

The line of 433 MHz RFID hardware, initially developed for the U.S. Department of Defense, is now being marketed to logistics providers, international shippers, construction companies and product manufacturers.

By Claire Swedberg

July 31, 2009—[Identec Solutions](#) has released a new line of 433 MHz active tags and interrogators for the commercial market based on the ISO 18000-7 standard. The series, which the company had first developed for the [U.S. Department of Defense](#) (DOD), includes six different active tags, as well a handheld reader and several fixed models. The product line will provide an alternative to proprietary 433 MHz solutions that RFID tag users have been employing for tagging and tracking goods and containers as they move around the world. Identec expects its new tags will have a read range of 300 feet when employed with fixed interrogators, or approximately 150 feet with handheld readers. Some of the tags have sensors, as well as onboard memory options.

The series, says Peter Linke, Identec's executive VP of sales and marketing, was created for the DOD in summer 2008, enabling the company to be among those included in a three-year indefinite-delivery, indefinite-quantity (IDIQ) contract awarded by the [U.S. Army's Product Manager for Joint-Automatic Identification Technology](#) (PM J-AIT) in December 2008 (see [U.S. Defense Department Picks Four for RFID III](#)).



Identec's i-Q310 CST (container security transponder) is one of six 18000-7 tags being introduced.

The DOD, which utilizes active RFID tags for containers of nearly all goods it ships overseas, had initially contracted its RFID products and integration from active RFID company [Savi](#). In 2006, Savi offered its intellectual property (IP) licensing program for companies seeking to develop, manufacture and sell RFID tags and interrogators compliant with the ISO 18000-7 standard (see [Savi Announces IP Licensing Program for Active RFID Tags](#)), and the DOD opened the bidding process to other RFID vendors based on that now-open protocol.

The vendors chosen by PM J-AIT in 2008 were Savi, [Northrop Grumman](#), [Unisys](#) and [Systems & Processes Engineering Corporation](#) (SPEC). Both SPEC and Unisys selected Identec as the designated provider of RFID hardware to fulfill any purchases resulting from that contract. According to Linke, the tags are designed to operate in challenging environments in which temperature extremes and dirt are commonplace. "One area Identec has always been very strong in," he says, "is harsh environments."

With the development of the tags for the Department of Defense, Identec saw an opportunity for this technology in other markets as well, and is now selling it to commercial end users, including logistics companies, international shippers, construction firms and product manufacturers. Businesses that ship products internationally will be the most common customers, Linke notes, because the 433 MHz frequency is accepted globally.

The new i-Q310 tag series—intended for tracking, tracing or securing cargo, vehicles and other assets—can include built-in sensors and a database memory of up to 128 kilobytes, as well as 32 kilobytes of memory for logging data from the sensors, such as those that ascertain if a container door is opened, detect light, or measure temperature, humidity or shock. The user can specify the thresholds defining a security breach (the degree at which a door is opened, for instance). All six i-Q310 models include an integrated speaker that supports acoustic signalization for search, locate or alarm

applications.

Interrogators include the i-PORT 310 fixed reader, with a 300-foot read range, adjustable power output and the ability to read 100 tags per second. The i-PORT handheld model has a 150-foot read range, a built-in 802.11 Wi-Fi card and a USB port.

Identec will provide software to interpret data based on RFID reads and middleware for the commercial products, Linke says, while the four vendors directly contracting with the DOD will provide the appropriate software. While SPEC and Unisys are utilizing Identec hardware, Savi uses its own hardware, and Northrop Grumman contracts its hardware to [Evigia](#). Unisys is also employing tags provided by [Hi-G-Tek](#).

In March 2009, after Identec Solutions had developed its ISO 18000-7 tags and readers, the company joined forces with several other RFID providers to create the [Dash7 Alliance](#), an association of RFID technology suppliers and customers promoting the ISO 18000-7 standard (see [Dash7 Alliance Seeks to Promote RFID Hardware Based on ISO 18000-7 Standard](#)).

At the behest of the Dash7 Alliance, the [University of Pittsburgh's RFID Center of Excellence](#) has set up a test lab to verify whether a tag or interrogator claiming compliance with the ISO 18000-7 standard is, in fact, compliant. Dash7-certified products will display a Dash7 logo. Identec, however, has not submitted its line of ISO 18000-7-compliant products to the lab for certification testing.