

Next-generation reader module introduced

The WJR-7000 next-generation reader from WJ Communications (www.wj.com) is designed to support full 1 W Gen2 dense reader spectrum, a fast data rate of 240 KHz, and worldwide operation capability in a module the size of a business card. Operating over the UHF frequency band (902 MHz-928 MHz), WJR-7000 includes the RF, digital circuitry and embedded firmware required for Class 1 Gen1 ISO18000-6C (UHF Gen2) and ISO 18000-6B international standards. It leverages the ubiquitous PCMCIA type II package with 3.3 V CMOS levels (up to 5 V) serial communication and can be operated via the included WJ graphical user interface. An intuitive command set allows for extremely fast development of custom applications via an open source DLL and API support.

The company is also offering an RFID UHF silicon reader chipset that meets the ECPglobal Gen2/ISO18000-6C and ISO18000-6B international standards. This low-cost on-chip protocol engine is suitable for use in RFID-enabled mobile and stationary printers, readers, PDAs and handheld devices. It simplifies UHF reader designs with transmit preamble and data encoding and modulation, frequency-agile carrier generation, and downconversion and decoding—all incorporated into a single chip with minimal external components. In ISO18000-6C operation, Tari values of 6.25, 12.5 and 25 microseconds, and tag link frequencies from 40 kHz to 240 KHz are available. The WJC200 also enables dense-reader-mask-compliant transmission. Its on-chip synthesizer supports operation within the 902 MHz-928 MHz US ISM band. With the aid of an external VCO, the frequency range can be extended from 860 MHz-960 MHz.

RFID printer/encoder delivers high-frequency support

The R110Xi high-frequency (HF), industrial, multiprotocol RFID tabletop printer/encoder from Zebra Technologies (www.zebra.com), is suitable for high-volume and on-demand smart label printing and RFID tag encoding. It encodes passive inlays using multiprotocols such as ISO15693 and ISO18000-3 mode 1, and offers Philips MIFARE ultralight support. Built on the proven XiIIIPlus platform, the R110Xi HF enables users to take advantage of 4-inch print widths, 203 dpi and 300 dpi print resolution and XML encoding for seamless integration into existing enterprise systems with the addition of HF capabilities. Users also benefit from easy maintenance of a mixed population of RFID and standard printers using Zebra's suite of advanced printer management tools in ZebraLink.



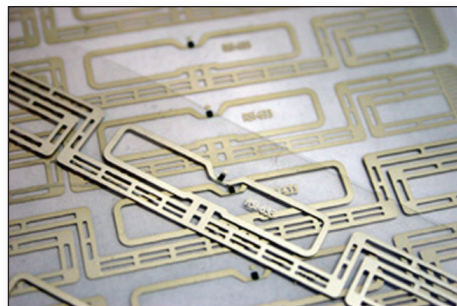
Reader enhancements offer improved functionality

A firmware update to the Infinity 510 UHF fixed reader from Sirit (www.sirit.com) features a number of performance enhancements to improve functionality. Firmware revision 1.2 includes expanded regulatory regional support (e.g., for Australia, Brazil, Hong Kong, India, Japan, NZ, Singapore, Thailand, and Korea), and enhanced digital I/O technology for integration with sensors and actuators such as lights and motion detectors. Enhanced support for Reva Systems' tag acquisition processor (TAP) is also provided. TAP was designed to act as a central

command post for numerous networks of RFID interrogators (readers). The TAP is a rack-mountable device that plugs into networks of interrogators and the user's local area network (LAN). It filters and aggregates tag reads before sending the tag data to software applications running at the enterprise level.



High capacity memory RFID tags revealed



Three new RFID tags based on the RFID Gen 2 chip from NXP Semiconductors are available from RSI ID Technologies (www.rsiiidtech.com). Each tag offers additional user memory that allows companies to add a wide range of additional information to RFID tags above and beyond EPC numbers. To create the new RFID tags, RSI ID Technologies used its rapid antenna design process. The process enabled the antenna design and production to begin within just four weeks. By leveraging this proprietary development process, RSI has been able to significantly improve on the industry's typical antenna design turnaround, which can take months.

Tagging solution gives customers choice

The OAT tag@source from OATsystems (www.oatystems.com) is a complete, automated, in-line tagging solution that enables manufacturers to efficiently apply RFID tags to products within production and packaging facilities. This new solution, based on more than 700 months worth of automated RFID-tagging experience across numerous industries, is built on the SOA-based OAT foundation suite that provides proven integration into existing systems such as WMS, MES and PLCs, and is validated on IBM's Premises server. The OAT tag@source comprises all the necessary process steps including encoding, applying, verifying, pallet building, shipping and any necessary rework, and is available in a variety of open configuration options.

Reusable tag lowers cost of ownership

The RFID small rigid tag from Intermec (www.intermec.com/rfid) is a compact, reusable RFID tag that is ideal for harsh industrial applications where ruggedness, chemical resistance or extreme temperatures are a factor. Because it can be used thousands of times, it is even more economical to use than disposable tags. As a companion to Intermec's ECPglobal interop-

erability-certified RFID large rigid tag, the RFID small rigid tag is available in EPCglobal Gen 2 and ISO 18000-6B protocols. Measuring 1.22 in. x 3.11 in., it is equipped with a wideband antenna design that allows the tag to be used practically anywhere in the world on virtually any surface, including metal, plastic and wood. Its rugged design can withstand extreme temperatures from -40 F to 250 F (-40 C to 121 C) and long-term exposure to chemicals such as machining oil, methyl ethyl ketone, isopropyl alcohol, acetone and kerosene.

Reader series enables global deployment of Gen 2 RFID

A series of high-performance, Gen2 RFID world readers from Alien Technology (www.alientechnology.com) are enabling a common reader hardware platform and universal software APIs to be leveraged across the Americas, Europe and Asia/Pacific. Included in the series is the Alien ALR-9800-WR1, designed to meet the radio emissions standards of Australia, Hong Kong and Thailand, and the Alien ALR-9800-CHN for use in China. As with all Alien ALR-9800/8800 readers, the new world readers are based on the Alien Enterprise RFID platform that provides a flexible architecture for meeting current EPC Class 1 Gen 2 performance, management and protocol requirements. The new readers host the well-supported Alien reader protocol, featuring a rich array of programmable functions for optimizing reader performance. In addition, they maintain high read rates under dense reader situations, making them well-suited for deployment in larger-scale rollouts.



RFID tag delivers 'onboard' security

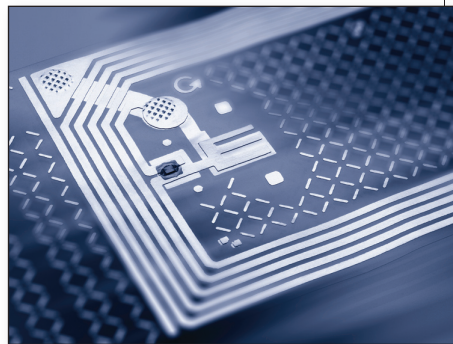
A new SecureRF (www.securerf.com) RFID tag with onboard security and cold chain management features has been specifically designed for pharmaceutical supply chain applications. The solution is based on SecureRF's algebraic eraser (AE) cryptographic protocol. Thousands of times more efficient than existing methods for an equivalent level of security, AE makes it possible to put authentication and data-protection protocols directly on a passive RFID tag and provide high levels of communication security with readers. This new battery-assisted passive tag also includes a temperature sensor as well as strong privacy protection to help address Health Insurance Portability and Accountability Act (HIPAA) privacy requirements. It supports EPCglobal Gen 2 standards.

Inlay delivers performance comparable to copper

A new aluminum HF inlay, the V730S-D 13-P01, is well suited for security and asset tracking applications such as library and access control. This credit card size inlay from Omron (www.omronrfid.com) is compliant with the ISO15693 HF standard for 13.56MHz frequency. It achieves comparable performance with the copper version of same size inlay.

RFID chip supports logistic/manufacturing applications

Two new RFID transponder chips for item tracking applications in logistics and manufacturing environments are available from Infineon (www.infineon.com). The my-d light and my-d vicinity HC RFID chips, which operate at the global 13.56 MHz RF band, add applications-specific capabilities to the Infineon RFID product line-up. Offering a data retention of more than 10 years, both chips can be read and rewritten more than 100,000 times. Depending on the reader configuration and antenna design, the ICs are programmable up to a distance of 120 cm. Each is compliant to ISO/IEC 15693 and ISO/IEC 18000-3 mode 1 standards.



The my-d light chip features an advanced quiet mode that improves the ability to use the chips when items are stored closely together. As a result, it is ideal for applications that require reliable identification, reading and writing of up to 50 adjacent objects at the same time in about one second, regardless of their orientation. It stores 416 bits of non-volatile user memory.

The my-d vicinity HC chip is suitable for object identification applications where the RFID inlay has to be significantly smaller than today's standard size of 4.5 cm x 7.5 cm. It features a high input capacitance that enables the design of very small antennas at 13.56 MHz of only 8 mm in diameter.

Family of RFID UHF bandwidth products expanded

MTI Wireless Edge (www.mtiwe.com) has added new low axial ratio RFID reader antennas to its existing line of RFID UHF bandwidth products. These small (190 mm x 190 mm), lightweight (0.8 Kg), high-performance antennas are designed to enhance the single port reader's performance. The low axial ratio RFID reader antenna family includes six antennas covering the three RFID



UHF bandwidths: MT-242032 (RH or LH) 865 MHz-870 MHz, MT-262013 (RH or LH) 902 MHz-928 MHz, and MT-262017 (RH or LH) 950 MHz-956 MHz. The small footprint and light weight of the antenna range eases installation and makes it the ideal solution for a wide range of applications. **EW**