

# RFID Vendors Launch Item-Level RFID Drug-Tracking Systems

One system reads EPC Gen 2 UHF tags on items, while the other reads both HF tags on items and UHF tags on cases.

By Beth Bacheldor

Nov. 14, 2006—Two RFID vendors are launching new products this week, designed to help pharmaceutical companies implement item-level tracking. The first, [Vue Technology](#), unveiled on Monday a new RFID system for drug retailers looking to use [EPCglobal](#) Gen 2 UHF RFID tags to track pharmaceutical items in their stores. And on Tuesday, [Blue Vector Systems](#) announced the introduction of its Smart Tunnel, an apparatus that fits over conveyor systems and can read UHF tags affixed to cases, as well as HF tags attached to items within those cases.

Both solutions are designed to give companies more flexibility as they build out their RFID implementations. Vue Technology's new system lets firms use standard UHF tags to track individual items, says Robert Locke, Vue Technology's CEO. "There [has] been a number of companies that have publicly stated they want to use standard Gen 2 tags for item-level tagging in the pharmaceutical industry," Locke says. "This gives people a credible choice."

There had been debate whether UHF—the choice for case- and pallet-tracking—was technically sufficient for item-level tracking, because UHF hadn't seemed to work as well as HF for tighter, smaller read ranges. The debate has now been settled, with mutual agreement that both RFID tag technologies will work (see [RFID Vendors Unite to Promote UHF for Items](#)).

Vue Technology's new UHF solution for pharmacies is based on the vendor's TrueVue RFID platform, which acts as middleware and provides RFID data to the company's entire suite of applications. The solution allows users to leverage Gen 2 UHF tags from a variety of suppliers, and includes Gen 2 readers, RF networking hardware that enables the readers to interrogate thousands of antennas, and VuePoints—RFID antennas that serve as read points. These can be placed within pharmacy shelves, receiving stations, countertops and other locations.

Also included is the TrueVue application suite of network management, reporting, alerting and workflow software. The suite lets end users set rules for interrogators, monitor the operational status of hardware and software, and view a variety of reports, from individual tag reads to company-wide views spanning multiple stores. Users can also set up alerts to cue employees when thresholds are met or rules are broken, such as when such a certain type of drug is out of stock on a shelf.

Though Locke declined to divulge many technical details about how Vue Technology has fine-tuned the system to ensure accurate reads of item tags used for a variety of pharmaceutical product types, including liquids, pills, blister packs and gels, the company claims it achieved inventory accuracies approaching 100 percent during testing. "We've applied our unique skills and trade secrets in the antenna design," Locke

explains.

One way the system boosts read-rate accuracy is by determining how powerful a signal interrogators must transmit, , explains Gordon Adams, Vue Technology's senior VP of sales. If an RFID lacks such a capability, the interrogator signal may be too weak to successfully read a tag, or so powerful that it might create duplicate reads or overload the system. "This makes for a more intelligent reader," Adams says.

A team of Vue Technology engineers tested the new UHF solution for several months, affixing every commercially available EPC Gen 2 tag and antenna design on a variety of pharmaceutical products the company purchased at a local drug store, then installing the VuePoints and readers on shelves in "every kind of permutation," Adams says. Vue Technology's complete UHF pharmacy solution will ship at the end of November; pricing is dependent upon the implementation.

Meanwhile, Blue Vector Systems' Smart Tunnel can read HF tags on individual items inside a case or container, as well as any UHF tags affixed to a case—all at once. The tunnel features a Linux-based Edge Manage appliance. About the size of a paperback book, the appliance acts as middleware, filtering out duplicate reads and executing rules governing the business intelligence for the tunnel. For example, if the system reads only 47 HF tags in a case that is supposed to have 48 items, the Edge Manager can direct the conveyor system to kick that case off the belt for review, says John Beans, Blue Vector's VP of marketing.

The Global Manager software allows companies to monitor and manage all the Edge Managers, as well as run reports detailing every tag read. Companies can choose either EPCglobal Gen 1 or Gen 2 UHF tags operating at 800 to 960 MHz, as well as a variety of 13.56 MHz HF tags built to support the ISO/IEC 15693 or ISO/IEC 18000-3 tag standards. "This tunnel gives you a lot of flexibility," Beans says, adding, "We are tag- and reader-agnostic—in the end, we can work with anybody."

RELATED\_ARTICLES Beans says Blue Vector applied many of the lessons it learned while testing smart shelves designed to hold both UHF and HF tagged goods at pharmaceuticals distributor McKesson (see McKesson Starts RFID Pilot for Viagra). "Even before we introduced the Smart Tunnel, we [had] been working through all the intricacies of reading items in a dense situation like a shelf," Beans says. "The shelf presented the same challenges [as the tunnel], and we've worked through the technical issues, the little nuances that you have to learn, like sometimes having to modulate the power up and down to get accurate reads."

Blue Vector's Smart Tunnel is currently available, with pricing dependent upon implementation. Beans expects a mix of pharmaceutical manufacturers, packagers, distributors and retailers to install the system.

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