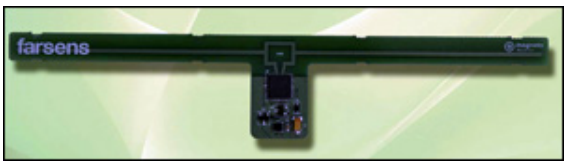
RFID News Roundup

The following are news announcements made during the past week by the following organizations: Farsens, STMicroelectronics; Hong Kong RFID Ltd.; Checkpoint Systems; LogiTag Systems; AMS; Quake Global, Inmarsat and Orbcomm.

Farsens Unveils Battery-Free RFID Magnetometer Sensor Tag



The Magneto sensor tag

Farsens, a provider of passive RFID-enabled sensor technology and wireless sensor networks, has introduced the Magneto, a battery-free RFID sensor tag capable of measuring magnetic fields. The Magneto, compliant with the EPC Gen 2 RFID standard, allows for a wide range of opportunities to monitor magnetic fields in applications for which accessibility is restricted or battery use is not recommended, according to Farsens. The company cites such applications as retrofitting piping systems (rust monitoring), industrial process automation (actions based on magnetic field changes) or using the tags as smart dust devices for military or homeland security purposes. The tag features an LIS3MDL magnetometer from STMicroelectronics, Farsens reports, with a measurement range from ±4 gauss to ±16 gauss, and comes in a variety of antenna designs and sizes to adapt performance to the required application in the 860 to 960 MHz band. The Magneto's reading distance is around 1.5 meters (5 feet), and it can be embedded in a wide variety of materials, such as plastics or concrete. In a product brief, Farsens notes that while commercial EPC Gen 2-compliant readers can be used to interrogate the tag, some considerations must be taken into account. For example, as the tag has a large supply capacitor connected to VDD (the IC's power supply pin), the system's power-up will be slow and can last for several seconds. In order to speed up the charge process, the reader must be configured to send power as continuously as possible, the company explains in the product brief. Once the supply capacitor is charged, the tag will respond with its Electronic Product Code (EPC). From this point forward, memory-access commands can be used to control the LIS3MDL sensor. Evaluation kits of the Magneto battery-free RFID sensor tag are available now.

Hong Kong RFID Ltd. Announces Upgraded Industrial Handheld D

Reader

The Empress HH mobile reader

Hong Kong RFID Ltd., an RFID hardware manufacturer, distributor and consultancy firm operating in Hong Kong and the South China Region, has announced the Empress HH (HKRAR-EM02-HH) mobile reader, an upgraded model that the company says is an all-in-one handheld 2.4 GHz Active RFID reader with an rugged industrial design. Weighing 280 grams (9.9 ounces) and measuring 158 millimeters by 78 millimeters by 28 millimeters (6.2 inches by 3 inches by 1.1 inches), the Empress HH is designed to be lightweight and compact in size, so it can be easily carried and used anywhere, the company reports. It has an IP 65 rating, signifying that testing has confirmed it to be dustproof and waterproof, that it can operate in temperatures ranging from -10 degrees to +50 degrees Celsius (14 degrees to 122 degrees Fahrenheit), and that it can withstand relative humidity of up to 95 percent (non-condensing) and a fall of up to 1.5 meters (4.9 feet) onto polished concrete, according to Hong Kong RFID. It features 256 megabytes of random-access memory (RAM) and 256 megabytes of read-only memory (ROM), uses the Microsoft Windows CE 5.0 operating system, and has a keyboard, a hands-free speaker, a microphone/receiver, a headset port, USB client and DC power inputs, an RS232C interface and an Ethernet RJ45 option. The device features a 3.5-inch display and a stylus touchscreen interface. The Empress HH works well

with a full range of Empress 2.4 GHz active transponders, the company reports, including the Hussar, Garrison and Tempcorder series, according to Hong Kong RFID. It also reports important transponder parameters, such as RSSI and battery status. The Empress HH replaces Hong Kong RFID's Empress HKRAR-5080EM model, which will be discontinued.

Checkpoint Report Finds Shrinkage Cost Retailers $112 Billion, But RFID Usage Is Mixed

Shrinkage, comprising shoplifting, employee or supplier fraud, organized retail crime and administrative errors, cost the retail industry more than $112 billion globally last year, according to the 2012-2013 Global Retail Theft Barometer, and represented 1.4 percent of retail sales, on average. The study, underwritten by an independent grant from Checkpoint Systems, was conducted this year by Euromonitor International. It was based upon in-depth phone and written survey interviews conducted in 16 countries among retailers covering 160,000 stores representing $1.5 trillion in sales during 2012, Checkpoint Systems reports. According to Carlos Perez, Checkpoint Systems' VP of global marketing, shrinkage represented approximately 1.5 percent of retail sales in the United States, at an estimated per-household cost of $302. "That figure represents what shrink costs U.S. consumers, because we take the assumption that retailers will pass on the cost to the consumers," Perez states. The lowest shrinkage rates were recorded in Japan (1 percent of retail sales), followed by Hong Kong, Australia and Germany (each at 1.1 percent), while the highest rates were recorded in Brazil and Mexico (1.6 percent). The rise is attributed to the slow economic recovery, as well as organized retail crime for high theft rates. Among the most stolen merchandise reported by the retailers, according to the study, were fashion accessories, jeans, footwear and lingerie/intimate apparel, high-value electronics (such as Apple products), consumer health products (such as allergy treatments), milk formula, electronic games and satellite navigation/GPS, and mobile device accessories

(such as cases and earphones). Those retailers with notable investments in loss prevention told researchers they believe that they manage shrinkage well. Perez pointed out that most of the retailers surveyed said their investment in loss prevention will be stable during the coming year (retailers in the United States, for example, will keep investments stable). China, Australia and Belgium retailers, on average, said they plan to increase spending in loss-prevention technologies. The study identifies RFID as an important technology for loss-prevention applications, in addition to traditional inventory management. Many retailers already have begun implementing RFID both for merchandise visibility applications and for shrinkage reduction. Nearly 50 percent of the retailers interviewed in France indicated that they implemented RFID within their retail outlets. The study found that RFID use is currently limited in Australia, Belgium, Brazil, China, Italy, Spain and the United Kingdom. Interestingly, Perez notes, 30 percent of the shrinkage rate is either administrative or supply related—areas in which source tagging via RFID can be used to reduce those problems. "It is surprising how little RFID source tagging has been installed around the globe," Perez states. "That is starting to change… But it's not where we'd expect it 10 years after Wal-Mart first issued its RFID edict to suppliers." (For more information about Wal-Mart's initial RFID requirements, see Wal-Mart Opts for EPC Class 1, V2.) The study did find some retailers planning to leverage source tagging. In Brazil, for example, the majority of retailers queried said they are not planning to increase their investment in loss prevention in the short-term, though a few did indicate that they planned the implementation of such measures as source tagging and RFID. In China, RFID use is currently limited, but retailers in that country reported planned loss-prevention efforts that include RFID. In Hong Kong, investment in loss-prevention technology is likely to remain relatively stable in the short-term, but there were a few reported planned efforts that included the implementation of RFID technology. RFID use is currently very limited in

Mexico, though a number of the retailers interviewed said they plan to increase their use of the technology. “Some retailers still have a way to go by expanding existing loss prevention solutions providing a sure return on investment to reduce theft,” said Per Levin, Checkpoint’s president and chief sales officer for shrink management and merchandise visibility solutions, in a prepared statement. “Forward-looking retailers are deploying RFID-based solutions that combine protection with visibility at the item level. This type of strategic platform, combined with investments in people and processes, opens up new horizons to reduce out of stocks, improve merchandise availability for consumers and increase sales for the retailers.” Interested parties can obtain a copy of the 2012-2013 Global Retail Theft Barometer report via GlobalRetailTheftBarometer.com.

Wyoming Medical Center Tracks Supply Replenishment Via LogiTag RFID System

The Wyoming Medical Center, located in Caspar, Wyo., has installed LogiTag Systems‘ StockBox, an RFID solution that leverages 13.56 MHz passive RFID tags compliant with the ISO 15693 standard, to more efficiently manage supplies stored in rooms across the center’s entire 700,000-square-foot facility. The StockBox is designed for consumables, such as surgical supplies, that are only used once. Once a predetermined amount of product is consumed, an RFID tag is placed within an RFID-enabled box, thereby triggering the reordering of that item from the warehouse or stockroom. The solution replaces an automated supply cabinet solution that the medical center had been leasing, which cost approximately $175,000 per year to maintain, according to LogiTag. While the cabinets kept supplies secure, nurses had to first enter a keypad code and then the items required, in order to obtain a count. This slowed the staff down, the company reports, and due to the extra steps, the count was rarely kept up to date. The medical center wanted a system that would be easier to use, and that

would improve the facility's material-management processes, save labor time and hospital funds, according to LogiTag. The new StockBox works with Spacesaver's FrameWRX health-care storage system, by which RFID tags have been placed on each bin in the storage system. When the quantity of a particular product within a bin reaches the designated reorder point, a staff member removes the tag and inserts it into the StockBox. The StockBox's built-in RFID hardware reads the tag's ID number and forwards that information to the StockBox software. In response, the software issues a notice to authorized personnel to replenish that item. When additional supplies arrive, a worker unlocks the StockBox, removes the RFID tag and places it back at the appropriate reorder point, thereby signaling that inventory levels are now up to date in the software. The Wyoming Medical Center worked with Improve Group, which initially installed the solution within one of the medical center's small ER supply rooms that held low-value inventory items. Improve Group installed 285 primary bins and 285 secondary bins, along with the StockBox. Since then, StockBoxes and FrameWRX have been installed in 15 more supply rooms throughout the facility. To date, LogiTag reports, the medical center has seen more than a 90 percent reduction in its annual maintenance costs, cut the amount of labor associated with counting supplies in half, and experienced no stock-outs. In addition, the center has eliminated expired items and waste, with right-size inventory. It has also been able to produce real-time reports, accessible by hospital employees, and it now has faster and easier access to supplies, as well as more time for patient care, according to LogiTag. Other health-care organizations using the StockBox solution include acute-care facility New York Hospital Queens (see New York Hospital Queens Tests RFID Inventory System).

AMS Schedules Multi-Project Wafer Start Dates for Analog Foundry Customers in 2014

The full-service foundry business unit of AMS has announced its IC prototyping service, known as the multi-project wafer

(MPW) or shuttle run, with an updated schedule in 2014. According to AMS, the prototyping service, which combines several designs from various customers onto a single wafer, offers cost advantages for foundry customers as the costs for wafers and masks are shared among a number of different shuttle participants. AMS' MPW service includes the whole range of 0.18µm and 0.35µm specialty processes. In order to provide leading analog semiconductor process technologies, manufacturing and services, AMS offers four MPW runs in 0.18µm CMOS (C18) process, as well as four MPW runs in its advanced 0.18µm high-voltage CMOS (H18) technology, the company reports. Based on IBM's CMOS7RF 0.18µm CMOS process, the H18 process technology offers RF integration and high-density system-on-a-chip (SoC) capability. According to AMS, it is suitable for such applications as smart sensors, sensor interface devices, smart meters, industrial and building controls, and light-emitting diode (LED) lighting control in the automotive, industrial and medical markets. For the 0.35µm specialty processes, which are based on the 0.35µm CMOS process transferred from Taiwan Semiconductor Manufacturing Co., a total of 14 runs will be offered in 2014: AMS' 0.35µm high-voltage CMOS process family with a 20-volt CMOS option, suited for power-management products and display drivers; a 50-volt CMOS option, optimized for automotive and industrial applications; and a 120-volt module that meets the requirements of sensor and sensor-interface chips in high-voltage applications. The advanced High-Voltage CMOS process with Embedded Flash functionality adds to AMS' MPW service portfolio. The CMOS-compatible 0.35µm SiGe-BiCMOS technology S35, AMS reports, enables RF circuit designs, with an operating frequency of up to 7 GHz combined with high-density digital parts on one single ASIC, AMS says. Overall, AMS will offer almost 150 MPW start dates throughout 2014. The complete schedule for 2014 has now been released, and detailed start dates per process are available on the Web at asic.ams.com/MPW. To take advantage of the MPW service, AMS' foundry customers must deliver their completed GDSII-data on

specific dates, after which they will receive untested packaged samples or dies within a short lead-time of typically eight weeks for CMOS and 12 weeks for high-voltage CMOS, SiGe-BiCMOS and Embedded Flash processes.

Quake Global Announces Modems Supporting New Inmarsat-Orbcomm Global Satellite M2M Standard

Quake Global, a manufacturer of machine-to-machine (M2M) devices for terrestrial and satellite networks, has announced that its QPRO modems are compatible with the new satellite M2M platform being introduced by Inmarsat and Orbcomm. The three companies have been working together to leverage each other's technologies and network access to provide worldwide M2M connectivity, according to Quake Global. The QPRO is a small, rugged, multi-band modem that provides a fully programmable stand-alone M2M solution. Quake's patented universal communications protocol, the company reports, provides a single, uniform set of commands to integrate terrestrial and satellite networks. "We are pleased to see that this consortium is cooperating for the purpose of promoting greater standardization in satellite M2M networks," said Polina Braunstein, Quake Global's CEO, in a prepared statement. "This clearly supports Quake's business philosophy of providing its customers cost-effective wireless network options without having to invest and sustain network-specific product lines." The Inmarsat/ORBCOMM QPRO devices are available now.

- Follow
- Follow
- Follow