

Case Study: Future-Proofing Retail Operations with Reliable IoT Infrastructure

mc-IoT

Mission Critical IoT leads the way in wireless communication support, delivering reliable and expert technical solutions to IoT companies worldwide.

Background

A global retail brand managing thousands of stores across multiple regions needed to improve the reliability, security, and visibility of its in-store systems. Gaps in connectivity, lack of failover support, and outdated infrastructure were compromising operational efficiency and customer experience.

Simultaneously, its international shipping division was facing logistics delays and cargo visibility issues, especially in regions with inconsistent network coverage.



Challenges

- **No Automatic Failover Support** - When primary networks failed, there was no seamless backup, causing lost transactions, slow system restarts, and frustrated frontline staff.
- **Lack of Sensor Integration** - In-store IoT sensors for temperature, shelf tracking, and energy use weren't connected to a centralized platform, limiting real-time insights and proactive actions.
- **Vulnerable Edge Network Security** - Legacy gateways left store networks vulnerable to intrusion and lacked modern access control and patch management.
- **Limited Visibility in Global Shipping** - Freight assets in international transit had minimal tracking and condition monitoring, creating blind spots in high-value shipments.

Solution Provided by Mission Critical IoT

- **Gateway Upgrades with Automatic Failover** - Deployed smart gateways with built-in failover using Fixed Wireless, ensuring real-time POS and operational continuity even during broadband outages. The gateways are monitored and managed 24x7x365 by Mission Critical IoT's on-shore engineers to make certain that a loss in connectivity, or even network congestion is instantly rectified without any burden on the retail staff.
- **Full Sensor Network Integration** - Connected in-store IoT sensors (e.g., temperature, motion, and door sensors) to a centralized dashboard, providing actionable insights and automated alerts.
- **Hardened Security Protocols** - Upgraded edge security with encrypted connectivity, multi-layer authentication, and proactive patching across all retail gateways.
- **Global Asset Tracking in Shipping** - Implemented GPS-enabled sensor solutions for cargo containers to monitor location, humidity, shock, and temperature in real time—even across ocean routes and remote regions.

RESULTS

Fail-back provisions minimizing redundant network usage have reduced connectivity costs

Achieved 100% transaction continuity with seamless network failover at the store level.

Improved global shipment traceability, reducing delays and product loss during transit.

Reduced security vulnerabilities by 80% with upgraded hardware and proactive endpoint protection.

Enabled real-time sensor data visibility for operations, energy efficiency, and inventory management.

From storefront to shipping container, every asset in your retail ecosystem matters. Mission Critical IoT ensures that your operations are not only connected—but protected, intelligent, and ready for what's next.

Let's talk about upgrading your retail network and supply chain with real-time, reliable IoT.