Zebra Marries AIDC Technology To Android And iOS

New RFD8500 sled brings enterprise-class RFID and barcode scanning to Android and iOS mobile devices.

On April 15, at RFID Journal Live!, Zebra Technologies announced its first multi-operating system RFID sled designed to easily add high-performance RFID reading - with an option for additional 1D/2D bar code scanning - to a wide variety of Android™ and iOS™ mobile devices including mobile computers, smart phones, and tablets. The RFD8500 can cost-effectively transform mobile devices including Zebra's TC55 and MC40 and Apple's iPhone and iPod Touch into handheld RFID readers. To learn more about the new offering, SCAN/DCR spoke with Chris Schaefer, senior director, RFID market development.

We're already hearing great comments about this product from our network of industry players. One attendee who tried the unit on the show floor said the RFD8500 performed flawlessly. Schaefer told us he's heard the same. "This is a time of change and evolution," he stated. "We released the first integrated RFID reader with the launch of the MC9090Z rugged RFID handheld in 2003. But, that product was designed for more rugged use cases, and retailers told us they wanted a product more appropriate for use in stores...something that 'fit' their styles and needs. That feedback led to the 2010 release of our MC3190Z RFID handheld - a lighter, sleeker, more compact integrated reader specifically for use within the four walls of a business..."
"Zebra's new RFD8500 sled provides investment protection to businesses that want to leverage their existing mobile device strategy and augment it with our RFID and barcode data collection capabilities....."

Bob Sanders, Zebra senior vice president, Data Capture Solutions and Engineering Shared Services.

location. Then in 2013, we took a first step toward flexibility, releasing our first sled reader—the RFD5500—which was designed to RFID-enable Zebra's own mobile devices via a direct connection between the device and the sled. The 5500 sled worked great with some of our own line of mobile computers, but was not compatible with non-Zebra devices. With this launch of the 5500's little brother—the RFD8500—users now have superior RFID interrogating and barcode scanning combined with the ability to also leverage other Bluetooth mobile devices—including Android and iOS devices."

More on the sled...

According to Zebra, users can easily add high-performance next-generation RFID and 1D/2D barcode scanning to their mobile devices of today and tomorrow—simply, easily and cost-effectively. They can pair the Bluetooth-enabled RFD 8500 with a compatible Zebra or third-party mobile device and they're ready to go. Users can attach the mobile device to the RFD 8500 sled for a complete one-piece solution—or workers can put the mobile device in a pocket, on a lanyard, or anywhere within Bluetooth range and use the RFD 8500 in standalone mode. [Editor's note: This product is a UHF passive RFID reader; Zebra has lots of other RFID technology products, including active, HF, LF, NFC, etc.]

Whether workers are capturing RFID tags or barcodes, they get leading edge technology that delivers great performance. And with support for Android, iOS, and in the future, Windows, they get real investment protection—the RFD 8500 sleds they buy today will work with the devices they use now, and in the future.

"Our goal is to make RFID deployment easier," Schaefer told SCAN/DCR. "We can no longer design new technology that is limited to use with just our products. Some users want to integrate consumer-grade devices into their enterprise tracking solutions. So our sled has to be able to accommodate those devices, as well.

"Bluetooth capability is also a must," he continued. "Bluetooth enables the transfer of data from the sled to the computing devices. It also enables batching of up to 40,000 tag reads in case the sled moves out of range of the

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Bluetooth host device. The device will transfer the reads when it comes back in range of the Bluetooth device.” The RFD8500 has all this and is packaged in an ergonomic and elegant, well-balanced form factor.

**Key facts**

- The RFD8500 UHF RFID reader enables businesses to leverage previous mobile device investments by adding world-class data collection capabilities
  
  a. Zebra’s lightweight, ergonomic RFD8500 sled offers full-shift battery life, making it ideal for inventory and asset management, product search and replenishment applications in retail stores, warehouses and healthcare environments.
  
  b. The new RFD8500 reader provides businesses with the flexibility to communicate with a variety of host devices to read and write to EPC Class 1 Gen2 UHF tags and capture 1D and 2D barcodes via Bluetooth®. The RFD8500 also supports select features of the EPC Gen 2v2 standard providing retailers with additional protection of consumer privacy and against counterfeit products.
  
  ■ The RFD8500 sled’s patent-pending antenna technology represents a breakthrough design that provides maximum range, read/write performance and coverage.
  
  ■ The RFD8500 sled is available with a comprehensive accessory ecosystem including multiple adaptors that enable devices to easily mount onto the sled for easy single-handed operation.

**The radio**

Schaefer said the 8500 forgoes off the shelf RFID ASICS and modules in favor of a powerful new proprietary Zebra RFID software radio. "We can't let an off the shelf RFID component limit our performance or development options," he stated.

This sled can turn any mobile device into an RFID reader. The mobile device is the 'brain' for the reader. We've done a great deal of performance testing and will be starting beta testing with partners and end users in May. We expect to have the sled generally available in September. We will give customers the option of purchasing the sled with or without the imager for barcode reading. In addition, if they use the sled with a Zebra device, they will also have an exceptional ecosystem of accessories to choose from.

**Comments…**

Bob Sanders, Zebra senior vice president, Data Capture Solutions and Engineering Shared Services, commented, "Zebra's new RFD8500 sled provides investment protection to businesses that want to leverage their existing mobile device strategy and augment it with our RFID and barcode data collection capabilities. The RFD8500 offers numerous innovative design and technology features that will help organizations improve worker productivity and simplify inventory processes with the mobile device and operating system that best meet their needs."

Also adding his thoughts, Farrokh Abadi, Chief Strategy and Business Development Officer, Checkpoint Merchandise Availability Solutions, stated, "Our customers increasingly want to leverage the power of RFID to drive timely, accurate inventory information and enhance the shopping experience. Zebra's new RFD8500 RFID sled... hits retail's sweet spot by providing high performance in a flexible design, enabling businesses to cost-effectively add RFID capabilities to their existing mobile devices. The stylish and easy to use RFD8500 also supports a powerful set of security features while bringing true comfort to inventory management tasks."

**Closing**

"We expect to see the most traction in retail inventory management and other applications within the four walls, initially," Schaefer closed. "To speed adoption, we have made this product very easy to use. For example, the simple press of a toggle switch can change the device from a barcode reader to an RFID interrogator. We haven't finalized pricing yet, but we are always conscious of what the market will bear. The RFD8500 delivers a new level of data capture flexibility, positioning users to drive business success no matter how the mobile device market evolves."

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**Continued from page 1.**

twenty-three years, and has now chosen to move a step closer to retirement.

"It has been one of my most satisfying professional experiences to work closely with Doug to have him succeed me as CEO," said Richard A. Marshall, Chairman of the Board for IIMAK. "I am excited for Doug and for the future of IIMAK. I am passing the leadership role to Doug with extreme confidence that he will provide the guidance, energy and
wisdom to build IIMAK beyond what I have imagined."

Under Wagner's leadership, IIMAK completed four acquisitions, penetrating into the inkjet inks market and strengthening IIMAK's position in Mexico and Central America. He also supported capital investments for improved manufacturing efficiencies and enhanced sustainability.

"Doug has a strong vision for IIMAK's growth and a keen strategic focus to drive results," remarked Marshall. "IIMAK employees are a dedicated team and will continue to bring new levels of innovation, customer care and value to our industries."

Prior to joining IIMAK, Wagner spent nine years with Avery Dennison in its Retail Information Services Group (RIS) last holding the position of vice president of sales & marketing for the Europe, Middle East and Africa region. He began his career working for the United States Department of State serving as a member of the Foreign Service at U.S. Embassies in Tunisia, Guatemala and Saudi Arabia. He holds an undergraduate degree in International Studies from West Virginia University.

Moving forward...
To hear more on Wagner's thoughts about the promotion, we spoke with him in a special SCAN/DCR interview. He told us, "This promotion is very rewarding for me. I am humbled but also energized about the recognition of my work at the company and about moving IIMAK forward. Dick [Marshall] has served as my friend and mentor. He has helped me get to this point in my career, and for that I am eternally grateful."

Asked about his goals for IIMAK and what changes we may see, Wagner stated, "Internally, I don't see any changes coming. Although Dick didn't found the company, he has certainly been instrumental in building it to what we see today. His mantra is to treat employees and customers with respect. That will never change as long as I am at the helm.

"He also built a solid foundation for us to grow on," the new CEO continued. "On an external basis, I will be responsible for revenue growth. We have already shown that we can diversify our company through strategic acquisitions, even in non-adjacent markets. For instance, we have our iMED Medical Manufacturing Solutions, which is a separate IIMAK Division specializing in medical device manufacturing services. We have also expanded geographically. We have 1,000 employees worldwide. Although we are headquartered in Amherst, New York, we have additional manufacturing, distribution and sales operations in Belgium, Brazil, and Mexico. In November 2013, we announced the acquisition of Industrial de Informática (IDISA) thermal transfer ribbon and imaging supplies business. The new company is known as IIMAK IDISA."

After telling us about the goal of diversification, Wagner made it clear that IIMAK's core business is TTR and that will remain the same. "We have to create new platforms for growth," he explained. "The more acquisitions we execute, the more we learn. But we will never abandon our TTR customers. That's what our business was founded on."

A return to troubled times?
Over the years, Dick Marshall was a staunch opponent of the pricing wars that plagued the TTR industry. Many of the giant TTR players were trying to "buy" the market by quoting ridiculously low prices. Margins were so low that it didn't leave a lot of room for investment in innovation. For a while, manufacturers seemed to come to their senses, but sadly, Wagner said there is evidence that this is occurring again.

Final comments
Wagner said he wanted to leave us with two thoughts/messages. "Even as we diversify, we will continue to invest heavily in TTR technology. There are still emerging needs in the market. And my second message relates to Dick Marshall. It is easy for me to put him on a pedestal; he has been my friend, coach, and mentor. But the industry should remember how much he has done to promote AIDC during his tenure at IIMAK. Although he is stepping away from the everyday grind of running the business, he will still be around to give us advice when we need it."

For more information: IIMAK, Amherst, NY, PH (716) 691-6333, ext 2165, Email: Jennifer.Georger@IIMAK.com. SCAN

Checkpoint Stays Nimble In Changing Retail Market

New "Slim" and "Whisper" tags target health, beauty, and cosmetics applications.
As RFID continues its steady march into new territories, it has become obvious that there is no "one-size-fits-all" technology to serve the growing list of applications. Major providers such as Checkpoint Systems and Impinj are working together to engineer specific products for each
market. Checkpoint's new Slim and Whisper tags using Impinj Monza R6 chips is a good example of how new market needs have brought about innovation.

At RFID Journal Live!, Checkpoint launched its new offerings which focus on health, beauty, and cosmetic products. These retail items are often targeted by shoplifters because of their small size and relatively high value. According to Retail Loss Prevention Executives, mascara is the most commonly pillered cosmetic for ORC (Organized Retail Crime). The real point here is that these items require special RFID tags for both inventory management and antitheft measures.

To learn more about the market and the new tags, SCAN/DCR spoke with Su Doyle, industry program manager, Checkpoint Systems. Doyle told us, “We had many inquiries from retailers asking us for products like the new Slim and Whisper tags. It is fairly well-known among industry players that apparel is leading the way in item-level RFID adoption, and retailers are expanding its use to other product categories. In the big department stores where apparel often is sold, there are usually health and beauty items on sale, as well. Health and beauty items are well suited to RFID inventory management since they are high profit items with complex assortments. But apparel tags aren’t a great fit, since these items require special tags that are small and that do not interfere with branding.”

About the tags…
The Slim is offered with a label size of 88x7mm and integrated with the latest Impinj® Monza® R6 chip. It has been optimized for performance with all of Checkpoint’s RAIN (standing for RA-dio frequency I-dentificatio-N) RFID solutions, including its RFID EAS Overhead Solution, the EVOLVE® E10 Exclusive pedestal and other Merchandise Visibility solutions. The Slim tags can be applied over the packaging of numerous health/beauty/cosmetics products and are tamper resistant.

“We have worked with chain drug stores to engineer products for their special needs,” said Doyle. “The old way of thinking was to hide a (EAS) tag inside item packaging. But, what we have found in our studies is that, if there is a visible circuit, potential thieves are less likely to try to shoplift the product. The trick is to put a visible circuit on a product without interfering with bar codes and branding. We have been providing RF EAS visible tagging in recent years and now we can provide RFID-based EAS as an option as well. As a sidenote, VPs of Loss Prevention at multiple Food and Drug retailers have stated that black mascara is the number-one stolen product. It is a small item with high resale value.”

The Whisper is offered with a label size of only 12x12mm and integrated with the Monza R6 chip. It is the smallest form factor in its category and comes with removable adhesive so that no marks are left on cosmetics products.

“We are excited to see Checkpoint driving always-on inventory management solutions using the Slim and Whisper labels with our Monza R6 chip featuring AutoTune™,” said Craig Cotton, VP of Marketing and Product Management at Impinj. “We look forward to a continued partnership with Checkpoint to enable new solutions and tagging of new categories of items. The Monza R6 chip includes Integra technology that enables RAIN RFID labels to deliver higher data reliability and accuracy, which is a must for retail deployments.”

Availability and feedback
According to Doyle, Checkpoint/Impinj developed this tag based on requests from multiple retail partners, and will have more feedback to share as the tags are deployed in high volume - the new tags became available last week. “We couldn’t even have developed tags like this a year ago,” she confided. “It’s only because of the Impinj Monza R6 that we are now able to offer these tags. The Monza R6 is really a big deal for extending item-level RFID to multiple product categories.”

The tags are designed for inventory purposes, but with Checkpoint's RFID-EAS readers and software, they can also protect against theft. With always-on RFID tracking, stores will know if an item has left the shelf and when it hits the checkout counter. If the item is taken from the shelf and does not subsequently register as being sold, it can trigger an alert. Doyle said more retailers are starting to use a single hybrid tag that serves for both inventory and EAS (electronic article surveillance) purposes. While item-level RFID has seen greater growth in Europe, Doyle said that apparel and department store retailers such as Kohls have been very proactive in adopting RFID in the U.S.

Adoption
In new stores, stores that are just being built, retailers are installing dual RF/RFID readers. By having the ability to read both RF EAS and item-level RFID tags, they protect the investment in the RF technology they are already using while at the
same time, getting ready for the future. It is easier to install RFID always-on readers in new construction and build it into the store design than it is to integrate it into existing stores.

Back in 2011, Checkpoint developed its OneTag™ approach, to enable retailers to obtain these dual benefits from one tag, and we developed our first RFID Overhead EAS solution. The next step was to design an even more unobtrusive exit door solution with a more robust range for wide entrances and high ceilings, and greater read accuracy. Retailers and mall owners are increasingly looking at ways to improve the aesthetics at the front of the store, in addition to making the sales floor layout more open looking. With this in mind, they obviously are looking for EAS systems that are "out-of-sight" but still provide the merchandise protection they need. The company's RFID-based EAS Overhead 2.0 product can be flush mounted or installed inside the ceiling and it has been designed to resemble a speaker mesh. It offers protection for stores with entrances up to 20-foot wide and 12-foot high, and we continue to work with retailers as they come up with new store designs.

The Overhead 2.0 has a new smaller form factor -22 inches by 17 inches -complemented by two small satellite antennas. Because of its compact size, it can easily be installed around lighting, exit signs, and other items typically found at the store front. The system also provides the ability to locate and track items, stationary or moving in or out of the store, and to distinguish between items merchandised near the exit door and items actually leaving the store. It’s all about reliably knowing what’s happening at the front of the store. Now retailers can truly rely on RFID to provide merchandise visibility, inventory accuracy, and loss prevention throughout the store and at the exit door/s.

Although always-on technology is the "coming trend," Doyle said the ideal solution will include both overhead and handheld readers. "Most retail employees aren't fond of doing physical inventories," said Doyle. "With both always-on and handheld readers, inventory functions will be monumentally easier. The store wins; the employees win. And ultimately, consumers win because the items they want are more apt to be in stock with more accurate inventory counts."

Closing

As we ended our interview, Doyle stated, "Things are changing quickly. Retailers have more technology options than ever before when it comes to inventory/supply chain tracking. There will be growing pains and process adjustments as they adopt these new offerings, but as an industry, we have to make integration as easy as possible. We also have to offer sustainable results."

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Janam Launches Revolutionary Palm-Sized RFID Reader

**CEO says this is a game changer for the industry.**

There are a number of ways to read RFID tags. One approach is to take a handheld device—a mobile computer, smart phone, etc.—and attach it to a "sled." Janam is taking a different approach with the launch of its new XM2-RFID for Rail mobile computer. A fully rugged, highly capable, handheld RFID reader, the XM2-RFID for Rail offers best-in-class read range and battery life, and according to the company, is the first fully integrated handheld computer to deliver the ability to read Automatic Equipment Identification (AEI) RFID tags to the palm of the hand.

Harry B. Lerner, CEO, Janam.

The XM2-RFID for Rail provides the power and performance required by mobile workers in freight and rail operations. With its versatility and lightweight ergonomic form factor, it is specially-designed to read the AEI RFID tags required on all railcars in North America and widely used globally, allowing rail and intermodal companies to track and monitor equipment effectively. Lighter and more affordable than competitive solutions, the 13-ounce XM2-RFID for Rail mobile computer reads AEI tags from at least one meter (3.3 feet) away. And, after five hours of continuous use and more than 40,000 tag reads, a customer’s unit recently still had 20% remaining in its battery.

"With more than 1.3 million railroad cars in North America equipped with AEI RFID tags, the rail industry has been eagerly awaiting a device like the Janam XM2-RFID for Rail," said Harry B. Lerner, CEO of Janam. "Because its size, battery life, tag reading performance, computing power, and price..."
The RFID reader was designed by Janam's engineering staff to fit into the small palm-sized device.

*More on the pricing*...

As Lerner noted above, the XM2-RFID will be priced at "less than half of what competitive offerings are bringing." We pushed him to give us some better perspective. "Most of the technology in the market is based on attaching a mobile computing device or a smartphone to an RFID reader," he explained. "By the time you figure the cost of the computing device and the reader/sled, you'll spend anywhere from $4,000 to $5,000. Also, in most cases there will be an upcharge to make the devices compatible with rail tracking. Our reader starts at $1,895 list price and offers more features, easier use, and much better ergonomics."

*Final words*...

"The XM2-RFID is a true game changer for the RFID industry and especially for railroad car tracking," Lerner closed. "Janam is showing the world how capable we are at designing ergonomically sized products that meet specific tracking/mobile computing needs. We are confident the XM2-RFID is going to be a winner in its category."

For more information: **Janam Technologies**, LLC, Woodbury, NY, PH (516 677-9500 Ext. 104, Email: traci.hoch@janam.com, Web site: www.janam.com

In our next issue, we will have a story from Impinj. Craig Cotton will give us his views of the recent **RFID Journal Live!** show and info on new Impinj RFID offerings that our changing the industry. **SCAN**

**TECHNOLOGY AND STANDARDS**

*by Steve Halliday*

**RFID JOURNAL LIVE - AN UPDATE**

The **RFID Journal Live!** show was a few weeks ago and many of us are still working on projects associated with the show. For those that are involved in RFID this show is the primary trade show/conference.

This year the event took on a new location and a new challenge. San Diego, CA gave the west coast folks a chance to visit the show without the expense of traveling across the country. Of course for us (as...
I am sure there were a host of new things at the show that I missed but a few that I did catch that were very exciting were:

- Both **NXP** and **EM** announced new passive UHF (RAIN) chips at the show including the ability to do cryptographic encryption on the chip. This adds a new level of sophistication to the use of RFID and I am looking forward to seeing the first applications to take advantage of the new technology.
- **Impinj** announced they had shipped their ten billionth RAIN chip. That’s ten billion items (things) tagged in the IoT from Impinj alone.

Talking to some of the exhibitors, the show felt smaller, but the isles were certainly smaller than last year so that may have been an illusion. The traffic seemed to be slower, but everyone I talked to said they felt it was good quality traffic. I didn’t get to attend any of the conference sessions other than the initial welcome and keynote and my session in the IoT section. The impressions were good, and the range of sessions met the standard that we have come to expect from Live!. Congratulations to the staff on a great event.

Is your company keeping up with the rapid changes in international standards that relate to AIDC? Are you aware of how the Internet of Things will affect your business? High Tech Aid can provide detailed, customized reporting, monitoring, and meeting attendance for your company needs. Email steve@hightechaid.com for more information.

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