

Connectivity and Networking are Key

Connectivity is essential to vision and ID applications as a means to share data, support decision-making and enable highly-efficient integrated processes. Networking enables vision systems to transmit pass/fail results to PCs for analysis, or communicate directly with PLCs, robots and other factory automation devices in an integrated process control system.

If you need to link your vision and ID systems to PLCs at the enterprise level, it is important to find a system that supports the complete set of standard networking protocols:

- **TCP/IP** client/server enables vision and ID systems to easily share results data with other systems and control devices over Ethernet without any code development.
- **DNS** (Domain Name Service) allows you to assign each vision or ID system a meaningful name, such as "Bottling Line System 1," instead of having to use a numeric IP address.
- **FTP** (File Transfer Protocol) allows inspection images to be stored on the network for later analysis.
- **Telnet** is an Internet standard protocol that enables remote login and connection from host devices.
- **DHCP** (Dynamic Host Configuration Protocol) allows a vision or ID system to automatically receive its network IP address from a server, enabling true plug-and-play performance.
- **SMTP** (Simple Mail Transfer Protocol) enables you to immediately receive an e-mail on your PC or cell phone when a problem occurs on the production line.

To integrate a vision or ID system with the PLCs, robots and other automation devices in your plant, it is important to find a system that also supports the following:

- **Industrial Ethernet** protocols enable vision and ID systems to be linked to the most popular PLCs and other devices over a single Ethernet cable, eliminating the need for complex wiring schemes and costly network gateways.

And industrial protocols such as:

- **Fieldbus networks.** A protocol gateway accessory is usually needed to add a vision or ID system to a Fieldbus network.
- **RS-232 and RS-485** serial protocols. Needed to communicate with most robot controllers.












Finally, as more and more vision and ID systems are used throughout the manufacturing process, the need for a centralized way of managing them becomes increasingly important. You should look for a vision or ID system that comes with software that allows you to easily control and monitor the operation of all your vision and ID systems remotely over the network from any location—on or off the plant floor.

Simplifying integration with Cognex Connect reduces costs and downtime

Cognex products link to a wider range of factory automation equipment than any other range of products. Whether you connect directly to a PLC (Programmable Logic Controller) or robot controller or manage multiple systems remotely from a networked PC or HMI (Human Machine Interface), Cognex Connect™ assures a seamless reliable communications link between Cognex products and all of your equipment on the factory floor. Cognex Connect is available with In-Sight® vision systems, Checker® vision sensors and DataMan® barcode readers.

Supported protocols:

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

	Factory Device	Checker	DataMan	In-Sight	Protocol	Protocol Type
PLCs	B&R			✓		Industrial Ethernet
	Mitsubishi		✓	✓	MC Protocol	Industrial Ethernet
				✓		Fieldbus
				✓	PLC Function Blocks	Pre-configured device commands and attributes
	Rockwell	✓	✓	✓		Industrial Ethernet
				✓		Fieldbus
		✓	✓	✓	Add-On Profile (AOP)	Pre-configured device commands and attributes
	Siemens	✓	✓	✓		Industrial Ethernet
			✓	✓		Fieldbus
	Other Protocols			✓		Industrial Ethernet
				✓		Serial
				✓	ASCII String Commands	Serial
				✓		Industrial Ethernet
		✓	✓	✓	TCP	Industrial Ethernet
		✓	✓	✓	UDP	Industrial Ethernet
FTP Server		✓	✓	✓	FTP	FTP Image Transfer
Robots	ABB, Denso, FANUC, Kuka, Mitsubishi, Motoman & Staubli			✓	Pre-configured drivers and ASCII string commands	Serial / Ethernet
	Adept, Epson, IAI, Kawasaki, Nachi, Yamaha, & other Robots			✓	ASCII string commands	Serial / Ethernet

If you need to integrate inspection images, quality data, and interactive controls into your own operator interface Cognex Connect gives you an array of visualization options:

- In-Sight Display Control embeds an In-Sight image and CustomView display in your .NET or ActiveX compatible custom application, or a PC-based HMI/SCADA system from Rockwell, WonderWare, Citect and others.

- In-Sight and Checker allow you to upload data to your HMI displays, SPC (Statistical Process Control) systems, plant supervisory systems, and even Microsoft Excel to monitor operations and record statistical data.
- Checker, DataMan and In-Sight offer SDKs (Software Development Kit) to allow systems integrators to create a custom user interface for managing your systems, tailored to your exact requirements.

Americas

United States, East +1 508 650 3000
 United States, West +1 650 969 8412
 United States, South +1 615 844 6158
 United States, Detroit +1 248 668 5100
 United States, Chicago +1 630 649 6300
 Canada +1 905 634 2726
 Mexico +52 81 5030 7258
 Central America +52 81 5030 7258
 South America +1 909 247 0445
 Brazil +55 47 8804 0140

Europe

Austria +43 1 23060 3430
 Belgium +32 2 8080 692
 France +33 1 4777 1550
 Germany +49 721 6639 0
 Hungary +36 1 501 0650
 Ireland +353 1 825 4420
 Italy +39 02 6747 1200
 Netherlands +31 208 080 377
 Poland +48 71 776 0752
 Spain +34 93 445 67 78
 Sweden +46 21 14 55 88
 Switzerland +41 71 313 06 05
 United Kingdom +44 1327 856 040

Turkey +90 212 371 8561
 United Kingdom +44 1327 856 040

Asia

China +86 21 5050 9922
 India +9120 4014 7840
 Japan +81 3 5977 5400
 Korea +82 2 539 9047
 Singapore +65 632 55 700
 Taiwan +886 3 578 0060

COGNEX
www.cognex.com

Corporate Headquarters
 One Vision Drive Natick, MA 01760 USA
 Tel: +1 508 650 3000 Fax: +1 508 650 3344