

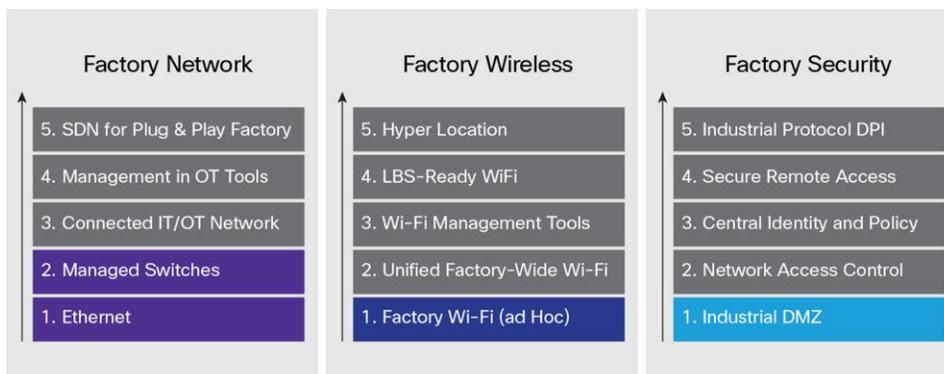
Cisco Connected Factory Accelerator Bundles



Many manufacturers are pursuing the immense business benefits available from digitizing and connecting their factories. Major gains in overall equipment effectiveness (OEE), reduced downtime, and manufacturing flexibility can be achieved with a factory that is digitized and connected. By providing visibility to machines and processes, manufacturers can anticipate issues that create unplanned downtime. By putting in place a secure, converged and wireless-ready network, manufacturers can have a platform that enables the agility to quickly start up new machines, cells, and lines, and rapidly deliver new products.

But the typical factory is **not** IoT ready. In the network, many companies have delivered on basic Ethernet connectivity and may have managed switches; however, they have not connected the IT and operational-technology networks or deployed the network management tools and technologies to be truly “plug and play.” Typical factory wireless deployments are unplanned, isolated from the central network and are not location ready. Finally, security in the factory is typically limited to an industrial DMZ. Rarely are factories deploying the network-level security that includes identity policies and secure remote access tools that can give management the confidence that the plant-level data can be securely extended to the cloud (Figure 1).

Figure 1. IoT Infrastructure Readiness in Typical Factory

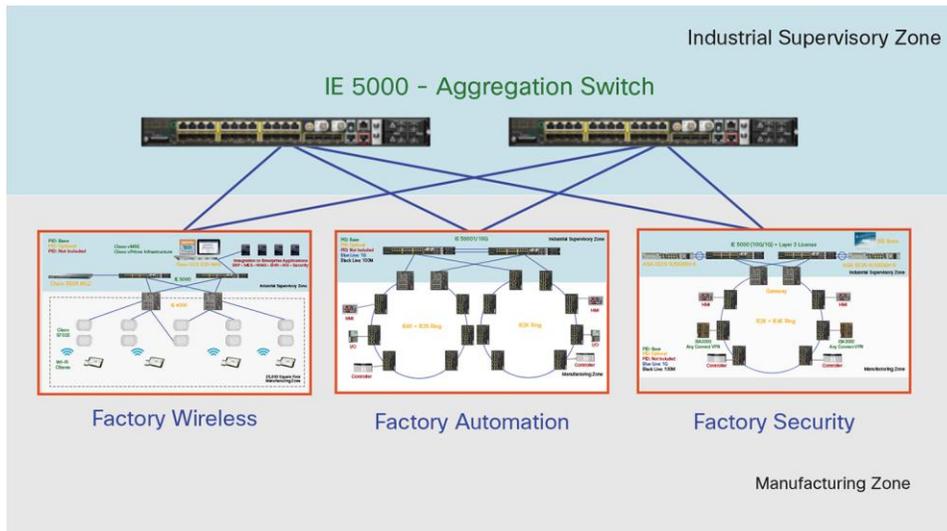


Traditionally, companies like Cisco haven't made this easier on manufacturers. Factory networks, security, and wireless infrastructure products can seem complex and are often characterized as highly customized solutions.

Simple, Attractively Priced Factory Infrastructure Bundles

Recognizing the need to help manufacturers more quickly and simply scale their infrastructure for the countless connected devices they are bringing on-line as part of their IoT initiatives, Cisco is launching the Connected Factory Accelerator bundles. These attractively priced bundles provide the core infrastructure components to help enable one connected factory or an entire IoT-enabled manufacturing enterprise. To unify the infrastructure to improve security and visibility, the bundles share a common Cisco Industrial Ethernet 5000 Series Switch, which is the most flexible and scalable industrial Ethernet platform available.

Figure 2. Connected Factory Bundle Infrastructure



The Connected Factory Network Accelerator Bundle

Having a unified and converged plantwide network is essential for flexible automation and machine-level visibility. Cisco provides rapid fault isolation and resiliency that provide for an extremely reliable network and quick identification of network issues. Many manufacturers have reduced their overall hardware footprint by aggregating their systems with the Cisco industrial switch while reducing network interface card (NIC) and cabling costs. The Network Accelerator bundle is available with a 1G or 10G base 5000 switch.

Benefits

With the Network Accelerator bundle, you can:

- Connect factory automation and control systems to IT systems with standards-based IP networking.
- Improve operational efficiency and cut costs with highly secure remote access.
- Speed response time to issues on the plant floor.
- Mitigate risks by improving network uptime and equipment availability.

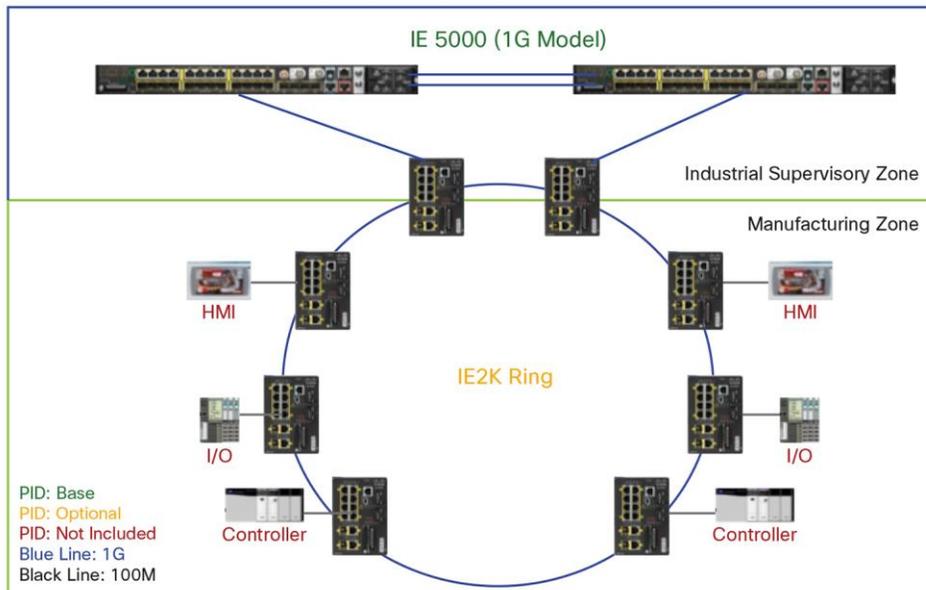
Shown here in Figure 3 are the components for the Network Accelerator bundle.

Figure 3. Connected Factory Network Accelerator Bundle Components



Shown in Figure 4 is the architecture in which the bundle is used.

Figure 4. Connected Factory Network Accelerator Bundle Architecture



The Connected Factory Wireless Accelerator Bundle

It's essential in today's factory to have a platform for mobility. Increasingly, machines, handheld devices, and automated guided vehicles (AGVs) are entering the plant wireless ready. Achieving the flexibility to quickly change a manufacturing line and move assets requires integrated, secure wireless connectivity. Meanwhile, tremendous opportunity exists to add location-based tags and hyperlocation sensors that provide extreme visibility to assets and goods moving through the plant. The Cisco Factory Wireless Accelerator bundle capabilities include a unified architecture that lowers the total cost versus multiple unplanned networks. Simple deployment and centralized management provide for quick installation and immediate wireless network visibility. All this with the integrated security that helps ensure that information and data is transmitted only to the assets and people that you intend.

The Connected Factory Wireless Accelerator bundle is available with a 1G or 10G base Industrial Ethernet 5000 Series Switch.

Benefits

With the Wireless Accelerator bundle, you can:

- Deploy advanced applications on the plant floor (asset tracking, mobile video).

- Use Wi-Fi asset tags and Cisco Mobility Services Engine (MSE) to find production assets and inventory faster.
- Deploy mobile high-definition (HD) video cameras for troubleshooting and collaboration.
- Have better communication between machines and people located throughout the plant improves decision making and optimizes uptime.
- Use a unified, easy-to-manage and highly secure plant wireless infrastructure to provide the reliability and performance needed for mission critical plant floor applications.

Bundle Components

Components for the Wireless Accelerator bundle are shown in Figure 5.

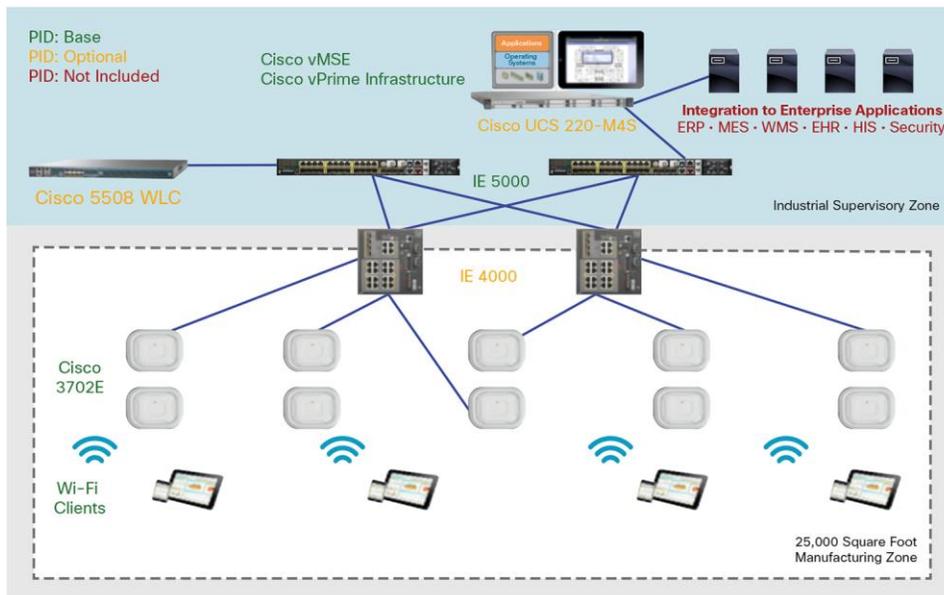
Figure 5. Bundle Components with Cisco Base Equipment

	Connect	Application
Cisco Base Equipment	<ul style="list-style-type: none"> • 2 X IE 5000 Switches • 2 X IE 5K Layer 3 License (1G/10G) • 8 X MMF Rugged SFP • 10 X 3702E AP 	<ul style="list-style-type: none"> • 1 X MSE • 10 X Cisco ONE Foundation License • Cisco vPrime Infrastructure

Architecture

The architecture for the Wireless Accelerator bundle is shown in Figure 6.

Figure 6. Connected Factory Wireless Accelerator Bundle Architecture



The Connected Factory Security Accelerator Bundle

Manufacturing is consistently ranked as a top industry targeted for cyber attacks. Quite often, the solution has been to isolate the factory floor network, but it's increasingly apparent that this prevents manufacturers from achieving the tremendous business improvements that can be achieved with big data and cloud analytics.

Managing security in the network provides for granular security monitoring, threat detection, and incident monitoring. On the plant floor, this can provide cell-based access or access isolated to the individual machine. At the zone level, identity policies can be deployed that are content and context aware. And at the DMZ, remote access policies, perimeter defenses, and encryption services can provide instantaneous threat detection and elimination. The Connected Factory Security Accelerator bundle provides the benefits of these cybersecurity features in a single offering.

Benefits

With the Connected Factory Security Accelerator, you can:

- Unify security for IT and operational-technology applications to protect plant assets with converged-access security products, technologies, and services
- Get wired-to-wireless access controls and the additional end-to-end defense benefits of Cisco ISE with a Cisco wireless environment
- Protect intellectual property and safeguard employee and customer information

Bundle Components

Here are the components for the Connected Factory Security Accelerator bundle, as shown in Figure 7.

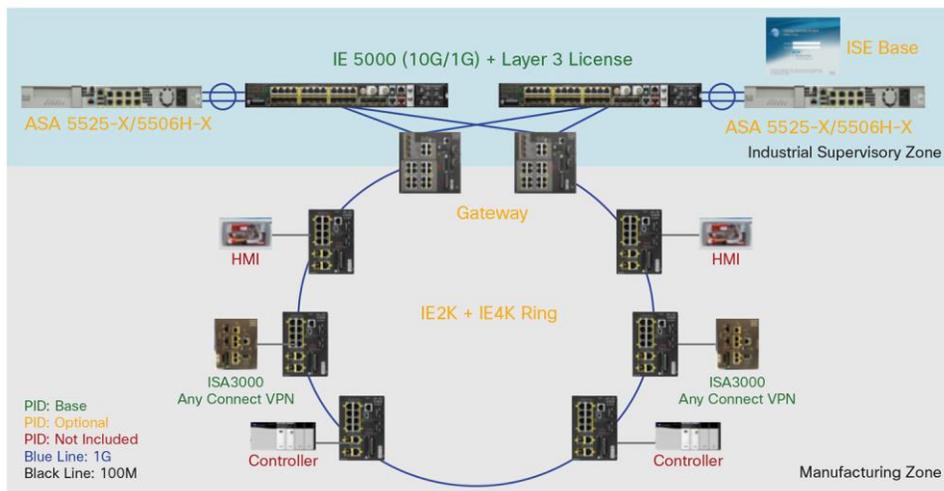
Figure 7. Components of Connected Factory Security Accelerator Bundle



Architecture

As shown in Figure 8, here is the architecture for the Security Accelerator bundle.

Figure 8. Connected Factory Security Bundle Architecture



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Jumpstart Your Connected Factory Today and Partner with Cisco

The Cisco Connected Factory Accelerator Bundles enable you to fast-track your plant automation initiatives and rapidly show a return on investment. In addition, you can be assured these bundles are backed by Cisco's leadership in networking and IT. Many leading manufacturers have turned to Cisco as their trusted partner in digital transformation because of:

- **Robust Technology portfolio:** Only Cisco has the complete building blocks, solutions and services to enable a full 'IoT-ready factory' with accelerated deployment and business outcomes.
- **Holistic vertical solution:** Leveraging Cisco's leadership in networking solutions, the Cisco Connected Factory bundles addresses line of business imperatives and delivers measurable business outcomes.
- **Proven Economic value:** Comprehensive set of Cisco IoT technologies that are 'future-proofed' mean you can count on maximum ROI for your company.
- **Broad Ecosystem:** Cisco has proven partnerships with industry leaders such as Rockwell Automation to offer a complete portfolio of manufacturing relevant solutions.

Contact your Cisco Representative today to learn more how the Connected Factory Accelerator bundles can jumpstart your wireless, security or automation projects. For more information, visit <http://www.cisco.com/go/connectedfactory>



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