Kionix Introduces FlexSet^{TM} Performance Optimizer for Ultimate Control of Accelerometer Power and Noise

Ithaca, NY—November 7, 2013 – [Kionix, Inc.,](#) a leading supplier of MEMS inertial sensors and software solutions, today announced its latest breakthrough in MEMS motion-sensing technology – FlexSet^{TM} performance optimizer. The innovative FlexSet^{TM} technology enables system designers, for the first time, to set and dynamically adjust power and noise values to meet their system's unique requirements and obtain optimal performance. The new technology is built into Kionix's latest accelerometers, including the [KX022](#) (2x2mm) and [KX023](#) (3x3mm), and will become a cornerstone of Kionix's low power, high performance products in the future.

FlexSet^{TM} includes an online and downloadable [graphical user interface](#) as both a design tool and informational reference. Representative of the actual register selections that designers will have when customizing the accelerometer parameters, this tool allows system designers to tune the performance of their system through precise design parameter choices. Instead of a limited number of preset values, designers will have control of a wide range of switch selections and pull-down menus that provide a variety of operational configurations including ODR, sample averaging, operating modes, sample buffering, bandwidth, and more.

The FlexSet^{TM} user interface demonstrates the resulting impact on power consumption and noise, so system designers can customize the accelerometer for their application and obtain optimized performance. It also includes a "Compare Cases" mode so designers can do side by side comparisons of various settings.

"Accelerometers are increasingly being used to help lower overall system power consumption while also performing mission critical user interface functionality in mobile devices. "FlexSet^{TM} gives designers sophisticated control over the accelerometer to reduce power consumption while maintaining required performance levels, said John Chong, Director of Product Engineering at Kionix. "The easy-to-use GUI tool lets them evaluate and tweak the exact parameters and settings for the accelerometer up-front in order to optimize their system's performance."

While system designers typically want the lowest power as well as the lowest noise values, these parameters present a tradeoff. More samples taken in a given timeframe and increased averaging improve the accuracy. But more complicated filtering and other features designed to improve the accuracy of the readings and avoid noise-related inaccuracies increase power consumption.

According to Chong, "Customers always want something just a little different than the standard offerings. But their individual requirements can vary dramatically. So we developed FlexSet™ to let them essentially design their own accelerometer. It gives designers the opportunity to use their skills and experience to fine tune a critical component within their systems and goes way beyond the standard user-selectable parameters offered today."

In addition, FlexSet™ enhances the programmability of integrated algorithms that allow system designers to easily implement other system capabilities, such as screen rotation, Tap/Double-Tap™ and motion wake-up functions. FlexSet™ can also turn on and off the algorithm engines, providing even greater power saving opportunities.

FlexSet™ is setting a new precedent for product customization and system optimization. Visit our website to experience FlexSet™ today.

About Kionix

Kionix, Inc., a global MEMS inertial sensor manufacturer based in Ithaca, NY, USA, offers high-performance, low-power accelerometers, gyroscopes, and 6-axis combination sensors plus comprehensive software libraries that support a full range of sensor combinations, operating systems and hardware platforms. Leading consumer, automotive, health and fitness and industrial companies worldwide use Kionix sensors and total system solutions to enable motion-based functionality in their products. Kionix is ISO 9001:2008, TS 16949, and TS 14001:2004 certified. Kionix is a wholly owned subsidiary of ROHM Co., Ltd.

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