



Smart Warehouse Solution Brief

Executive Summary

With increasing real estate expenses, labor shortages, and supply chain interruptions, smart warehouse and 3PL operations need to do more with less. Achieving operational efficiency is a strategic necessity for productivity and profitability. Technology is a key enabler, beginning with adopting a warehouse management system (WMS) that can connect to automated solutions for receiving, picking, packing, and shipping. Wireless connectivity can be the best choice in a warehouse environment, but Wi-Fi often fails to meet coverage, performance, and security objectives. A comprehensive network solution must be predictably fast, secure, flexible, cost effective, and reliable. This is where a 4G/5G private wireless network can help.

Warehouses of the Future Welcome Smart Solutions

New private wireless solutions can be the smart choice of the future for warehouses. Taking advantage of a private 5G network behind a warehouse firewall offers security, data control and better performance for business-critical applications. Smart warehouses can meet the growing demand for operational efficiency

with emerging technologies like ruggedized scanners, autonomous guided vehicles (AGVs), and autonomous mobile robots (AMRs). These technologies all require one thing at their core – a high-speed, high-bandwidth, low latency wireless network. To smooth this technology transition, some warehouses are turning to private 4G/5G solutions that are fully managed by network and security experts to ensure optimal performance without taxing in-house staff.

Betacom Offers a Turnkey Managed Service

With a managed service solution, a private wireless network becomes the backbone for warehouse services that can adapt and grow as service needs change. The right technology partner knows how to accommodate the demands of warehouse operations and security by leveraging new networking solutions without prohibitive costs.

Betacom 5G as a Service (5GaaS) is a turnkey managed service that provides 3PL operations, distribution centers, and eCommerce fulfillment centers with a 4G/5G private wireless network to run critical warehouse applications that cannot fail. It offers best-of-breed security, coverage, and high-bandwidth, low-latency performance. Betacom plans, designs, installs, and operates the network with proactive network and security monitoring. Importantly, all warehouse data is managed on-premises and is owned and controlled by the warehouse, behind their firewall. With Betacom 5GaaS, since the business owns their own data, there is no need to worry about variable rate data plans.

At the heart of 5GaaS is our Security and Service Operations Center (SSOC), a highly secure command center. It is equipped with the latest Artificial Intelligence tools that continuously monitor and improve network and security performance. The Betacom SSOC is staffed by US-based technical experts who proactively manage the private wireless network end-to-end.

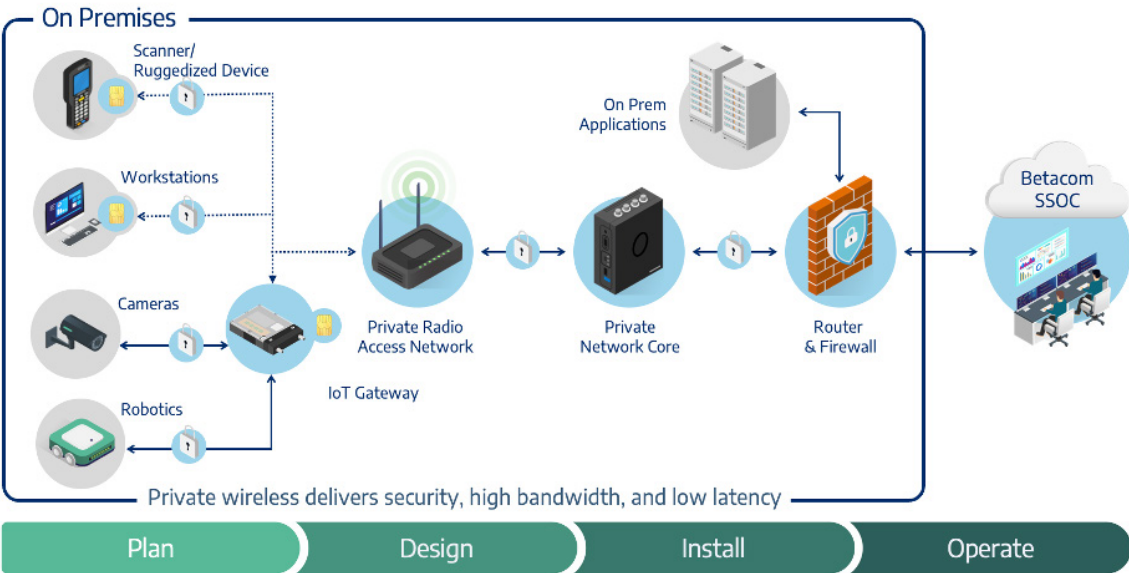


Figure 1: Betacom 5G as a Service Architecture

Benefits of a Betacom Smart Warehouse Solution

Warehouse and 3PL executives across the country have identified these mission-critical situations in which Betacom 5GaaS helps them achieve their business objectives:

- **Receiving, Picking, and Packing:** Warehouses often use RFID and barcode scanners and connected workstations in their operations but report that due to poor Wi-Fi coverage and performance, scanning data is inconsistent, requiring manual intervention. With a reliable private wireless network, warehouses are seeing productivity gains without having to hire new staff. New hands-free technologies like voice picking and vision picking can be reliably supported, and mobile push-to-talk devices can be used for efficient team communications throughout the building.
- **Camera Solutions:** Connecting cameras can be essential for security & access management, asset management, worker safety, and quality assurance. Cameras are also critical for yard management for gate operations, monitoring dwell times, and achieving regulatory compliance. Private 5G allows cameras to be securely and reliably connected.
- **Robotics:** Private wireless networks connect autonomous guided vehicles (AGVs), autonomous mobile robots (AMRs), collaborative robots, and autonomous forklifts to achieve automation and predictive maintenance objectives, applying low latency where it counts the most.
- **Warehousing Infrastructure:** 5GaaS connects critical warehousing infrastructure such as automated storage and retrieval systems (AS/RS), conveyor and sortation systems, and overhead systems to achieve maximum efficiency through automation.
- **Smart Building Operations:** With a private wireless infrastructure in place to transform warehousing operations, the same solution can connect a building management system, HVAC, lighting, and utility meters and equipment to optimize building operations.

Betacom 5G as a Service Ticks all the Boxes

Betacom 5GaaS enables warehouses to provide superior connectivity to dramatically improve operational efficiency. It is a turnkey managed solution that allows organizations to control the performance criteria, the data, and the network as a whole – while Betacom manages the network with full visibility and support. It checks all the boxes for a smart warehouse solution that meets needs now and into the future:

- ✓ Private and highly secure connectivity. The warehouse owns the data.
- ✓ Delivers high speeds and low latency performance.
- ✓ Cloud-based using wireless technology that can evolve to 5G.
- ✓ Flexible to accommodate discrete services and scale as needed.
- ✓ Best-in-class solution from a proven technology provider.
- ✓ Designed for business-critical demands.
- ✓ Private network without in-house staff or stress, installed and operated by Betacom.

Contact us to learn more:
www.betacom.com/contact-us

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