



PRESS RELEASE FOR IMMEDIATE RELEASE – January 2014

For Editors

Providing Electronic Solutions

RM3100 Highest Performance Geomagnetic Sensor

Willow Technologies Limited (www.willow.co.uk) introduces the **NEW RM3100 industrial grade Geomagnetic Sensor Suite** for use in critical applications. With the **highest resolution** and **lowest-noise geomagnetic sensor in the market**, it provides accurate measurement of signals: <10 nT which is less than 0.1% of Earth's magnetic field. **Ideal for applications requiring absolute heading or orientation data, including augmented reality and location tracking.**



Established on PNI Sensor Corporation's proprietary magneto-inductive technology, these tiny sensors deliver high performance resolution and repeatability with extremely low noise, providing both high gain and high sampling rates and importantly, no hysteresis. These heading sensors also do not require any temperature calibration or current 'set and reset' pulses before each measurement.

Martin Pearce, Marketing Director, at Willow Technologies commented "The RM3100 delivers more than 20x higher performance than existing micro-electromechanical systems (MEMS) or Hall Effect sensors. Its improved performance is due to a new and improved ASIC, the MagI²C and offers both SPI and I²C interfaces for easy integration in a wide variety of systems."

The RM3100 is the latest addition to PNI's portfolio of geomagnetic sensors and includes three of PNI's newest magneto-inductive sensor coils as well as its new ASIC drive circuitry. It delivers improvement in gain, resolution and power consumption, with added flexibility of both SPI and I²C interfaces. It relies on PNI's proprietary technology to provide over **23 times better resolution and 27 times less noise than commonly used Hall Effect magnetic sensors**. These are critical attributes for **accurate absolute orientation** in a wide variety of applications.

Geomagnetic sensors are used to measure the Earth's magnetic field to provide absolute reference and heading. But a large challenge is the changing magnetic fields that temporarily distort the heading information, such as metal parts in furniture, a passing car, or nearby mobile phones and computers. Compensating for these and other transient magnetic anomalies requires the geomagnetic sensor to be able to precisely distinguish between sensor noise (blur) and real changes in magnetic field. PNI's geomagnetic sensors lead the field in their ability to reduce blur to establish the true magnetic field, outperforming other magnetic sensors by orders of magnitude.

"It is not surprising that this patented technology has been proven across a wide spectrum of applications, including motion tracking, compassing, game, TV and set top box controllers and magnetic field measurement", continued Pearce.

Additionally, PNI's Geomagnetic Sensors are simple to design in and the peak current requirement is dramatically less than Hall Effect sensors.

"This Geomagnetic Sensor Suite introduces a level of precision and performance for consumer applications, that was previously only available for advanced industrial applications such as advanced robotics, SONAR targeting and oceanographic & terrestrial mapping." Concluded Pearce.

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Editor Information

Founded in 1989, Willow Technologies is located in Copthorne, West Sussex in the UK. We provide electronic solutions to customers by designing, manufacturing and supplying components and systems globally to the electrical and electronic marketplace. Specialists in switching, sensing, resistive and hermetic seal solutions we have a wide portfolio of sensing technologies and over 60 years of application experience. Our in-house engineering capability and rapid prototyping facility for custom parts enable us to develop products to match specific application requirements. Willow is ISO9001:2000 registered.

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