MPU-9150 MODULE

MPU-9150 9DOF 9 1-Axis Gyroscope, Magnetic Field Accelerometer Diy PCB Board Kit to Replace MPU6050

Product description

The MPU-9150 is the world's first 9-axis tracking device designed for the low power, low cost, and high performance requirements of consumer electronic equipment, including smartphones, tablets, and usage sensors. And guess what? You can play with it.

This breakout table makes prototyping easy with the InvenSense MPU-9150 by breaking all the pins you need to the standard 0.1 "spaced heads. The board also provides I2C stop resistors and a solder jumper to change the I2C DIRECTION OF the device

The MPU-9150 is a packaged system (SiP) that combines two chips: The MPU-6050, which contains a 3-axis gyroscope, 3-axis accelerometer, and an integrated Digital Motion Processor (DMP), capable of processing complex 9-axis fusion algorithm; And the AK8975 3-axis digital compass. The part's 9-axis built-in fusion algorithms access all internal sensors to collect a complete set of sensors data The part is offered in a 4x4x1mm LGA package and upgrade compatible with the integrated 6-axis tracking device MPU-6050 provides a simple upgrade path and makes it easy to fit into space-constrained tables.

Features:

- Digital output 9 axis fusion data in rotation matrix, quaternion, Euler's angle, or raw material data format

- Three-axis angular velocity sensor (gyroscope) with a sensitivity of up to 131 LSBs / dps and a full scale range of ± 250, ± 500 ± 1000, and ± 2000dps

- Three-axis accelerometer with a programmable full scale range of ± 2g, ± 4g, ± 8g, and ± 16g

- Three-axis compass with a full scale range of ± 1200 and micro; T

- Reduction of adjustment effects and sensor drift by eliminating alignment errors of the dash cross axis between the accelerometer, gyroscope and compass

- 2.4V-3.46V VDD supply voltage range; VLOGIC 5% Vo VDD

- Gyroscope Operating Current: MA (total power, gyroscope at all rates)

- Gyro + Accel operating current: MA (full power, gyroscope at all rates, accel at a sample rate of 1 kHz)

- Gyro + Accel + Compass + DMP operating current: MA (full power, gyroscope at all rates, accel at a sample rate of 1 kHz, compass at a speed of 8Hz)

- Accel low power mode operating current: 10uA at 1Hz, 20uA at 5Hz, 70uA at 20Hz, 140uA at 40Hz

- Full Chip Sleep Mode Supply Current: 8 and Micro; TO

- 400 kHz fast mode I & sup; two; C serial host interface

- On-chip distribution generator with frequency variation ± 1% over the total temperature range

- 10,000g shock tolerant

- I2C stop resistors populated in

- All pins broken to standard 0.1 "spaced heads

- Solder bridge to change LSB from I2C direction