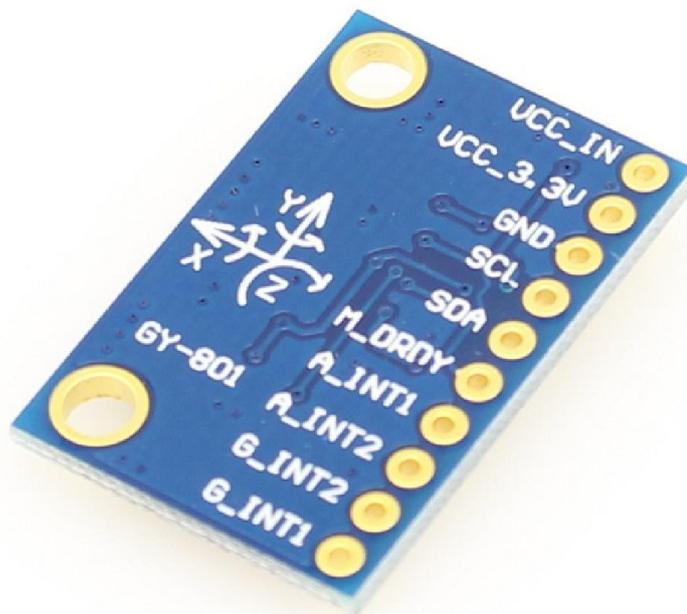
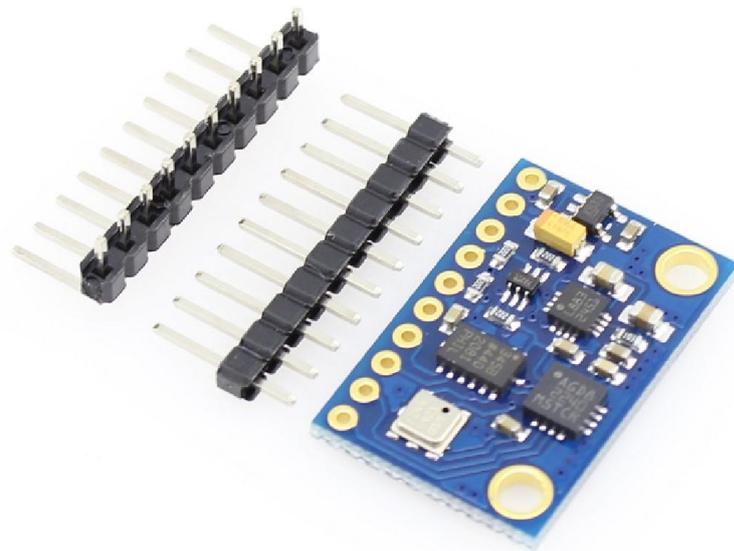
Vibration monitoring and compensation

GPS navigation systems

Appliances and robotics

Weather forecast





Document

[Schematic & Datasheet and Arduino code](#)