

Smart Packaging Sells Forklift Readers

In what it calls an industry first, International Paper Smart Packaging is offering forklift-mounted UHF RFID readers commercially.

By Mary Catherine O'Connor

Mar. 24, 2005—International Paper Smart Packaging, the radio frequency identification (RFID) products and services provider and systems integrator that is part of the global paper and forest products company International Paper (IP), has announced that it is offering the first commercially available RFID reader system mounted on a forklift. Companies could use the RFID-enabled forklift to track RFID-tagged products (cases and pallets) as they are transported through warehouses and loading areas.

Companies can buy a complete forklift, with the reader already installed, direct from IP Smart Packaging, or they can purchase a new forklift on an OEM basis through one of two forklift manufacturers with whom IP Smart Packaging has developed an agreement. IP Smart Packaging will work with that manufacturer to customize the forklift with the RFID reader hardware. (Due to a nondisclosure policy, IP Smart Packaging could not reveal the names of these manufacturers to *RFID Journal*.) If a company already has forklifts that it wants to use to track tagged products, IP Smart Packaging personnel will retrofit the vehicles with a reader, antenna and cabling.

Durability is key to the functionality of the forklift-mounted readers, according to the company. It has partnered with Symbol, AWID and other RFID equipment manufacturers to develop ruggedized UHF readers for use on the forklifts. The Symbol readers, which support EPC Class 0, 0+ and 1 tags and is upgradeable via firmware to support EPCglobal's recently ratified Gen 2 protocol, are available now. Readers from AWID and other reader manufacturers are still being developed. IP Smart Packaging developed the special impact-resistant antennas that will be deployed on the forklift. The reader and antenna are designed to withstand the vibrations and impacts that forklift trucks are subject to in a warehouse environment.

"The truck and reader are mobile objects that come in contact with immobile objects, and a lot goes wrong in these kinds of environments," says Scott Andersen, technical director for International Paper's Smart Packaging business. "They could hit poles or pallets or other stationary objects. And there's no suspension on lift trucks." Andersen says these factors raise the bar in terms of a device specification for a reader mounted on a forklift, and that the Smart Packaging team developed its system, using its experiences operating RFID-enabled forklifts internally, to be able to handle warehouse environments.

As a systems integrator, IP Smart Packaging can also provide support in linking (via either an 802.11 connection or some other type of wireless infrastructure) the forklift reader to the user's network. In some cases IP Smart Packaging can also link the forklift reader to the user's RFID infrastructure or middleware. IP Smart Packaging also offers a complete RFID tracking and location service called Warehouse Tracking System (WTS) (see IP Unveils RFID-Enabled Warehouse) into which it would network any RFID-enabled forklifts.

For the past two years, International Paper has been using RFID-enabled forklifts, equipped with clamps to lift

and transport tagged rolls of paper products, in its own operations and is currently using 20 such trucks at its paper mill in Texarkana, Texas. Thus far the readers on these trucks have captured 5 million EPC reads, according to the company. The RFID-enabled trucks that Smart Packaging is offering come with a forklift attachment, but different types of attachments could be used on the trucks, if the end user wants to move items other than pallets. To RFID-enable an alternative, however, IP Smart Packaging would need to uninstall the reader hardware from the forklift and reinstall it on the new attachment.

Pricing information, which varies widely according to the end user's hardware and integration needs, is not being released, but the RFID-enabled forklifts and forklift-mounted readers are available now.

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