

# Cisco Connected Factory Network

## Benefits

- **Validated proven network architectures** for your manufacturing environment. Bring together manufacturing industrial automation networks and business systems for real-time flexibility and awareness.
- **Improve visibility and resiliency** to reduce expensive unplanned downtime. Dramatically reduce the time needed to identify and debug causes of downtime.
- **Adapt to changes quickly**, whether they're new product introductions, planned product-line changeovers, adjustments due to component supply, or shifts in the mix of product demand.
- **Gain awareness of changes in real time** – from the enterprise to the plant floor—through mobile devices, video monitors, and HMLs that communicate over a converged network.
- **Link real-time information back to the entire supply chain**, so each step in the manufacturing value chain, supply through distribution, can quickly respond.
- **Create a secure factory** with end-to-end security built into the network, providing multiple layers of protection.



## Building a Resilient, Adaptable, and Intelligent Manufacturing Network

The launch date for your new product line is only weeks away. Just before you begin the new run to put finishing touches on your product, you receive a new type of alert: a key machine needs servicing. Rather than risk potential downtime, you use enhanced and predictive visibility to service the machine during a scheduled downtime window and then run the production successfully. You meet your deadline with no downtime and no idle workers.

Thanks to the Internet of Things (IoT), this kind of real-time visibility and business intelligence is well within your reach. Companies around the world are adopting new plant architectures that take advantage of the pervasive connectivity and actionable data provided by the IoT. By converging factory-based operational technologies (OT) with global IT networks, companies are increasing uptime and improving operational equipment effectiveness (OEE) intelligence – from the plant floor through the supply chain.

With the IoT-based Cisco® Connected Factory – Network, part of the Cisco Connected Factory portfolio of validated and proven end-to-end network architectures, you gain a 360-degree view of operations. You also gain real-time network diagnostics and troubleshooting.

That means less downtime, higher productivity, greater resiliency, and the agility to respond to rapidly changing customer and market needs.

## How It Works

One of the biggest game changers driving the convergence of IT-based networks and OT on the factory floor is the use of Industrial Ethernet and Profinet. With Industrial Ethernet-capable hardware specially built for rugged industrial environments, we make it possible to bring enterprise-class networking power to the plant. And the solution is based on open standards technologies so it works with a wide range of third-party systems and applications.

With our intelligent industrial automation aware infrastructure, you can accurately track and analyze where, how, and why downtime is occurring – the first step toward reducing it. You can also respond quickly to changing conditions on the plant floor, in the supply chain, and in the marketplace. This helps increase efficiency and agility, boost productivity, and cut down on costly downtime across the enterprise.

## Accelerate Your ROI

Accelerate your transition to a more secure, reliable, connected factory environment with services that help you plan, build, and manage your industrial automation network. From strategy through execution, Cisco services help you realize more value from your solution by continually aligning business outcomes to your connected factory business goals. We provide comprehensive consulting services and combine our leading networking expertise with our technology partners' specialized industry expertise to help you get greater value from your business transformation.

The following services cover the complete solution lifecycle:

- Connected Factory Architectural Roadmap
- Connected Factory Micro Engagement
- Connected Factory Starter Kit
- Connected Factory Design and Build Service
- Solution Optimization Service
- Product Support Service

## Get Started Today

The Connected Factory Starter Kit is a great way to experience and evaluate a limited converged factory architecture in your own facilities. And it makes it easier to quickly deploy an initial production environment to validate your ROI.

Once deployed, the starter kit provides a strong foundation for enabling the following Internet of Everything capabilities:

- Converged connectivity
- Comprehensive security
- Location-based services
- Voice and video are outside of Connected Factory, but, can certainly be sold into the plant. Note that we don't endorse voice or video traffic on the same network as the automation control traffic.
- Integrated big data and analytics

## Key Solution Components

### Industrial Ethernet Switches

An important component of Cisco Connected Factory – Network is the scalable, flexible Cisco Industrial Ethernet (IE) portfolio of switches. With ruggedized design, industrial protocol support, and a range of management and deployment tools, these switches provide predictable performance and resiliency. Switch models include Cisco Industrial Ethernet 2000, 3000, 4000 and 5000 Series Switches.

### LAN Switching

In addition to our IE switches, we offer a variety of Cisco Catalyst® access switching and wireless LAN solutions that support Industrial Automation applications. These help deliver agile services and applications to manage, secure, and govern your network. These switches allow your network to adapt and support new application deployments to meet changing business needs.

### Strategic Partnerships

By partnering with leading suppliers of industrial automation equipment and control systems – leaders like Rockwell Automation – Cisco can deliver the tested and proven integration you need to harness the power of the IoT.

## Next Steps

To find out how to get started and for additional information, visit [www.cisco.com/go/connectedfactory](http://www.cisco.com/go/connectedfactory).