

DYNAMIC SPECTRUM SHARING: Delivering Private 5G Networks for Mission-Critical Military Logistics

When the Marine Corps Logistics Base (MCLB), in Albany, GA needed a connectivity solution to address ongoing operational inefficiencies, a private 5G network powered by shared spectrum transformed its impact. With private 5G networks powered by shared licensed spectrum, the U.S. Department of Defense can streamline logistics, reduce costs, and enhance mission readiness on a massive scale.

The Problems

- **Traditional connectivity options were not effective solutions.** Owing to the complex and challenging warehouse environment, traditional Wi-Fi did not offer sufficient reliability while fiber-optic install was prohibitively costly.
- **Manual processes and outdated systems resulted in inefficiencies, higher labor costs, and delayed inventory management.**
- **Efforts to introduce process automation and access to real-time data were hampered by the unavailability of a unified, scalable network.**

The Solution

A CBRS-based private 5G network was deployed and is now delivering 40 Gbps of wireless capacity across one million square feet of the Base. The network's ORAN and X-RAN technologies offer dynamic, secure network management with the flexibility and resilience needed to adapt to changing operational demands, which can further enhance military readiness and efficiency.

The Results

- 98%** Accuracy in Inventory Reordering
- 65%** Faster Movement of Goods
- 55%** Reduction in Labor Costs

The Future of Mission-Critical Logistics and Technology

Because shared spectrum-based private 5G networks overcome the limitations of traditional connectivity, they are a critical solution, particularly in challenging environments, like factories and warehouses. The MCLB Albany project's success creates a model for logistics modernization that can be employed across DoD. It also further validates shared spectrum as a solution for mission-critical applications, setting the stage for a broader DoD logistics modernization effort that will ensure military readiness and efficiency for years to come. The MCLB Albany project's success will also encourage even more adoption of CBRS-based networks in commercial industries like manufacturing, healthcare, and transportation.



MODERNIZING LOGISTICS for the U.S. MILITARY:

The Advantages of Shared-Spectrum-Powered Private 5G Networks

- ✓ **Shared Spectrum is Cost-Effective and Reliable:** The seamless and cost-effective allocation of shared spectrum ensures reliable connectivity.
- ✓ **Low Latency Connections Deliver Real-Time Access to Data:** Faster access to data enables real-time inventory tracking, process automation, better resource allocation, and responsive decision-making.
- ✓ **Increased Operational Efficiency:** Automation and improved network reliability reduce manual intervention and delays, creating significant labor and operational savings and freeing up resources for other priorities.
- ✓ **Security:** Designed to meet strict DoD cybersecurity requirements while integrating with existing USMC systems.
- ✓ **Scalability:** The flexible, "future-proof" architecture will continue to support automation and AI-driven operations as well as expansion to additional military operations.