



Private 5G Solutions for Manufacturing

Where Precision and Control Activates Real-Time Factory Intelligence

As factories continue their drive towards automation, they are investing heavily in Industry 4.0 technologies such as Industrial Internet of Things (IIoT), robotics, and artificial intelligence (AI), to improve productivity, lower costs, and improve worker safety. Manufacturing leaders recognize that private 5G networks create a powerful networking communications infrastructure.

Oceus offers flexible private 5G solutions for any size factory and warehouse, from small and local, to large and global manufacturing complexes.

Oceus' private 5G network solutions are uniquely suited for high performance communications with reliability and security throughout a factory or manufacturing complex, and offer the bandwidth, capacity, and low latency to achieve demanding network performance benchmarks.

OCEUS PRIVATE 5G ADVANTAGES

With an advanced network infrastructure focused on mobility, security, and performance, Oceus private 5G network solutions transform manufacturing with:

- **Deterministic Performance:** Secure and scalable network infrastructure to reliably connect IoT sensors with monitoring, analytics, and operational tools.
- **Universal Mobility:** Integrates spectrum-agnostic solutions and our mobile network operator relationships to expand connectivity indoor, outdoor, and on-the-go.

- **Intelligent Orchestration:** AI/ML engines dynamically adjust network performance to ensure peak customer experience.

MILLISECOND & MILLIMETER PRECISION FOR REAL-TIME CONTROL

Oceus private 5G networks underpin a critical component of today's manufacturing operations: reliable always-on connectivity with millisecond and millimeter pinpoint accuracy.

- **Autonomous Production Lines** - Supports 100k+ sensors per access point, to precisely connect robotics and AGVs to cost-effectively scale
- **Continuous Machine Function Monitoring** - Self-healing and AI-driven performance to reliably flag and preempt issues that prevent factory down-time
- **Intelligent Risk Mitigation** - Network integrity to prevent theft, accidents, supply chain disruptions, and climate fluctuations

DETERMINISTIC RESOURCE CONTROL TO MAXIMIZE PRODUCTIVITY

Oceus private 5G solutions guarantee specific levels of throughput and latency and leverage real-time intelligence from hundreds of thousands of sensors to deliver manufacturers actionable insights to predict and prevent unwanted outcomes.

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- **Guaranteed Performance for Priority Use Cases** – AI continuously monitors the network and makes dynamic changes to support priorities
- **Predictive Analytics** – Real-time intelligence for time-critical control, to forecast demand and manage and reduce costs
- **Aggregated Data** – Wireline speeds and bandwidth to pinpoint variances from diverse and complex sources, to correct before problems occur

SEAMLESS NETWORK INFRASTRUCTURE FOR UBIQUITIOUS COVERAGE

Oceus private 5G solutions deliver the reliability and quick response of wired connections combined with the flexibility and cost-effectiveness of wireless connections. Self-healing network coverage assures continuous connectivity.

- **Smart Device & Inventory Tracking** – Continuous connections to IoT sensors to track availability of resources and manage materials and inventory levels
- **Flexible Networking Configurations** – High mobility without coverage gaps for flexibility in factory floor configurations to meet changing demands

- **Seamless Synchronizing with Stakeholders** – Global connectivity across warehouses, factories, suppliers, shipping networks, and customers

DEPLOYING OCEUS PRIVATE 5G SOLUTIONS

Private 5G operates in low, medium, and high-band frequencies across any spectrum, supporting broader sets of use cases than are available with Wi-Fi.

Oceus private 5G solutions are spectrum agnostic, running on licensed, unlicensed, or shared CBRS license spectrum, to meet any deployment and configuration requirements of facilities. Oceus has strategic partnerships with global mobile network operators that can get 5G mobile devices up and running today on a private network.

Oceus has designed its patented private 5G solutions to meet unique and challenging requirements as a secure and mission-critical communications solution that keeps factory operations seamlessly connected, indoors, outdoors, and on the move.



To discover more about Oceus private 5G solutions, visit us at [Oceus.io](https://oceus.io).

About Oceus

Oceus empowers government and commercial enterprise with intelligent private 5G communications for uninterrupted critical operations in challenging environments where deterministic delivery of data in a wireless environment is critical: in-building, campus-wide, and on-the-move.

Oceus delivers advanced wireless network infrastructure with the mobility, security, and performance needed for seamless connectivity. Our edge computing capabilities provide low latency, ultra-high reliability, and enhanced security for wireless IoT devices and applications. The Oceus Intelligent Controller provides software-defined network orchestration using AI/ML to automate the management of 5G enterprise systems and applications for military operations, border security, disaster response, smart cities, logistics, transportation, manufacturing, healthcare, education, utilities, and energy.

Oceus is headquartered in Herndon, VA, with Oceus Technologies, our R&D lab, and our Integration and Operations Center both located in The Colony, TX.