

Haier America Tags Freezers and Fridges

The manufacturer has integrated its RFID system with its ERP software and is affixing EPC Gen 2 UHF tags on the four appliances it supplies to Wal-Mart.

By Claire Swedberg

May 14, 2007—Appliance manufacturer [Haier America](#) is affixing EPC Gen 2 UHF RFID tags to four of its products shipped from its own warehouse in Edison, N.J., and from a facility in Walnut, Calif., operated by logistics service provider [Dura Freight Lines](#). For now, the company is using the technology solely to satisfy Wal-Mart's requirement that the products it receives are tagged with RFID.

Haier America has installed an RFID system consisting of [Avery Dennison RFID](#) inlays embedded in labels provided by [Nashua Corp.](#), [Printronix](#) printers, and [Motorola's](#) interrogators. The manufacturer spent approximately \$10,000 to implement the RFID system, and for now, Haier America doesn't want to spend any more money on the technology because it hasn't determined if there will be a strong return on investment, according to Michael Moser, Haier America's director of IT. "It's a very simplistic system—that's what we needed," he says. "We knew that at this point, RFID would bring nothing to the table for us. We had only one goal: to make our customer, Wal-Mart, happy."

Moser began researching RFID shortly after learning that the company was in the group of Wal-Mart suppliers that had to begin using RFID by January 2007 (other groups of suppliers have had to implement RFID earlier, starting in January 2005). The mandate meant Haier America would have to tag four products it ships to the retailer's RFID-enabled distribution centers: two compact refrigerators, one larger refrigerator and one freezer. In 2006, Haier America shipped hundreds of thousands of units to Wal-Mart, and about half of those will be tagged with RFID this year.

Moser says his initial research on RFID was frustrating. He could understand little of the information available on Wal-Mart's or [EPCglobal's](#) Web sites and had difficulty determining exactly what the overall RFID requirements were. At an EPCglobal conference, however, he met a Wal-Mart representative who helped him through the process, including assisting with testing RFID tags that Haier America sent to him.

In the meantime, Haier also went to [Vormittag Associates Inc.](#) (VAI), which provides solutions to Wal-Mart and [U.S. Department of Defense](#) suppliers seeking RFID technology to comply with mandates. VAI was already supplying Haier America with a UCC 128 barcode label system. In this case, VAI designed the RFID system and integrated it into Haier America's existing enterprise resource planning (ERP) system housed in Haier America's headquarters in New York City. The ERP system stores and processes shipment data, including each product's stock keeping unit (SKU) and shipping status. The integration enables Haier America to automatically print RFID labels and make associations between SKUs and the unique ID numbers on the RFID tags.

"[Haier America] needed a fairly quick education," says Kevin Beasley, VAI's CIO. Haier buys many of its products from its parent company, [Haier Co. Ltd.](#) in China, which is also looking at RFID technology, although it does not have any in place yet. "We spent some time making sure what they did here [at Haier

America] wasn't affected by what was happening there," Beasley says. That meant ensuring that standards in China would not create a problem for readers used in the United States. (Chinese air-interface protocol specifications and UHF frequencies differ from those in the EPCglobal UHF standards.) "That required a little bit of extra planning. Mostly that had to do with discussions with RFID printer manufacturers," he says. "We did have to make sure any equipment selected handled the frequencies currently used in China." VAI also brought in [Cybra's](#) MarkMagic middleware, which provides the printer drivers, RFID-encoding and label-design capabilities.

Although Haier America has finished its RFID implementation, the project isn't static. Every few weeks, Moser says he checks to see if Wal-Mart has added any new sites to its list of RFID-enabled distribution centers and stores, which the retailer continues to expand (see [Wal-Mart Embraces RFID's Green Potential](#)). He provides updates to the warehouse in Edison, N.J., as well as to Dura Freight. At both warehouses, if an order is placed for Wal-Mart and the goods are going to an RFID-enabled site, those items are routed to the RFID label printer. The tag in each 4- by 6-inch label is encoded with a vendor number, a SKU and a unique ID number. A worker uses a Motorola interrogator to verify that the tag is correctly encoded, then attaches the label to the appliance's box by hand. In the future, RFID data will be sent to a server in New York City to create advance shipment notices for Wal-Mart, according to Mike Morano, VAI's project director. That capability is not yet underway, Moser says.

RELATED_ARTICLES Today, once the box ships, "we don't track the RFID data ourselves," Moser says, adding that he hasn't ruled out expanding the RFID technology in Haier America's operations to include that capability at a later time.

Currently, the company is using RFID labels only on Wal-Mart shipments. But Haier America expects it will need to expand its RFID capability to comply with other large retailers' RFID requirements.

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