



Kionix Announces Breakthrough Micro-Amp Magnetic Gyro Solution for Consumer Electronics Applications

KMX61G with integrated sensor fusion software offers an 80% to 90% reduction in power compared to traditional consumer gyros

Ithaca, NY—[Kionix](#), Inc., a leading supplier of MEMS inertial sensors and software solutions, today announced the KMX61G – a high performance accelerometer-magnetometer sensor with industry-leading sensor fusion software that delivers the world’s first highly accurate gyro emulation using just 550µA of power. This represents dramatic savings in power compared to traditional gyros, providing new options for consumer electronics product designers.

Now a single 6-axis device can provide 9-axis accelerometer, magnetometer (e-compass) and gyro outputs with a power profile that enables applications previously unreachable using traditional 9-axis solutions.

“We see many applications in mobile devices that can benefit from gyroscope functionality but do not require the extreme performance of a traditional gyro.” said Jeremie Bouchaud, Director & Sr. Principal Analyst, iHS iSuppli. “The magnetic gyroscope can meet these needs well while offering power, cost and size benefits that are very attractive.”

In addition to Kionix’s proprietary calibration and sensor fusion algorithms, the KMX61G includes a range of capabilities to enable precise control of the sensor including 512-byte FIFO buffer with watermarking, embedded temperature sensor and a low-power, embedded motion wake-up function.

With applicability to the large and rapidly growing smartphone, tablet, and health and fitness devices market, the KMX61G is well-suited to help design engineers achieve new levels of product performance.

“Customers have told us they would like to include gyro capabilities in their product designs, but in many cases are unable to due to power, size or cost constraints.” said Scott Miller, Vice President of Engineering, Kionix. “We are excited that through the combination of high-performance hardware and innovative software the KMX61G delivers breakthroughs in all of these areas, providing our customers with a range of new design possibilities.”

For customers only requiring high performance e-compass capabilities without a gyro output, Kionix is also introducing the KMX61, a 6-axis e-compass device with auto-calibration software. The KMX61 delivers high sensitivity (0.05 $\mu\text{T}/\text{count}$) with stability over temperature ($\pm 0.05\%$ / $^{\circ}\text{C}$) and is well-suited for a range of smartphone, tablet and health and fitness applications.

Key Features and Benefits of KMX61G and KMX61

- 5 μA standby, 550 μA full operating power consumption
- 3x3x0.9mm package size
- User-programmable $\pm 2\text{g}/\pm 4\text{g}/\pm 8\text{g}$ full-scale accelerometer range
- $\pm 1200\mu\text{T}$ total magnetometer measurement range
- 512-byte FIFO buffer with watermarking capability
- Embedded temperature sensor
- User-selectable ODR from 0.781Hz to 1.6KHz
- Magnetometer algorithms for auto-calibration and MI rejection
- Low-power motion wake-up

- Supply voltages between 1.8 and 3.3V
- Excellent bias stability over temperature. Bias errors resulting from assembly can be trimmed digitally by the user.
- Accelerometer, magnetometer and emulated gyro (*KMX61G only*) outputs with up to 14-bit resolution
- Accelerometer, Magnetometer, Emulated Gyro Output (*KMX61G only*)

Availability

The KMX61G will be sampling in Q1 2013 to qualified customers with unit pricing of \$2.50 in quantities of 1,000. The KMX61 will be sampling in Q1 2013 to qualified customers with unit pricing of \$1.80 in quantities of 1,000. For more information, please email: salesna@kionix.com or contact the [Kionix sales office](#) nearest you.

About Kionix

[Kionix, Inc.](#), a wholly owned subsidiary of [ROHM Co., Ltd.](#), is a leading manufacturer of MEMS inertial sensors based in Ithaca, NY, USA. Leading companies in [consumer](#), [automotive](#), [health and fitness](#) and [industrial](#) markets use Kionix sensors and total system solutions to enable motion-based functionality in their products.

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Kionix is a registered trademark of Kionix, Inc.

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