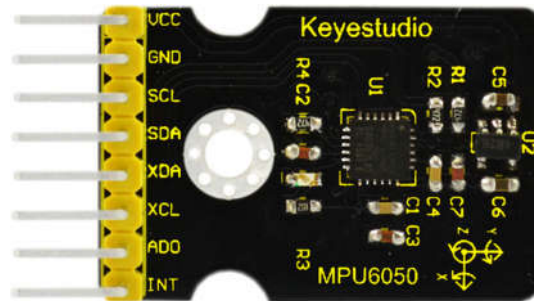


keystudio

keystudio MPU6050 Gyroscope and Accelerometer module



Introduction

The MPU-6050 is the world's first integrated 9-axis MotionTracking device that combines a 3-axis MEMS gyroscope, 3-axis MEMS accelerometer, and a Digital Motion Processor (DMP). With its dedicated I2C sensor bus, it directly accepts inputs from an external 3-axis compass to provide a complete 9-axis output. The MPU-6050 is also designed to interface with multiple non-inertial digital sensors, such as pressure sensors.

The MPU-6050 features three 16-bit analog-to-digital converters (ADCs) for digitizing the gyroscope outputs and three 16-bit ADCs for digitizing the accelerometer outputs. For precision tracking of both fast and slow motions, the parts feature a user-programmable gyroscope full-scale range of ± 250 , ± 500 , ± 1000 , and $\pm 2000^\circ/\text{sec}$ (dps) and a user-programmable accelerometer full-scale range of $\pm 2g$, $\pm 4g$, $\pm 8g$, and $\pm 16g$.

Specification

1. Chip: MPU-6050
2. Power supply: 3-5V(Internal low offset voltage)
3. Communication method: standard IIC protocol
4. Built in 16-bit analog-to-digital converter, 16-bit data output
5. Gyroscope range: ± 250 500 1000 $2000^\circ/\text{sec}$
6. Accelerometer range: $\pm 2\pm 4\pm 8\pm 16g$
7. Pin pitch: 2.54mm