

HP Tags Printers, Scanners

This week Hewlett-Packard begins shipping pallets of EPC-tagged printers and scanners to Wal-Mart's Dallas/Fort Worth distribution center.

By Jonathan Collins

May 4, 2004—This week IT giant Hewlett-Packard will begin shipping EPC-tagged printers and scanners to Wal-Mart's Dallas/Fort Worth distribution center. HP is one of just eight Wal-Mart suppliers involved in a trial that began on Friday (see Wal-Mart Begins RFID Rollout) using RFID tags carrying Electronic Product Codes (EPCs). The trial is part of Wal-Mart's efforts to gear up its ability to receive EPC-tagged pallets and cases of products ahead of January 2005, when more than 100 of the retailer's suppliers will start delivering EPC-tagged shipments.

Only three of the 65 HP consumer products that the company currently ships to Wal-Mart will initially be EPC-tagged. The three comprise one model of HP's Scanjet scanners and two of its Photosmart photo printers. Even so, the company says it expects to exceed Wal-Mart's mandate by being ready to ship the entire range of its consumer products sold in the retailer's stores many weeks before that deadline.

The first three products to be shipped to Wal-Mart with EPC tags will come from HP's Memphis manufacturing and distribution operations.

At the Memphis manufacturing plant, tags are placed on the packaging of each individually boxed desktop printer or scanner. The pallets that the products are shipped on are also tagged. Those tags are then used to record details of the transfer of the finished goods to a separate distribution center, before shipment to Wal-Mart.

The manufacturing site and distribution center are each operated by a different HP subcontractors. HP says it helped its subcontractors deploy RFID systems by putting together project management teams to oversee the operation at each site. "Deploying these systems is a complex business," says Ian Robertson, head of HP's RFID program.

A tag is integrated into the underside of product label attached to the box containing an individual printer or scanner. Also attached to the box are additional labels identifying and explaining RFID technology to Wal-Mart customers.

In Chester, Va., another manufacturing plant is also tagging HP products. The operation—also owned by an HP subcontractor—is tagging cases of HP inkjet printer cartridges. However, no date has been decided for shipping these tagged cases to Wal-Mart. "We are almost ready to go, but when we ship will depend on joint planning with Wal-Mart," says Robertson.

The process for tagging the inkjet cartridges involved placing tags on empty cartons that are later filled with product. According to HP, the ink cartridge's liquid and metal composition combined with its foil wrapping presented a significant challenge to getting an accurate reading of the tag. That's because all those elements can interfere with the tag's ability to communicate with an RFID reader. By experimenting with the placement

of the tag on the carton, HP learned that if there was a gap between the cartridge and the place on the carton where the tag was attached, the company could avoid those interference problems. Even so, HP says, it is still a ways off from getting 100 percent read rates on the cartridge cases when they are on a shipping pallet.

Reading tagged items and cartons before they are placed on a pallet can offset much of the issue of getting an accurate read from each product tag, says HP. “Read rates can vary according to each product. It can depend on the model on each pallet, but every box on a pallet is associated with the license plate of that pallet, so we don’t need to be able to read each item there,” says Robertson

HP has also learned that the process of shrink-wrapping pallets can create an electrostatic discharge (ESD) that can kill the tags on the palletized items. However, this problem can be overcome by using ESD-sensitive wrapping, by installing antistatic flooring in the area where pallets are shrink-wrapped or by using other discharge devices.

HP started investigating how RFID could be used in its supply chain nearly two years ago, and, the company says, it has seen RFID’s ability to drive significant gains in productivity. In an initial proof of concept pilot at the Memphis operation last year, the company measured that a pallet ready for shipment could be processed in just 11 seconds—well down from the 90 seconds it had taken previously. “That was a specific process with a specific product. We know that in electronics manufacturing, there is a high degree of variability, and every item could mean a shift in configuration. But it made us think RFID was worth going after,” says Robertson.

HP says that deploying EPC should be a money-saver for the company because products are shipped and received more quickly, both at its customers premises and throughout the company’s own supply chain. “One pallet can be shipped through three different HP distribution centers before being shipped to the customer,” says Robertson.

The company is integrating its EPC network with other software applications gradually. “We are tackling this with manageable bites,” says Robertson. So far, HP says, its EPC capabilities connect into the warehouse management systems and shop floor management systems at the initially deployed sites.

HP is using EPC Class 1 UHF RFID tags and readers from a number of tag manufacturers, as the company wants to make sure that any vendor’s tag will work with any vendor’s reader and vice versa. “That ensures we are working with a standard technology,” says Robertson, emphasizing that the company will always buy from multiple vendors.

HP is currently working in about 29 of its production facilities and distribution centers worldwide to enable EPC-tagged shipments. While only the manufacturing and distribution facilities in both Memphis and Chester are capable of shipping EPC-tagged products today, HP plants in Asia that ship directly to Wal-Mart are expected to be able to ship tagged products before the end of the year.

In addition, in Sao Paolo, Brazil, HP is overseeing an RFID pilot program in a subcontractor plant that is investigating the potential for EPC tagging to reduce costs in the manufacture of finished goods.

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