

Wal-Mart Shipments Get Gen 2 RFID Tags

Texas Instruments' educational products division is the first of the retailer's suppliers to send shipments bearing Gen 2 RFID tags.

By Mary Catherine O'Connor

Jan. 4, 2006—[Texas Instruments'](#) Educational & Productivity Solutions (E&PS) business division, a supplier of educational products to [Wal-Mart](#), is attaching EPC Gen 2-complaint RFID tags to cases and pallets of its calculators heading to five of Wal-Mart's distribution centers. This makes E&PS the first Wal-Mart supplier to send the retailer shipments with Gen 2 tags.

Most of Wal-Mart's top 100 suppliers have been attaching RFID tags to pallets and cases headed for select DCs and 150 stores for a year now. This January marks the deadline for Wal-Mart's next top 200 suppliers to begin doing so, as well.

Late in 2005, the retailer expanded its RFID infrastructure so that five DCs and 500 stores could read Gen 1 EPC tags on goods shipped by its top 100 suppliers, plus 37 smaller suppliers that are tagging shipments on a voluntary basis (see [Wal-Mart To Expand RFID Tagging Requirement](#)). However, Keith Hodnett, vice president of TI and supply chain manager for E&PS, says that when his division sent its first Gen 2-tagged shipments last week, only one of these five DCs had Gen 2-capable RFID interrogators (readers) in place. Wal-Mart, he says, is in the process of installing Gen 2 equipment in the balance of the DCs so they can read Gen 2 tags soon. In fact, after tests of Gen 2 tags and interrogators this fall revealed improved read rates of products in motion, the retailer said it plans to phase out the use of Gen 1 tags by mid-2006.

According to Hodnett, E&PS expects that tagging cases of 12 different stock-keeping units (SKUs) of the calculators it ships to Wal-Mart will help the retailer reduce instances of out-of-stock products—especially during the back-to-school shopping season, when demand is highest for the calculators. Earlier this year, a study by the [University of Arkansas](#) (UA) found that Wal-Mart was able to reduce out-of-stocks by 16 percent through the use of RFID tags on cases of goods from suppliers (see [EPC Reduces Out-of-Stocks at Wal-Mart and Report Shows How Wal-Mart Did It](#)).

"We're very seasonal," says Hodnett. "Our calculators, which are used in the math and science classrooms, are on teachers' [school supply] lists that get passed out in the August-to-September time frame. So initially, we'd like to [use RFID to] prevent out-of-stocks and keep products flowing during that key back-to-school season."

Hodnett says that by the 2007 or 2008 back-to-school season, E&PS might begin to tag the packaging of each of the calculators, which retail for approximately \$100 to \$125. "Once we get to the item level, in addition to the increased visibility we'll have for demand planning [through additional point-of-sale data, if Wal-Mart deploys an RFID-enabled POS system], we'll also be able to integrate RFID throughout our supply chain, from procurement of materials all the way to the point of sale," he says. Tracking the tags on the products within the stores could also help reduce theft of the products.

To tag its pallets and cases, E&PS is using RFID inlays supplied by [Texas Instruments RFID \(TI-RFiD\)](#)

Systems. "E&PS has been very proactive in the implementation of Gen 2 technology, and we're excited to have worked with them, as a sister division within TI, to make that happen," says Tony Sabetti, TI-RFiD's UHF and retail supply chain director. TI-RFiD is sourcing the RFID chips used in the inlays from Seattle-based semiconductor Impinj. RFID service provider NCR is converting the inlays into 4- by 6-inch shipping labels. Sabetti says TI-RFiD is also supplying its Gen 2 EPC tags to approximately 10 other companies that are piloting the technology and will be also shipping Gen 2-tagged cases and pallets to Wal-Mart and other organizations soon.

Rather than keep its RFID tagging system separate from its warehouse IT systems, Hodnett says it worked with Oracle, the provider of its enterprise resource planning (ERP) system, and Yantra, its warehouse management system (WMS) provider, to integrate a manual RFID tagging system with its order fulfillment process. When an order is sent to the WMS that is bound for any of the five RFID-enabled Wal-Mart DCs, and includes cases of any of the 12 SKUs E&PS needs to send with RFID tags, those cases are diverted to a special RFID tagging station. There, they are tagged and sent onto the shipping dock. The benefit of this approach is that it aggregates the cases that require tags as they are being pulled into orders. Otherwise, the cases would have to be aggregated and tagged after the cases were already assembled into orders, which could take more time and require more labor.

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