

**The U.S. company plans to tag 100 percent of the cases it ships to retailers automatically, saving \$83,000 yearly in labor costs.**

By Claire Swedberg

July 12, 2006—A U.S. distributor of electronic-entertainment products has installed [Accu-Sort Systems'](#) Flexible Automation Solution Tools (FAST) Tag In-Motion RFID tag system. The distributor, which Accu-Sort has declined to name, installed the system in January to achieve automated RFID tagging of every carton passing through its system.

Currently, the distributor tags about 60 percent of the cases it ships, according to Michael Kuhno, RFID product specialist at Accu-Sort. Ultimately, however, the firm intends to reach 100 percent to comply with the RFID mandates of its retailer customers.

This will be the first time a FAST Tag-In Motion deployment will be used to tag 100 percent of a company's cartons. FAST Tag-In Motion is an automated RFID tag application system that includes bar-code scanning and RFID encoding, application, verification and control for conveyor systems. The system is scalable and configurable, and has previously been used by customers in the pharmaceutical, apparel and health and beauty industries for selective tagging.

The system allows a distributor to run all its cases down the same conveyor belt, automatically tagging any that require RFID tags. Meanwhile, other cartons—those destined for retailers that do not require RFID tagging—can pass through without being tagged.

Before using the FAST Tag-In Motion system, Kuhno says, workers at the entertainment-products distributor had been encoding and printing RFID labels manually using [Technologies'](#) R110Xi desktop RFID label printer-encoders. The workers then manually placed the tags on boxes to meet the RFID mandates of the distributor's retailer customers.

With the new automated system, as cases are shipped from the distributor's facilities, an Accu-Sort Axiom bar-code scanner reads each box's bar code number automatically. That information is directed to the FAST Tag In-Motion controller, which communicates with the customer's warehouse management system. The cases move along a conveyor while a unique RFID number is automatically encoded to each one by an [Accraply](#) RFID label printer-applicator on an [Alien Technology](#) Squiggle EPC Gen 2 UHF RFID tag intended specifically for that box.

The Accraply device applies the tag on the box as directed by the FAST Tag controller, and an [Applied Wireless Identifications](#) (AWID) interrogator reads the tag data. FAST Tag receives the information from the AWID reader and verifies that the correct tag is on each carton, according to the box's order on the conveyor. If the system determines that a tag is missing, incorrect or nonfunctioning, the box is diverted to a reconciliation station, where an RFID label can be encoded and printed using a Zebra R110Xi desktop RFID printer-encoder.

The entire system operates on the FAST Tag In-Motion software suite, which can be integrated with a distributor's in-house warehouse management or ERP system. For other applications, Kuhno explains, the system can also be run as a stand-alone solution.

"We provide software that speaks to the back-end host system, whether it is homegrown or a major WMS package," Kuhno says. "It controls everything—the RFID equipment, conveyor controls and bar-code equipment." Accu-Sort can also provide sourcing assistance for conveyor modifications or work with existing material-handling providers, as was the case with this entertainment-products distributor.

The entertainment-products distributor is using on-pitch RFID tags (that is, converted to labels in the smallest possible form factor). "This allows RFID tags to be spaced closely together—in this case, an 1/8 of an inch—while encoding one tag at a time without affecting adjacent tags," says Kuhno. In addition to encoding the tag, the Accu-Sort system prints the [EPCglobal](#) logo and human-readable tag information on each label.

On-pitch tags are cheaper and smaller than traditional 4- by 2-inch RFID labels with the same spacing. The size and spacing of the on-pitch labels provides the potential for applying more tags per minute than traditional RFID labels, Kuhno says. "That was a big selling point for this customer."

This system allows the application of RFID tags on cases at a rate of 30 per minute, or more than 14,000 cartons in an eight-hour shift. According to Kuhno, in addition to lowering tag costs, the system will save the customer \$83,000 yearly in labor costs by eliminating the manual encoding and application of tags.