

## MARKET BRIEF

# RFID Temperature Monitoring in Health Care

## AT&T Solutions Keep Patients Safe, Caregivers in Compliance

Vaccines, pharmaceuticals, tissues, blood bags, organs and samples from patient biopsy and blood tests all have one common enemy: Being stored at the wrong temperature. If these substances get too hot or too cold, they may lose their effectiveness or, worse still, harm the patient.

That's why health care providers and regulatory organizations pay such careful attention to the temperatures at which such substances are stored. Their regulations dictate not only the proper storage temperatures of such items but how often their temperature must be checked, how the monitoring devices are calibrated, what action must be taken and documented if the temperature is out of range, and even how the temperature records are stored.

### More Work, Less Accurate

Doing all this manually creates a massive amount of extra work for already busy nursing, laboratory and pharmacy clinic staff. Checking the temperatures manually is not only time-consuming and unwieldy, but prone to error. Even if a staff member checks the temperature twice a day, variations between those checks can go undetected, and unexpected absences or failures in communication can cause a temperature to go unrecorded or be recorded in error. Some hospitals use expensive temperature logging machines that are attached to a refrigerator or freezer, but which lack advanced alerting capabilities or the ability to keep working in the event of a power failure.

Failure to comply with regulations governing the temperatures at which supplies are stored is, first and most importantly, a threat to patient health. It can also be a threat to the financial stability of a health care provider. If an audit discovers a health care provider has failed to comply with such rules, the provider could lose reimbursement from government insurance programs that account for more than half of the revenue at some hospitals.

Hospitals, clinics, testing labs and similar facilities need safe, reliable and cost-effective methods to monitor, record and verify the temperatures at which critical clinical supplies are kept. Such a solution would, ideally, make use of low-cost networking equipment already in place as well as off-the-shelf monitoring technology.



### The AT&T RFID Solution

AT&T offers a comprehensive RFID Temperature Monitoring Solution for the health care industry. This offering makes use of widely-available technologies such as Wi-Fi (wireless local area networks), and RFID (radio frequency identification), helping health care providers to meet regulatory requirements, reduce costs, increase efficiency, improve quality and ensure safe patient care.

The solution includes all devices, infrastructure and systems needed for full-scale tracking applications, as well as customized reports that can be used to make decisions regarding patient care, asset inventory, and other key health care organization needs. AT&T has formed a relationship with Aeroscout, an industry leader in Active RFID equipment and software, to provide this service.

The temperature tracking itself is performed by Wi-Fi based Active RFID tags – small, rugged wireless devices that can attach to most containers. Each tag transmits a unique identifier to a local Wi-Fi access point, avoiding the cost of the proprietary data receiving units used in other solutions. This data is then transmitted to AT&T MobileView software that recognizes the unique RFID tag and the



container whose temperature it tracks. The AT&T software can also generate email and telephone alerts when temperatures fall outside of pre-set ranges. The battery-powered tag and wireless communication link continues to monitor the temperature even if there is a power failure in the unit.

#### The Challenge

**Assuring that vaccines, tissue samples and other medical material is stored at the proper temperature.**

#### Current Methods

**Manual temperature tracking is cumbersome, time-consuming and inaccurate. Proprietary monitoring systems are expensive and may lack advanced alerting features, and the ability to continue working after a power failure.**

#### The AT&T Solution

**Use of RFID temperature-sensing tags and industry-standard wireless networking provides cost-effective assurance of patient safety and regulatory compliance.**

The AT&T RFID solution integrates seamlessly with other AT&T services such as AT&T Wireless LAN, optical Ethernet, AT&T Mobility voice and data plans and AT&T Laptop Connect/NetVPN which allows secure mobile access to key applications such as temperature tracking. AT&T can also provide all other needed infrastructure, ranging from network connectivity to data storage, required to help the health care provider capture temperature data, as well as to prove temperatures were



properly monitored and the appropriate actions taken when temperatures fall outside of desired ranges. Through its consulting services, AT&T even helps customers optimize their process workflows, including temperature monitoring, to help them achieve the greatest benefits from the temperature monitoring solution.

With its combination of industry-leading RFID tags, compatibility with industry-standard Wi-Fi equipment and ability to provide all the needed solution components, AT&T is the best choice for health care providers looking for a temperature-monitoring solution that protects patient safety while meeting regulatory requirements.

For more information, visit us at <http://www.corp.att.com/healthcare/rfid.html>.

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