



KMX61G

**9-AXIS MAGNETOMETER / ACCELEROMETER / MICRO-AMP
MAGNETIC GYRO - KMX61G**



KIONIX SOLUTION
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DOCUMENTS

- Product Summary
- Kionix Announces Breakthrough Micro-Amp Magnetic Gyro Solution for Consumer Electronics Applications
- TN009 PCB Design Guidelines for 3x3 LGA Accelerometers
- Kionix Partners with Atmel to Enable More Intelligent Sensor Hub Management Solutions
- Kionix Synthetic Gyro Receives Windows 8.1 Certification
- Motion Matters - Kionix Launches Ground-breaking Micro-Amp Magnetic Gyro Solution
- TN007 Package Handling, Mounting, and Soldering Guidelines

The KMX61G is a high-performance, low-power, magnetometer-accelerometer device enhanced with integrated sensor fusion software and auto-calibration algorithms to deliver the industry's first highly accurate gyro emulation. Optimized for mobile applications, the KMX61G requires only 450µA of power – significantly less than any consumer gyro available today.

Not Recommended for New Designs.

FEATURES:

- Ultra low power: 1 µA typical in standby, 130 µA typical (accelerometer only), 350 µA typical (magnetometer only), and 450µA (operating, both magnetometer and accelerometer)
- 3x3x0.9mm, 16-pin LGA package
- 512-byte FIFO buffer with watermarking capability
- User-selectable ± 2g, 4g, 8g full-scale accelerometer range
- ±1200µT total magnetometer measurement range
- Embedded temperature sensor
- User-selectable ODR from 0.781Hz to 1.6KHz
- Magnetometer algorithms for auto-calibration and MI rejection
- Outputs with up to 14-bit resolution
- Digital (I2C) Output
- Supply voltages between 1.8 V and 3.3 V
- Excellent bias stability over temperature. Bias errors resulting from assembly can be trimmed digitally by the user.
- Embedded features
- User-configurable motion wake-up and back-to-sleep and wake-up functions
- Programmable interrupt engine
- Accelerometer self-test function

HIGHLIGHTS

- Emulated gyro output
- Ultra low power compared to traditional gyro solutions
- Magnetometer auto-calibration and MI rejection
- User-configurable motion wake-up function
- 512-byte FIFO buffer with watermarking capability

RELATED PRODUCTS

KMX61



PRODUCT SPECIFICATIONS

Axis	Magnetometer Range	Angular Velocity Range	G Range	Sensitivity	Resolution	Package Size	Pins	Package Type	Interface Output	Wakeup	Operating Temperature (Min.)[°C]	Operating Temperature (Max.)[°C]	Supply Voltage [V]
9	±1200 µT	2000 DPS Max	2g, 4g, 8g	16384 (± 2g), 8192 (± 4g), 4096 (± 8g), counts/g	16-bit	3x3x0.9mm	16-pin	LGA	Digital (I2C)	No	-40	85	1.8-3.3

EVALUATION BOARDS

Part Number	Buy Now	Description	Documentation
EVAL-KMX61G		KMX61G Evaluation Board	Board Schematic Board Layout

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