

# Transforming Manufacturing with Private 5G

## Building a Wireless Network for Industry 4.0

Incorporating process automation, centralized data management and inventory control with a cohesive and all-encompassing control network means efficiency, safety, and capacity will reach new heights of productivity.



## Your Manufacturing Network: Ready to Perform Today

Seamless wireless infrastructure, unified communications, smart IoT devices, and comprehensive managed services — these are the core pillars driving efficiency and innovation in today's manufacturing facilities.

### Driving the Future of Industrial Connectivity & Control

Black Box combines 5G, IoT, and intelligent infrastructure to enable secure, low-latency, and software-defined enterprise networks built for automation, scalability, and real-time performance.



**Neutral Host & Private Wireless**  
**Extend RF coverage with neutral host platforms.**  
Add CBRS-based private wireless to existing DAS for scalable, automated industrial connectivity.



**4K KVM-IP Command & Control**  
**Securely control systems with 4K KVM-over-IP.**  
AES-256 encryption and EDID enable high-fidelity, remote operations.



**Edge-Driven IoT with AlertWare**  
**Gain visibility with edge IoT.**  
AlertWare connects BLE, LTE, and 5G sensors for telemetry, analytics, and OT/IT integration.



**Intelligent Infrastructures**  
**Modernize with software-defined power and cooling.**  
Use DCIM and telemetry for AI-driven efficiency and scalable cabling.



**NaaS with Juniper Mist & Hybrid Wireless**  
**Deploy AI-powered, self-healing wireless.**  
Support RTLS and monitoring. Use AI to optimize and maintain performance.



**SaaS Automation for Network & Ops**  
**Simplify with modular SaaS tools.**  
Automate policies and remediation via API and ITSM for real-time visibility.

A 5G wireless network provides a competitive advantage through enhanced IoT, AI integration, and virtually limitless broadband access. 5G makes advanced industrial wireless networks a reality, driving innovation and efficiency.

### 5G: A Network of Networks

The 5th generation of mobile technology brings 3 important improvements:

- **High-speed mobile broadband**  
Transmit data in gigabytes per second, 4K video, and 5G assisted cloud connectivity will become commonplace
- **Massive machine-to-machine communications**  
Enables low-powered IoT devices on a large scale, leverage thousands of sensors in a smart facility
- **Ultra Wide Band** < 1 mSec latency – faster than human optical processing

5G is transforming industries today. 5G enables faster, more reliable wireless networks, driving increased efficiency and innovation across the factory floor.

Private 5G networks enable purpose-built wireless infrastructure for manufacturing, supporting mission-critical applications while optimizing other wireless operations for non-essential tasks.

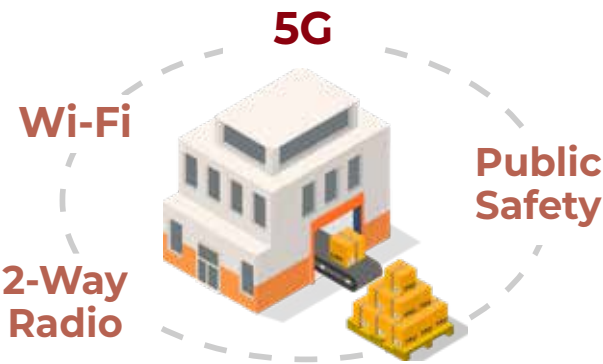
### Mission-Critical Wireless

Private 5G networks seamlessly integrate everything from Wi-Fi and Public Safety systems to two-way radio, ensuring comprehensive wireless coverage for all critical operations.

To build a reliable network, selecting a partner with proven expertise in manufacturing connectivity is essential. Black Box offers the experience and innovation needed to deliver a tailored, high-performance solution.

Improved penetration of physical barriers – more than **3 times** at ranges as great as **30 kilometers**.

Private 5G boosts factory efficiency with seamless, optimized device connectivity.



To learn how Private 5G can optimize your facility's wireless network, contact us at [contact@blackbox.com](mailto:contact@blackbox.com).