

## AI at the Edge for Private 5G

The convergence of private 5G networks and AI at the edge is transforming industries by enabling ultra-low latency, real-time decision-making, and secure, high-bandwidth communications for mission-critical operations.

### CHALLENGES

Private 5G adoption faces multiple hurdles that must be addressed for seamless AI integration:

- > **Network Complexity** – Managing and optimizing private 5G networks requires specialized expertise and robust orchestration tools.
- > **Security Risks** – Increased connectivity introduces new vulnerabilities, requiring advanced security measures to protect sensitive data.
- > **Latency Sensitivity** – AI workloads demand real-time inferencing, and network performance must support ultra-low latency operations.
- > **Interoperability Issues** – Integrating AI-driven applications with diverse edge devices and legacy systems presents compatibility challenges.
- > **Scalability Constraints** – Expanding AI-driven private 5G solutions across multiple sites requires efficient resource allocation and cost-effective scaling strategies.



### Intro to Edge Computing

In today's fast-evolving landscape, the need for real-time data processing and actionable insights at the edge has become a critical priority for mission-critical operations. Odin's Edge, powered by Norseman Defense Technologies, is designed to address these demands by delivering scalable, high-performance computing solutions in ruggedized, portable environments. This solution brings unparalleled flexibility, enabling data-driven decisions at the tactical edge while ensuring robust security and seamless scalability.

### Use cases

AI-powered private 5G is unlocking new possibilities across multiple industries

- > **Smart Manufacturing** – AI-driven predictive maintenance and real-time monitoring optimize factory efficiency and reduce downtime.
- > **Tactical Edge Operations** – Military and first responders leverage AI-powered private 5G for real-time situational awareness in the field.
- > **Autonomous Transportation** – AI models process high-speed sensor data over private 5G to support self-driving vehicle navigation.
- > **Healthcare Telemetry** – AI-driven diagnostics and remote patient monitoring improve healthcare outcomes with secure, low-latency communication.
- > **Smart Cities** – AI-enabled edge analytics on private 5G networks enhance urban planning, traffic management, and public safety.



## Solution Benefits

AI at the edge with private 5G delivers key advantages for enterprises and government agencies.

- > **Ultra-Low Latency** – Enables real-time AI inferencing and rapid decision-making for critical applications.
- > **Enhanced Security** – Ensures data sovereignty and reduces attack surfaces by keeping processing at the edge.
- > **Scalability and Flexibility** – Supports dynamic network expansion and adapts to changing workloads.
- > **Operational Efficiency** – Optimizes resource utilization and reduces network congestion for higher performance.
- > **Seamless Integration** – Ensures compatibility with existing infrastructure through intelligent orchestration and open standards.

## Conclusion

AI at the edge, combined with private 5G, delivers the speed, security, and intelligence needed for next-generation applications. Norseman Defense Technologies simplifies deployment, enhances security, and provides scalable, vendor-agnostic solutions that drive real-world success in commercial and government environments.

## The Norseman Advantage

1

### **Expert Solution Integration**

Norseman leverages partnerships with leading hardware and software providers to create fully optimized AI and private 5G solutions tailored to mission needs.

2

### **Security-First Approach**

With deep expertise in cybersecurity, Norseman ensures AI-driven private 5G networks are protected from emerging threats through advanced encryption, Zero Trust architecture, and AI-driven threat detection.

3

### **Vendor-Neutral Strategy**

By working across a broad ecosystem of technology providers, Norseman helps customers avoid vendor lock-in and select the best-in-class solutions that align with their operational goals.

4

### **Scalable Edge Deployments**

Norseman enables organizations to scale their private 5G and AI infrastructure efficiently, whether in a single facility, across multiple sites, or in tactical edge environments.

5

### **Turnkey Support and Lifecycle Management**

From initial design and implementation to ongoing maintenance and upgrades, Norseman provides comprehensive support to ensure long-term success.