

# Connecting Barcode Scanners and Printers to Your Industrial Ethernet without a Converter Box

Eliminating Black Boxes and Security Risks with Zebra's Network Connect



## Saying Goodbye to the Converter Box

Barcode scanners and printers play a crucial role in capturing the data manufacturers need to track and trace all the parts, products and inventory that move through production processes. But when it comes to integrating these devices in industrial operations, there are often major hurdles to connecting scanners and printers to the programmable logic controller (PLC).

Until now, operational technology (OT) engineers have had to connect scanners and printers to the IT Ethernet network, which requires third-party converter boxes that add another point of vulnerability and require time-consuming, complex protocol conversion and custom coding. It has often meant dealing with a separate IT team too, which can add time and complexity to an already urgent task.

Fortunately, you can now get the job done much faster, with less complexity and fewer security risks, with Zebra's Network Connect.

Network Connect allows scanners and printers to be securely connected to the industrial Ethernet network and to a PLC without a third-party "black box" or converter and without IT involvement. It accommodates popular industrial Ethernet protocols and provides add-on profiles (AOPs) as well as simple software-based tools that help you get your devices up and running in as little as a few minutes.

Zebra's solution simplifies the process, eliminates a potential failure point, and reduces downtime risk, but it also creates a more secure data capture environment by removing network vulnerabilities introduced by converter boxes

It's one less hassle or delay for OT, one less task for IT, and one less security worry for everyone. Read more to find out how Network Connect works with Zebra scanners and printers to revolutionize device connectivity in your industrial operations.







## How Network Connect Works with Zebra Scanners

Network Connect makes connecting scanners to your industrial Ethernet incredibly easy. You can get any Zebra scanner up and running and working with your enterprise applications in under 10 minutes by following a few simple steps:

- 1 Grab** a Zebra scanner
- 2 Configure** the scanner for the correct IP address and protocol
- 3 Download** and install the add-on profile (AOP), EDS files, or modules you need
- 4 Enter** the IP address and connect to your network
- 5 Turn on** the device and start scanning.

Network Connect simplifies the entire process by eliminating the need to connect to a third-party converter box or wait for IT to set up devices on an Internet-enabled network. There's no custom coding or programming required, and you have two-way communication with the scanner so you can control the device's LED, haptic feedback, scanner and tones.



## How Network Connect Works with Zebra Printers

With Network Connect, you can connect Zebra printers to your industrial Ethernet without a third-party converter box and without having to wait for IT to connect your devices to a potentially vulnerable network with external Internet access.

Instead, you can avoid “black boxes” and eliminate a potential security failure point by connecting your printers to your PLC and your industrial Ethernet directly. It all happens with a few simple steps:

- 1 Choose** or design a label template from Zebra's free Zebra Designer
- 2 Import** an AOP, EDS file and device profile into your PLC programming environment
- 3 Write** a Ladder Logic program in your PLC to handle printer status and label population
- 4 Start** printing!

The connectivity process takes just 10 minutes, plus the time to choose and customize your preferred label format. In most cases, choosing your label and preferred data takes 30 minutes or less.

In the future, if you need to update your labels, you can do it with Zebra's free label templates and design tools. And if you need to change or update the configuration for your Zebra printers, you can do easily and without PLC coding with Network Connect's built-in printer management.



## Case Study: Connecting a Zebra Link-OS Printer to a Rockwell PLC

A great example of Network Connection in action is a customer case study where Network Connect helped a manufacturer connect Zebra Link-OS industrial printers to a Rockwell PLC. Before using Network Connect, the customer would have needed to hand-write code using Zebra Printer Language, buy and configure a converter box or write custom Open Socket Code, then write Ladder Logic in Rockwell's Studio 5000, and then do it all over again if something changed and devices needed to be reconfigured.

With Network Connect, the process became remarkably easier, and there was no need to buy and configure a converter box. The customer pulled Zebra's EDS file and device profile from the printer into the Rockwell Studio Logic 5000 Developer tool. Then they customized a pre-configured label design with Zebra's free ZebraDesigner, sent it to the printer, wrote Ladder Logic in Studio 500, and started printing.

The Ladder Logic program in the PLC handles checking printer status and sends the data needed to recall the template and populate it with variable data at print time. And two-way communication between devices and the PLC means OT engineers can easily get notifications of activity, issues, or anything they might want to monitor.

Moving forward, if any label configuration changes are needed, you only need to update the template and not any PLC code.

## Support for Leading Connectivity Protocols

Network Connect provides support for the most popular industrial network and communication protocols, including:



### SUPPORTED PROTOCOLS FOR SCANNERS

- EtherNnet/IP
- Bluetooth
- Modbus
- Profinet
- TCP/IP
- Serial
- And more



### SUPPORTED PROTOCOLS FOR PRINTERS

- EtherNet/IP
- Wi-Fi
- Bluetooth
- And more

## Compatible Zebra Scanners and Printers

Network Connect is designed for compatibility with Zebra's rugged and high-performance barcode scanners and printers that are engineered specifically for industrial environments.

### ZT Series Industrial Printers

Zebra's ZT Series is the next generation of industrial printing. ZT Series devices combine the brawn of a rugged, high-reliability and high-quality label printer with the brains of a future-proof and adaptable device that can evolve with changing business needs.



#### HARDWARE HIGHLIGHTS

- Ultra-rugged durability & performance
- Fast print speeds with micro-consistent quality
- Future-proof design with field-installable upgrades
- Upgrade options include RFID, cutter and rewinder
- User-friendly interface with color-coded status & alerts
- Ethernet, serial, USB 2.0, USB Host, Bluetooth & more
- Centralized browser-based management with Link-OS™
- Seamless integration with AirWatch or SOTI device management

### 3600 Series Ultra-Rugged Scanners

Zebra's 3600 Ultra-Rugged Series goes to the extreme to ensure continuous scanning performance in the most punishing environments. Featuring a virtually indestructible design and the highest drop, tumble and sealing specifications in the scanning industry, there are 16 corded and cordless models for any industrial application. You also get advanced 2D imaging capabilities for omnidirectional scanning of 1D and 2D barcodes, with available models to capture high-density barcodes, direct part marks and more.



#### HARDWARE HIGHLIGHTS

- 23% more durable than any competing barcode scanner
- Withstands extreme operating temperatures ranging from -4° F to 122° F
- Can be stored at temperatures as cold as -40° F or as hot as 158° F.
- Dustproof, sprayproof and waterproof with IP65 and IP67-rated sealing
- Withstands drops to concrete from up to 8 feet
- Easily survived Zebra's grueling test of 5,000 consecutive tumbles
- Scratch-resistant and recessed scanning exit window for extreme durability

# Evaluating Network Connect for Your Industrial Operations

If you're looking for a simpler way to connect barcode scanners and printers to your PLC and industrial Ethernet, contact Lowry Solutions now to learn more about Network Connect, how to implement it in your environment, and whether this time-saving solution is right for your business.

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## About Lowry Solutions

Lowry Solutions is a global systems integrator for Enterprise Mobility Services, Internet of Things (IoT) Solutions and Managed Print Services. Our team of specialized consultants has decades of experience designing and implementing solutions that increase the visibility and traceability of all assets while reducing the labor traditionally needed to manage your supply chain.

Thousands of clients trust Lowry's customer success and support teams to be there to provide support that exceeds end-user expectations after solution deployment.



## About Zebra

You may not always see Zebra, but Zebra solutions can be found working behind the scenes in manufacturing plants and many other industries and facilities around the world. Founded in 1969, Zebra develops technologies that ensure every asset and worker on the edge is visible, connect them to the data they need, guide them with clear and accurate insights, and help optimize real-time workflows, operations, and decisions for efficient, impactful results.

Zebra empowers the front line of business to achieve a maximum performance edge in warehousing, retail/e-commerce, manufacturing, transportation and logistics, healthcare, public sector and many other industries.

With more than 10,000 partners across 100 countries, Zebra provides better visibility through industry-tailored, end-to-end solutions that intelligently connect people, assets and data to help you make business-critical decisions.

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