



Cisco Industrial Router and Gateway Portfolio



Overview

A complete industrial routing portfolio supporting 5G and public and private LTE to provide secure, and flexible connectivity wherever your business may operate.

The heart of a business is its edge – utility substations, pipelines, and cities, as well as roadways and the police cars, firetrucks, and buses that run over them. The need for business agility is accelerating its digitization. Examples include:

- Secure and scalable connectivity on roadways to boost pedestrian safety, and provide traffic management and emergency vehicle pre-emption.
- Digitizing the power grid to reduce outages, meet the needs of dynamic renewable powered grid, and build grid efficiency.

Remote data collection to improve efficiencies and help the oil industry improve operational efficiency. But digitizing isn't easy. The edge is **diverse, with every use case having different requirements:** different access technologies, protocol support, certifications, environmental and mounting options, and more.

In the past, organizations have been forced to solve each use case independently, resulting in multiple vendors and deploy multiple networks, each requiring unique training and skillsets. Newer wireless options, such as 5G and Wi-Fi 6, further complicate the edge and its evolution. Security is often an afterthought. The fragmented architecture makes it challenging to deploy at scale.

These issues, and the fact that many industries have skill gaps and a shrinking workforce, mean that they cannot transform at the rate needed. **Missed insights are the norm.**

Organizations need a simple, more integrated approach that brings the **power of the enterprise network to scale and secure the edge** and to free up IT and operations so they can do more.



Catalyst
IR1800



Catalyst
IR1101



Catalyst
IR8100



Catalyst
IR8300

Benefits



Lower total cost of ownership with a highly modular portfolio that offers multiple communication types for today's needs and is easily upgradable in the field for tomorrow's needs.



Boost operational efficiency and drive better business decisions by tracking and monitoring equipment, assets, workers, and mission-critical processes.



Protect your industrial assets with industry-leading end-to-end security capabilities that are built into industrial network devices, not bolted on. There's no need for separate hardware to deploy security. Gain visibility into your industrial assets with Cisco Cyber Vision and gain secure remote access to OT assets with Cisco Secure Equipment Access.



Scale and deploy unified security policies with ease with Cisco Catalyst SD-WAN Manager.



Deploy firewalls with application awareness, Intrusion detection and prevention (IDS/IPS) leveraging Talos intelligence, and advanced malware protection all without any additional hardware on certain Catalyst Industrial Router models on-premise, and on all Cisco Catalyst Industrial Router models when using Cisco Umbrella.



Minimize operational costs with fewer truck rolls, and simplify device deployment and operations with zero-touch configuration; manage, monitor, and update devices remotely.

Industrial routers that connect your business anywhere

Cisco offers a **portfolio of industrial routers**, that support any use case with the **flexibility, security, and scalability** needed to unite your edge. This portfolio extends all the benefits of the enterprise network with proven IT tools available wherever your network goes.

The Cisco industrial router portfolio includes a range of compact, ruggedized, modular products to build a highly secure, reliable, and scalable infrastructure to extend secure connectivity at scale to industrial assets.

Cisco industrial routers provide unprecedented flexibility with their modular design, built-in edge compute, and Catalyst SD-WAN support – allowing you to make your networking investments future-ready, so they will be there for you as your business and technology needs evolve.

These products are certified to meet harsh environmental standards. They support a variety of communications interfaces, such as Ethernet, serial, fiber, 5G, Wi-Fi 6, FirstNet, private LTE, LoRaWAN, , Wi-SUN RF mesh, and others.

The Cisco Industrial Router Portfolio

All Cisco industrial routers share a core set of common characteristics. All the routers have modular designs that can help extend product life and lower costs. The flexible design enables WAN redundancy and is ready to handle 5G, Wi-Fi 6, LoRaWAN, public LTE – including FirstNet, and private LTE – including Citizens Broadband Radio Service (CBRS), as well as enhanced data throughputs and differentiated services.

Additional features:

- All our routers are powered by Cisco IOS-XE, and can be managed Cisco Catalyst SD-WAN, delivering next-gen firewall capabilities, the ability to scale to thousands of widely distributed sites, and optimized WAN transport costs.
- They have built-in edge compute resources to process data locally and offer enterprise-grade security including support of Cisco Cyber Vision, have the ability to leverage the Cisco application hosting framework to develop and run IoT business apps, such as Cisco Edge Intelligence.
- They offer advanced security such as hardware encryption, full-stack multi-layer security, and much more.
- The industrial routing portfolio is designed to maintain performance in industrial applications and harsh operating environments – various models have extended environmental, shock, vibration, IP67, and surge ratings; a complete set of power input options; convection cooling; and DIN rail, 19-inch rack or wall mounting.
- They offer a choice of management tools for IT and OT to run a connected operation at scale using Cisco management tools including Catalyst SD-WAN, Cisco Catalyst Center (formerly Cisco DNA Center), and IoT Field Network Director.

The complete line of industrial routers includes:

- [Cisco Catalyst® IR1100 Rugged Series Router](#). The IR1101 is Cisco's most compact FirstNet Ready router, providing secure connectivity for mission-critical industrial use cases. It is well suited to industrial deployments ranging from distribution automation for utilities to transportation and manufacturing as well as remote asset management across the extended enterprise.
- [Cisco Catalyst IR1800 Rugged Series Routers](#). Scale securely with built-in next-generation firewall capabilities. Power your critical services with dual simultaneous 5G cellular, gigabit Ethernet, Wi-Fi 6 support, and more. Automotive compliances make these routers ideal for deployment in mission-critical mobile or stationary use cases in multiple industries.
- [Cisco Catalyst IR8100 Heavy Duty Series Routers](#). Ready for the outdoors, the IR8100 Series is IP67 rated for dust and water protection and built for extreme temperatures; it goes wherever you need it to go.. It's completely modular and upgradable, from 5G to future CPU, storage, and power-supply needs. The IR8100's chassis can be easily upgraded onsite and is designed to adapt to future changes in business or technology needs.

- **Cisco Catalyst IR8300 Rugged Series Router.** Ultra-high-performance rack-mount rugged router that is one of Cisco's first industrial-grade, fully integrated switching and routing platforms, and replaces the CGR2000. Enhanced security, including SD-WAN Security with Unified Threat Defense (UTD) and Cyber Vision for Industrial Control System (ICS) visibility, brings zero trust to a whole new level. As a precision timing source, it keeps your assets in the field in sync, and it's utility certified (IEEE1613 and IE61850) to help ensure compliance and reliability.
- **Cisco 500 Series WPAN Industrial Routers.** IR510 routers enable existing field devices with Ethernet or serial connections to become part of a Wi-SUN RF Mesh network over an unlicensed 915-MHz Industrial, Scientific, and Medical (ISM) band wireless band. IR530 range extenders enable customers to cover a larger area and increase network resilience, enabling IoT applications, including smart metering, distribution automation, street lighting, and remote SCADA monitoring.

Next steps

To learn more about the Cisco industrial routing portfolio, visit: <https://www.cisco.com/go/iot-routers>.

