

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: $\pm 1\%$
 - Gyroscope noise: $\pm 4\text{mdps}/\sqrt{\text{Hz}}$
 - Accelerometer noise: $100\mu\text{g}/\sqrt{\text{Hz}}$
- 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

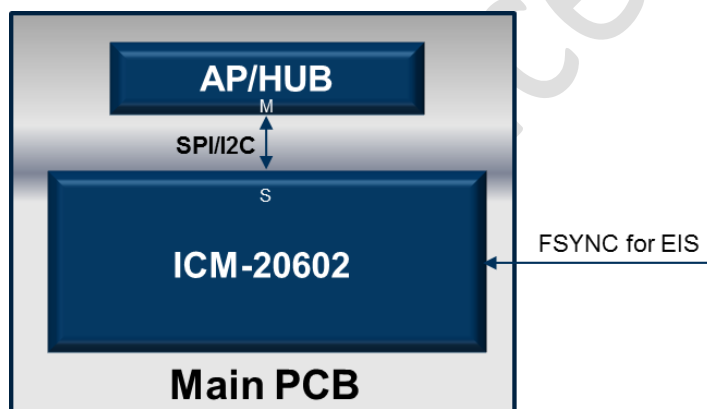
ICM-20602 includes on-chip 16-bit ADCs, programmable digital filters, an embedded temperature sensor, and programmable interrupts. The device features an operating voltage range down to 1.71V. Communication ports include I²C and high speed SPI at 10MHz.

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 $\pm 250\text{dps}$, $\pm 500\text{dps}$, $\pm 1000\text{dps}$ and $\pm 2000\text{dps}$
- 3-Axis Accelerometer with Programmable FSR of $\pm 2\text{g}$, $\pm 4\text{g}$, $\pm 8\text{g}$ and $\pm 16\text{g}$
- 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

