



## Pharmaceuticals

# On-demand temperature visibility for pharmaceuticals and biologics

### Solution Benefits:

- Monitor and document temperature in-transit at every step of the cold chain
- Ensure efficacy and quality. Reduce excursions, spoilage and waste due to improper storage.
- Address regulatory requirements
- Wirelessly read data without opening the packaging container
- On-demand information for real-time decision making
- FAA approved for use in cargo holds
- Works with your existing systems and processes

The Intelleflex Pharmaceutical Cold Chain Solution provides on-demand visibility for tracking and monitoring the temperature of biologics and other pharmaceuticals. With Intelleflex XC3 Technology™, you can easily and cost-effectively track and monitor the temperature of the product every step of the way while it's in-transit without unpacking—to ensure efficacy and product quality.

### The Need for On-Demand Visibility

With the continued growth of biologics and other pharmaceuticals and their strict temperature handling requirements, more attention is being focused on improving cold chain visibility and management. Cold chain visibility provides pharmaceutical suppliers, shippers and end users with the necessary information to make timely and accurate decisions, and take corrective actions that create sustainable improvements and ensure the proper handling of temperature sensitive products.

### The Challenge

The value of biologics and pharmaceutical cold chain shipments is expected to grow at more than 25% through 2011. Similarly, shipments of blood plasma, sera and vaccines are also expected to grow significantly. Unfortunately, legacy temperature monitoring technologies offer limited and inconsistent visibility into the cold chain leading to a lack of confidence in product integrity, efficacy, value and shelf life.

Domestic and international governments are increasingly regulating the control and management of the cold supply chain, requiring pharmaceutical providers, shippers and dispensers to document temperature control throughout the distribution process from the factory through to “the last mile”.

Air cargo is becoming a progressively critical component of the cold chain with many leading carriers delivering cold chain services. However, active transmitting tracking tags violate FAA regulations and can't be activated or used in cargo holds, leaving a critical link in the cold chain unmonitored and unmanaged.

To ensure security, shipping containers must be tamper proof and can't be opened in transit to collect temperature data. As a result, those at the end of the cold chain are forced to accept or reject shipments without accurate decision making information. Packing materials including gel packs, refrigerants, foam and other materials impede radio signals, limiting the ability of most solutions to provide information without unpacking the container.

As a result, the efficacy, quality and safety of biologics and pharmaceuticals are called into question, resulting in waste, shortages, increased costs and lost revenues.

## The Solution

Intelleflex delivers the ability to wirelessly track, monitor and report product temperature on-demand throughout the cold chain. We combine the power of our Extended Capability RFID™ system with your existing assets and systems to provide an integrated solution for in-transit visibility that improves real-time decision making, helps ensure product efficacy and quality and optimizes cold chain performance.

With Intelleflex, you simply place cost-effective and re-usable temperature monitoring tags inside each shipping container. Intelleflex tags feature on-board memory, enabling you to store and easily access a complete history of the product, from the factory to the dispenser, directly from the tag. Intelleflex tags are FAA approved and monitor the temperature inside the container in-flight while the container is in the cargo hold. Tags can be easily read in-transit at any point in the cold chain – without unpacking the container – enabling real-time decision making and eliminating the risk of tampering. Since efficacy is a function of temperature control, you can better ensure that the product has been continuously stored at proper temperature.

Intelleflex solutions are designed for the most demanding environments. Tags can be automatically and reliably read while inside foam and gel packaging, and shipping containers, and are built to withstand extreme temperatures, moisture and dust conditions.

Hospitals, clinics, pharmacies and customers can immediately determine the safety and efficacy of the product with the knowledge that it has been properly stored and managed at every step along the way.

Our solutions are designed to integrate with your existing applications and networks, or be used standalone without the need for complex backend systems. Flexible application options make it simple to use the system.

## XC3 Technology

Intelleflex solutions are enabled by Intelleflex XC3 Technology, allowing us to deliver the capability of active RFID-based solutions at a fraction of the cost.

- Based on ISO C3 and EPCglobal C1G2 standards for battery assisted passive RFID
- Deliver read ranges in excess of 300 feet/100 meters
- Read tags and monitor conditions such as temperature inside containers and pallets
- Operate seamlessly in RF unfriendly environments involving metals and liquids
- Tags include on-board memory for tracking and storing information about the asset or product with multiple levels of security
- Intelleflex offers handheld and fixed readers, multiple form factor tags and antennas, as well as starter kits for piloting projects

## Intelleflex Products Related to this Solution

- Handheld readers
- Temperature sensor tags

## For More Information

To learn more please visit our website or contact us directly. We look forward to hearing from you.

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