GENERAL DESCRIPTION

The ITG-1010 is a 3-axis MotionTracking device that includes a 3-axis gyroscope in a small 3x3x0.9 mm (16-pin QFN) package.

- High performance specs
  - Gyroscope sensitivity error: ±3%
  - Gyroscope noise: 0.01 dps/√Hz

- Includes 512-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

ITG-1010 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.

APPLICATIONS

- Handset gaming
- Location based services, points of interest, and dead reckoning
- Health and sports monitoring
- Drones

FEATURES

- Programmable FSR of ±250 dps, ±500 dps, ±1000 dps and ±2000 dps
- ODR (Output Data Rate) of up to 32kHz
- 512-byte FIFO buffer enables the applications processor to read the data in bursts
- On-Chip 16-bit ADCs and Programmable Filters
- 20MHz SPI read or 1MHz read/write
- 400 kHz I²C serial interface
- Digital-output temperature sensor
- VDD operating range of 1.71 to 3.6V
- MEMS structure hermetically sealed and bonded at wafer level
- RoHS and Green compliant

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>PART</th>
<th>AXES</th>
<th>TEMP RANGE</th>
<th>PACKAGE</th>
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<tbody>
<tr>
<td>ITG-1010+</td>
<td>X,Y,Z</td>
<td>-40°C to +85°C</td>
<td>16-Pin QFN</td>
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</tbody>
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†Denotes RoHS and Green-Compliant Package

BLOCK DIAGRAM

TYPICAL OPERATING CIRCUIT