High Performance 6-Axis MEMS MotionTracking™ Device

GENERAL DESCRIPTION

The ICM-20602 is a 6-axis MotionTracking device that combines a 3-axis gyroscope, 3-axis accelerometer, in a small 3x3x0.75mm (16-pin LGA) package.

- High performance specs
  - Gyroscope sensitivity error: ±1%
  - Gyroscope noise: ±4mdps/√Hz
  - Accelerometer noise: 100µg/√Hz
- Includes 1K-byte FIFO to reduce traffic on the serial bus interface, and reduce power consumption by allowing the system processor to burst read sensor data and then go into a low-power mode
- EIS FSYNC support

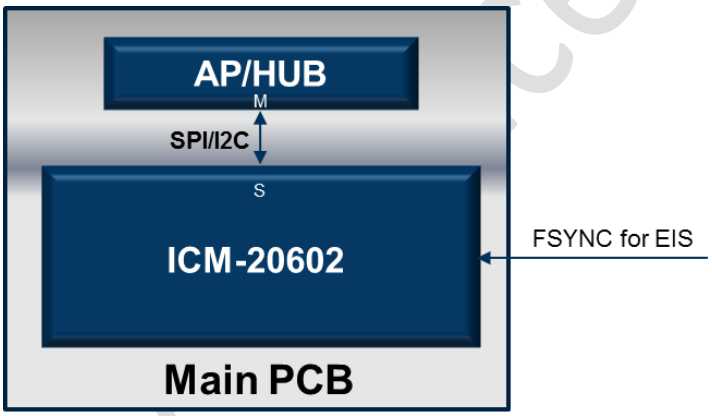
ICM-20602 includes on-chip 16-bit ADCs, programmable digital filters, an embedded temperature sensor, and programmable interrupts. The device features an operating voltage range down to 1.71V. Communication ports include I^2C and high speed SPI at 10MHz.

ORDERING INFORMATION

PART	TEMP RANGE	PACKAGE
ICM-20602†	–40°C to +85°C	16-Pin LGA

†Denotes RoHS and Green-Compliant Package

BLOCK DIAGRAM



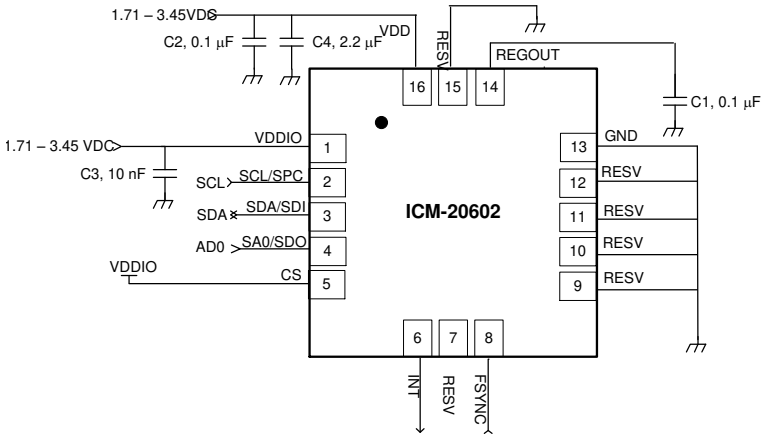
APPLICATIONS

- Smartphones and Tablets
- Wearable Sensors
- IoT Applications
- Motion-based game controllers
- 3D remote controls for Internet connected DTVs and set top boxes, 3D mice

FEATURES

- 3-Axis Gyroscope with Programmable FSR of ±250dps, ±500dps, ±1000dps and ±2000dps
- 3-Axis Accelerometer with Programmable FSR of ±2g, ±4g, ±8g and ±16g
- User-programmable interrupts
- Wake-on-motion interrupt for low power operation of applications processor
- 1K byte FIFO buffer enables the applications processor to read the data in bursts
- On-Chip 16-bit ADCs and Programmable Filters
- Host interface: 10MHz SPI or 400kHz Fast Mode I2C
- Digital-output temperature sensor
- VDD operating range of 1.71 to 3.45V
- MEMS structure hermetically sealed and bonded at wafer level
- RoHS and Green compliant

TYPICAL OPERATING CIRCUIT



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Document Number: PB-ICM-20602-00
Revision: 1.0
Revision Date: 11/30/2015