

The 5G and OnGo Manufacturing Facility

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 Now for the Near Future

Wireless infrastructure, integrated communications and collaboration, smart IoT devices, and managed services — these are the hallmarks of the modern manufacturing facility.

The Number of Wireless Devices is Increasing Rapidly

Growth in the number of wireless devices continues to explode:



Within **3 years**, there will be **13 networked devices** per person. Inside the manufacturing facility, these devices compete for bandwidth with mission critical components for manufacturing.



50% of all devices will be wireless. For the first time, wireless connections will bypass wired ones.



Networks will need to support a **66% increase** in wireless devices—moving from **3 billion** today to **5 billion**. When IoT devices like wireless sensors and managed automation are added in, the number of devices jumps to **29 billion**.

Manufacturing Advances Require a Better Wireless Network

The Fourth Industrial Revolution (Industry 4.0) is about interconnectivity as a driver for agile and lean manufacturing, bringing every process and protocol into a single, sharp focus.

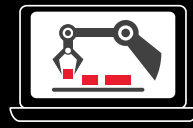


Connectivity is Essential

OnGo™/Private LTE accepts as many as one thousand more connections than existing Wi-Fi networks.

Everything on a Single Network

IoT technology such as PTT (push-to-talk), AI operation and monitoring, practically limitless broadband access, video streaming, facility control, and physical security.



IoT and Wireless Robots

Thousands of facility-wide sensors and real-time data speeds will yield not only new intelligent networking but also enable sensor-driven total robotic automation.

Virtual Reality (VR) and Augmented Reality (AR)

AR and VR will be used to improve the speed and efficiency of manufacturing. Wireless will need to support the manipulation of large and detailed projects in real time.



A 5G and OnGo wireless network means a competitive advantage in terms of IoT, AI, and practically limitless broadband access. 5G and OnGo can make advanced industrial wireless networks a reality.

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

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

OnGo is already here. Handheld devices and handheld controllers are OnGo ready.

5G is already here. Rollout began in 2019 and is accelerating. 5G subscriptions are forecasted to reach **3.5 billion** in 2026¹.

5G and OnGo enable the construction of purpose-built manufacturing wireless networks.

You will be able to support mission-critical applications while leveraging other wireless networks outside of direct tasking.

Mission-Critical Wireless

5G and OnGo/Private LTE are easily integrated into a system that supports EVERYTHING wireless, using Wi-Fi, RTLS, Public Safety, and two-way radio.

To build such a network, choosing the right partner with deep experience in manufacturing networking is critical. Black Box can be that partner for you.



To discuss how 5G + OnGo can help you prepare your facility's wireless network for the future, contact us at **1-855-324-9909** or **contact@blackbox.com**.