

Triple-Axis Gyroscope For High Speed Motion And Wearables

GENERAL DESCRIPTION

The ITG-3701 is a 3-axis MotionTracking device that includes a 3-axis gyroscope in a small 3x3x0.75 mm (16-pin QFN) package.

- High performance specs
 - Gyroscope max FSR: ± 4000 dps
 - Gyroscope sensitivity error: $\pm 3\%$
- 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-3701 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.

ORDERING INFORMATION

PART	AXES	TEMP RANGE	PACKAGE
ITG-3701+	X,Y,Z	-40°C to +85°C	16-Pin QFN

†Denotes RoHS and Green-Compliant Package

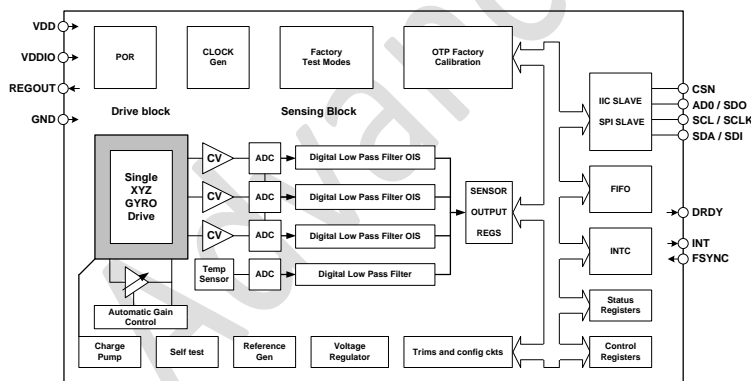
APPLICATIONS

- Sports and Health monitoring
- Wearable
- Motion UI
- Handset gaming

FEATURES

- Programmable wide FSR of ± 500 dps, ± 1000 dps, ± 2000 dps and ± 4000 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

BLOCK DIAGRAM



TYPICAL OPERATING CIRCUIT

