Introduction

Industrial Ethernet enables simple, yet powerful, connectivity with both office and industrial factory floor environments and makes image-based ID readers very easy to install, set up, and integrate. Compared to other communication methods, Industrial Ethernet provides superior noise immunity and speed and makes integration of multiple readers into existing network environments for data access, control, and monitoring of individual readers very easy.

Many DataMan® ID readers support RS-232 and USB connectivity, and have proven to be robust in the harshest environments. However, USB and RS-232 do not provide the advanced connectivity required for many factory networks. Most DataMan models offer industrial Ethernet (TCP/IP) and Ethernet protocol support, such as PROFINET and EtherNet/IP, as well as FTP for image and data communication over Ethernet. As image-based readers are more commonly integrated directly into the factory network, additional industrial Ethernet protocols are being added in future product releases.

Simplifying Integration with Cognex Connect Reduces Costs and Downtime

Cognex Connect™ is a comprehensive suite of communication capabilities including industrial protocol support for EtherNet/IP and PROFINET available with In-Sight® vision systems, the DataMan 200 and 500 fixed-mount ID reader series and the DataMan 8000 series of ID readers—a first for an industrial handheld ID reader.

Supported protocols:

- EtherNet/IP with Rockwell® Add On Profile (AOP)
- PROFINET with Siemens® GSD
- MC Protocol
- Modbus/TCP

COGNEX CONNECT

Benefits of Ethernet Connectivity

- Direct connection to the control network
- Easier/Faster deployment
- Reduced installation costs
- Remote access to diagnostics
- Reduced system complexity

Modular Communications

The DataMan 8000 series is also the first to introduce interchangeable modules for different communication interfaces... both RS-232/USB and Industrial Ethernet communication. Should the communication requirements in the factory change, the system's unique field exchangeable modular communication design allows users to easily upgrade from RS-232/USB to Industrial Ethernet or WiFi by simply exchanging a compact communication unit within the reader.

DataMan 8000 Module Options

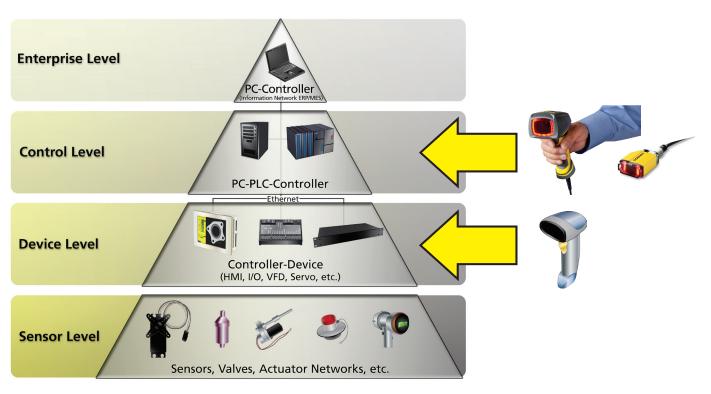- Ethernet
- USB & RS-232
- 802.11 WiFi

Moving Handheld ID Readers from the Device Level to the Control Level

Fixed-mount ID readers and smart camera vision systems are commonly Ethernet-based and the most advanced of these communicate directly with PLCs (Programmable Logic Controllers) via industrial protocols. *But what about handheld ID readers?* Read on to learn more.

Handheld barcode readers have traditionally been devices that require another gateway or a translation device to the control network, usually an industrial PC. They are often configured as simple devices and only communicate via USB and RS-232. Typically, the readers pass only raw data and require the PC for formatting, controlling, translating, and transferring the data or for sending commands to the reader. The introduction of the DataMan 8000 series has simplified this integration.

As a node on the Ethernet factory network, the DataMan 8000 series operates at the control level on the factory network, allowing you to remove the PC, and communicate directly with the PLC. Industrial protocols allow commands to be sent directly to the reader from the PLC, eliminating the custom software often found on the gateway PCs. Ethernet connectivity also allows for data and images to be archived directly through FTP support for later review and analysis while standard and complex data formatting is handled inside the reader. DataMan ID readers also offer a .NET based command library for customizing user-specific GUIs and terminal interfaces as well as providing control via a simple command line interface.

Enterprise Level

PC-Controller
(Information Network ERP/MES)

Control Level

PC-PLC-Controller
Ethernet

Device Level

Controller-Device
(HMI, I/O, VFD, Servo, etc.)

Sensor Level

Sensors, Valves, Actuator Networks, etc.

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