

# PHARMA-BIO TRANSPORT

SUPPLY-CHAIN IDEAS FOR HEALTHCARE

## Supply-Chain Strategies

Technology streamlines  
the cold chain

see page 8



## Tagged for Temps

Active, passive RFID tags free the cold chain from wires.

By Anastasia Thrift  
Managing Editor

Transportation systems wired for temperature monitoring are going wireless. Several companies are pooling their resources to meet the cold-chain demands of medical and pharmaceutical packagers through active and passive RFID.

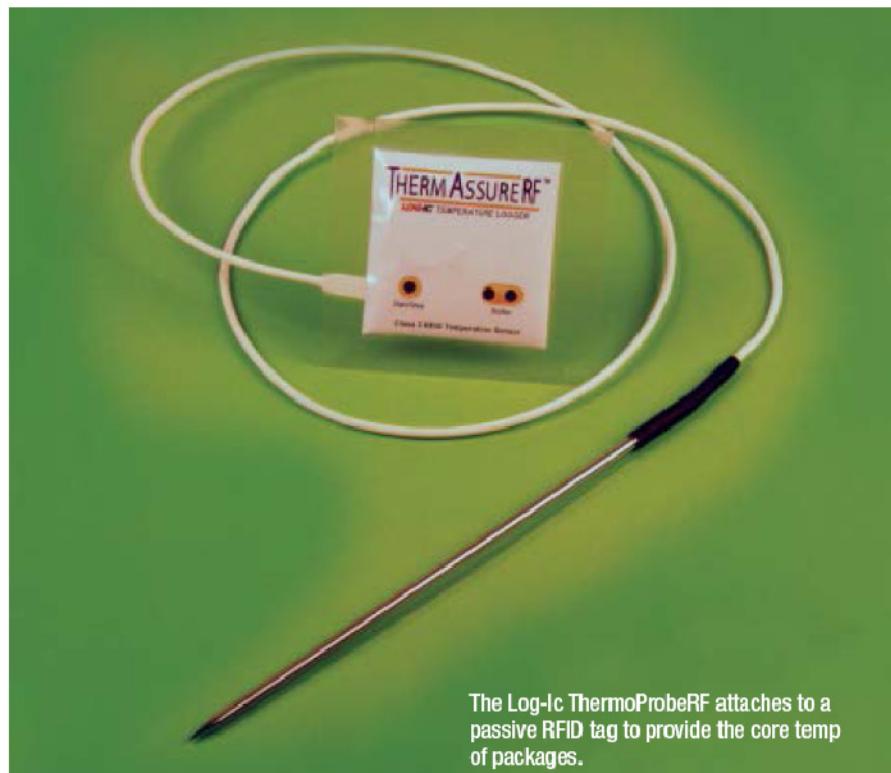
A partnership between AeroScout (Redwood City, CA) and DHL (San Mateo, CA) has used WiFi-based active RFID technology to track pharmaceutical products through the supply chain for a leading healthcare company. The tag producer and the international cargo company teamed with Microlise (Nottingham, United Kingdom) to monitor temperature fluctuation for a trial run between Belgium and Sweden last May.

Temperature and vehicle location data were broadcast via GPS from AeroScout tags to Microlise monitors. The strategy aimed to give supply-chain visibility to multiple custodians along the shipping route. Microlise's Transport Management Center software enabled monitoring through Web browsers.

This real-time location system software represents the bulk of advancing RFID technology in the year to come, according to Raghu Das, CEO of smart-packaging consulting company IDTechEx. In his predictions for 2008, Das said such medical usage of active RFID tagging still has untapped potential.

"Fully active versions are larger and more expensive, but can be reused such as with the AeroScout tag," Das says. "There are many solutions but not many implementations of it in the pharma cold-supply chain yet."

In a second example of utilizing RFID for cold-chain management, Intelligent



The Log-Ic ThermoProbeRF attaches to a passive RFID tag to provide the core temp of packages.

Devices Inc. (Ottawa, ON, Canada) and Evidencia LLP (Memphis, TN) collaborated to introduce a passive RFID, probed-temperature recorder called the Log-Ic ThermoProbeRF. Released last December, ThermoProbeRF has a wireless capacity for checking and downloading detailed time and temperature history.

With the Log-Ic ThermoProbeRF, drug manufacturers can program for time and temperature alarms via user-friendly software, according to the two companies. They say they have a powerful, easy-to-use monitor that can establish the core temperature of dry ice shipments of temperature-sensitive pharmaceuticals.

"The main benefit is the ability to use the device to monitor core packaging temperature and therefore to have true temperature readouts, and not ambient

temperature," Alex Salomon, general manager of Evidencia, says. "It's huge in terms of the service and quality of service they provide."

The small scale of the technology accommodates many package shapes and sizes. Its credit-card-size thickness could allow for better stacking and less breakage than nonwireless temperature recorders. "Our tag lies flat on the polyurethane and offers extreme resistance to stacking or crushing," Salomon says. A handheld reader detects the thermometer's input from up to 400 meters away.

"Commercial passive RFID tags with sensors are very rare," Salomon says. He offers evidence taken from customer feedback, experience, trade shows, and publications. From this, Intelligent Devices and Evidencia have determined that their product is unique. "This is a tiny field," Salomon says. ■