

MPU6050 3-Axis Acceleration + Gyroscope 6DOF - I2C Interface

The MPU6050 contains both a 3-Axis Gyroscope and a 3-Axis accelerometer allowing measurements of both independently, but all based around the same axes, thus eliminating the problems of cross-axis errors when using separate devices.



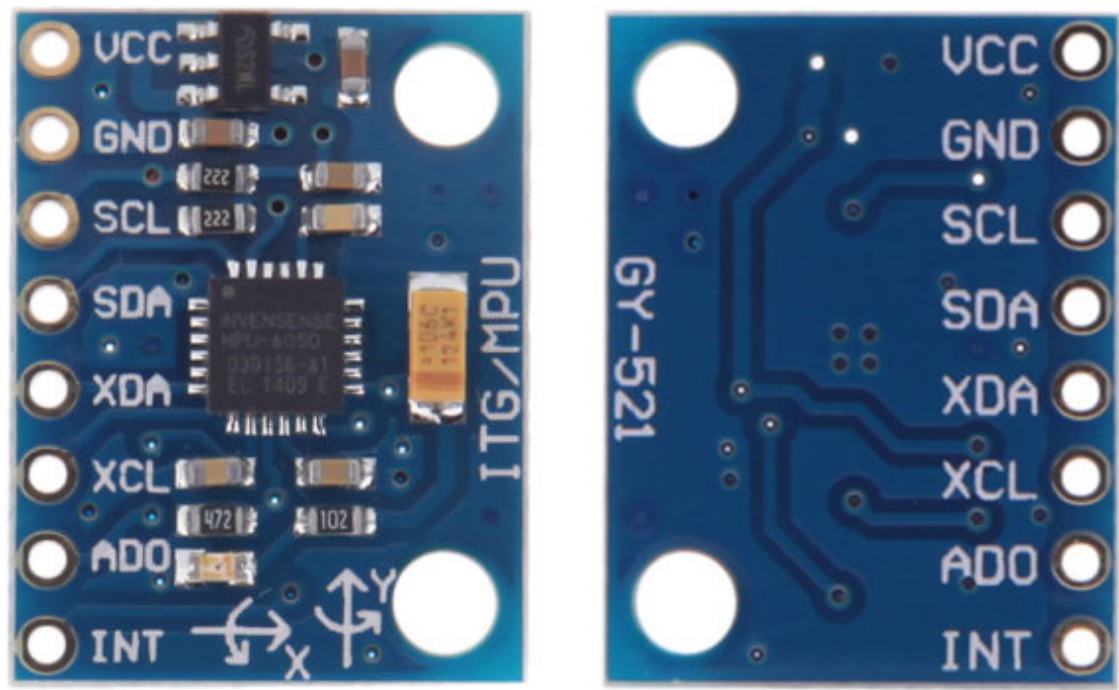
Quick Spec

- Chipset: Invensense MPU-6050
- Supply :3-5V (internal regulator)
- Communication modes: I2C
- Chip built-in 16-bit AD Converter
- Data Output - 16 Bit
- Gyroscope range: $\pm 250 \ 500 \ 1000 \ 2000 \text{ }^\circ / \text{s}$
- Acceleration range: $\pm 2 \ \pm 4 \ \pm 8 \ \pm 16\text{g}$
- Immersion Gold PCB, Pin pitch 2.54mm

What is inside the MPU6050

The MPU-6050 devices combine a 3-axis gyroscope and a 3-axis accelerometer on the same silicon die, together with an onboard Digital Motion Processor™ (DMP™), which processes complex 6-axis MotionFusion algorithms. The device can access external magnetometers or other sensors through an auxiliary master I²C bus, allowing the devices to gather a full set of sensor data without intervention from the system processor. The devices are offered in a 4 mm x 4 mm x 0.9 mm QFN package.

Board Layout



Circuit Diagram

