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Trimble Introduces Micro-LTE UHF RFID Module

Expanded Product Line Includes RFID Module Optimized For Small Tag Populations and Supports Growing Demand for Embedded RFID

SUNNYVALE, Calif., Aug. 14, 2013 /PRNewswire/ --Trimble (NASDAQ: TRMB) today announced the addition of the Micro-LTE to its ThingMagic® Mercury®6e Series of embedded UHF RFID modules. The Micro-LTE joins the ThingMagic Micro to create a family of the smallest, 2-port, high-performance RFID modules on the market. The Micro is designed for applications with medium to large tag populations, while the new Micro-LTE is optimized for small tag populations.

"Embedded RFID reader modules are providing vendors, solution developers and end users with the inside track to RFID-enabling a host of applications and devices," said Michael Liard, vice president of AutoID at VDC Research, Inc. "Supported by new, innovative vendor product introductions, a set of unique value propositions and higher levels of awareness and interest among the end-user community, we expect the market opportunity for embedded RFID to ramp quickly. The number of potential use cases is increasing sharply across a number of industries and product categories."

In an extremely small form factor, the Micro-LTE implements market leading high-performance features including high data acquisition rates with every tag read and rapid adaptation to changing tag populations. Coupling these capabilities with read performance optimized for small tag populations makes the Micro-LTE ideal for use cases that require reading small numbers of tags rapidly and accurately, such as access control, consumables authentication, process control, and race timing. The low power consumption of the Micro-LTE fits battery operated applications and wide RF output range (-5 dBm to +30 dBm) are key requirements for RFID enabled printers, tag commissioning stations, and point of sales readers.

The RF transmit levels and receive sensitivity of the Micro and Micro-LTE deliver competitive advantages including the ability to read RFID tags at over twice the distance of alternative solutions, the ability to read smaller tags without forfeiting read distance, and the option for OEMs to incorporate smaller antennas into their products without sacrificing tag read performance. In addition, adjustable duty cycle settings of the Micro and Micro-LTE provide product specific advantages such as extended battery life of handheld readers and other mobile devices.

Like the ThingMagic Micro, the Micro-LTE is designed for high-volume production environments and supports both traditional board-to-board mounting and solder down surface mounting, reducing component and assembly costs for equipment manufacturers.

Additional features of the Micro-LTE include:

- Small size: 46 mm L x 26 mm W x 4.0 mm H (1.6 in L x 1.0 in W x 0.16 in H)
- EPCglobal Gen2 (ISO 18000-6C) protocol support and (IP-X and ISO 18000-6B optional)
- Support for two monostatic RF antennas
- UART and USB 2.0 control/data interfaces
- Two 3.3V bidirectional ports configurable as input (sensor) ports or output (indicator) ports
- North America, EU and PRC region support with a single SKU

Trimble's family of ThingMagic embedded UHF RFID modules have been adopted across markets and implemented in a number of new and innovative products and solutions:

Simplified Printing and Encoding

[Zebra Technologies](#) recently announced the ZD500R UHF desktop printer that takes advantage of the small form factor and optimized read rate of the ThingMagic Micro-LTE RFID module. The ZD500R is ideal for space constrained retail and healthcare environments that require accurate, on-demand printing and encoding. The ZD500R is Zebra's smallest and lowest cost UHF RFID printer to date.

"Increasingly, we've seen RFID applications expand beyond warehousing and manufacturing into retail and healthcare environments that demand smaller, lighter and more efficient devices," said Michael Fein, senior product manager at Zebra Technologies. "ThingMagic RFID modules and advanced firmware features help us deliver small, low cost, and feature complete products that are easy for users to operate and system integrators to deploy."

Powerful Handheld Devices

ThingMagic RFID modules are a popular choice for handheld device manufacturers. For example, [VerdaSee Solutions](#) introduced a new mobile device for first responder and military applications. By utilizing all four antenna ports of the ThingMagic M6e RFID module, this portable and ruggedized handheld provides users with an extended read distance required by mission-critical applications. Leveraging the small form factor and high-performance features of the ThingMagic Micro, ACURA Global offers the Smart AB-700 handheld reader for use in several commercial and industrial markets.

"By building upon the exceptional characteristics of the ThingMagic M6e RFID module in combination with our unique hardware and software capabilities, we were able to create a [Gen2 reader](#) that delivers superior speed, efficiency and range with regard to tag acquisition while eliminating the issue of non-targeted reads caused by backplane RF signals," said Reuben Vasquez, chairman and CEO of VerdaSee Solutions. "We found Trimble's ThingMagic team to be exceptionally cooperative during the design phase, and its high-quality, cost-effective module allowed us to produce a backward and forward compatible solution that filled a huge void in the marketplace."

Innovation Across Industry

Other partners are embedding ThingMagic RFID into products and solutions used in a variety of markets. For example, the [AdvanPanel](#) from Keonn Technologies integrates the ThingMagic Micro to read RFID-enabled Kanban cards in just-in-time inventory systems. [Venture Research](#) integrates ThingMagic modules into smart shelves, waste management solutions, fork lift readers, industrial portals and several other RFID-enabled systems. With similarly diverse customer bases, partners [Beijing Sillion](#) in Asia and [ACURA Global](#) in South America use ThingMagic embedded RFID modules to develop retail, supply chain, logistics, transportation, and healthcare solutions.

"Predictable performance, small form factor, and cost effectiveness are important when selecting embedded RFID components for our solutions," said Sun Hai, founder and CEO Beijing Sillion Technology Co., Ltd. "We choose to work with ThingMagic RFID modules because of their superiority in these areas and because of the continued advancements ThingMagic firmware provides beyond standard RFID offerings."

ThingMagic Firmware Advantage

ThingMagic firmware adds valuable real-world features to the primary functions delivered by RFID reader chips. This functionality gives customers an enhanced set of capabilities to develop innovative and customized RFID solutions for worldwide deployment, including multiprotocol support, multi-regional support, advanced data collection for each tag inventory, tag write, lock and kill features, and custom command support for a variety of RFID tags.

A Commitment to Ease-of-Use

Development tools available with all ThingMagic RFID modules include the ThingMagic Universal Reader Assistant utility used to initialize readers and perform common tasks such as selecting application specific performance settings, the Mercury API Software Development Kit (SDK) with sample applications and source code to help developers get started demonstrating and developing functionality, and a full hardware SDK for rapid prototyping.

Pricing and Availability

The Micro-LTE is available now. For information on pricing and volume discounts, please contact ThingMagic sales at: sales@thingmagic.com or +1-866-833-4069. International dialers call +1 617-499-4090.

About Trimble's ThingMagic Division

Trimble's ThingMagic Division is a leading provider of UHF RFID reader engines, development platforms and design services for a wide range of applications. ThingMagic develops products for demanding high-volume applications and provides consulting and design services to create solutions for challenging applications. ThingMagic's customers include some of the world's largest industrial automation firms, manufacturers, automotive companies, retailers, and consumer companies. Located in Cambridge, Massachusetts, the ThingMagic business was founded in 2000 by a group of visionary PhD graduates from Massachusetts Institute of Technology's Media Lab. ThingMagic is "The Engine in RFID™".

For more information, visit: www.thingmagic.com.

About Trimble

Trimble applies technology to make field and mobile workers in businesses and government significantly more productive.

Solutions are focused on applications requiring position or location—including surveying, construction, agriculture, fleet and asset management, public safety and mapping. In addition to utilizing positioning technologies, such as GPS, lasers and optics, Trimble solutions may include software content specific to the needs of the user. Wireless technologies are utilized to deliver the solution to the user and to ensure a tight coupling of the field and the back office. Founded in 1978, Trimble is headquartered in Sunnyvale, Calif.

For more information, visit: www.trimble.com.

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