

Starbucks Keeps Fresh With RFID

The coffee purveyor is tracking perishable foods en route to its stores, to ensure they arrive unspoiled.

Dec. 13, 2006—Coffee retailer Starbucks is deploying RFID to ensure that perishable foods delivered to its cafes remain fresh. The company is using the technology to track temperatures within the refrigerated or freezer compartments of the trucks that deliver sandwiches, salads and other food items to its retail locations.

Starbucks has rolled out the ColdStream CL Closed Loop solution from Sensitech at about a dozen third-party distribution sites throughout the United States, according to Rupert Schmidtberg, chief technology officer at Sensitech. Other distributors will eventually install the system under Starbucks' direction, Schmidtberg says, though he can not yet say how many more will deploy the technology.

RFID has been a source of interest for the coffeehouse chain as it has expanded its menu, Starbucks representatives report. "At Starbucks, delivering a premier customer experience is our mission," Sid Jhaveri, Starbucks' director of global quality assurance and regulatory affairs, told attendees at the June 2006 Institute of Food Technologists (IFT) meeting and expo in Orlando, Fla. "As we continue to add fresh food offerings to our portfolio of products, managing the cold chain has become a critical factor in our quality-management program."

Starbucks requires all of its distributors to keep food at a specific temperature, which it declines to specify, during transport to its stores. The system, provided by Sensitech, utilizes Sensitech's TempTale RF 915 MHz active tag with a built-in sensor. The tag records the temperature within a truck compartment every 10 minutes. The reprogrammable active tag has a 300-foot read range, says Schmidtberg, and can be attached either to the interior wall of the truck above the cartons, or on a pallet.

The TempTale sensor begins measuring the temperature at regular preset intervals as soon as a driver leaves the warehouse. When the truck returns to the distribution center, an RFID interrogator reads the active RFID tag, which transmits its temperature log to the reader along with its unique ID number. The reader forwards this data via an Ethernet or Wi-Fi connection to an Internet server, hosted by Sensitech. "The trucks return with a full log of data read by the RFID infrastructure, which is then passed to our hosted database," Schmidtberg explains.

Sensitech provides password-protected access to each distribution center's temperature results, which is viewable by Starbucks personnel or the distributor's employees. Sensitech also prepares cold-stream analysis reports on a weekly and monthly basis, which it sends to Starbucks and the distributor.

"ColdStream CL Closed Loop has improved our visibility into our supply chain," Jhaveri said. "We now are able to monitor our processes to ensure optimal efficiencies and continuous improvement, all the while reducing the costs associated with gathering and reporting the data."

RELATED_ARTICLES If the temperatures are unacceptable, Sensitech works with the distributor to determine the cause. Typically, the problems are not mechanical but process-related. For example, says

Schmidtberg, truck doors can remain open for too long, or food can sit for too long on a dock.

Sensitech debuted its ColdStream CL Closed Loop application in October. In November 2005, the company announced its first RFID-enabled application: ColdStream PTS Plant to Shelf (see [Sensitech's RFID Cold Chain Solution](#)).

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