

# Cisco IP66/IP67-Rated Industrial Switches



## Extend high-performance networking to extreme environments

Cisco's IP66/IP67-rated heavy-duty industrial switches are designed to provide secure and reliable connectivity in the harshest environments. These switches are dustproof and waterproof, meeting IP66/IP67 standards for protection against dust and water submersion. They are engineered to withstand extreme temperatures, vibration, shock, and electrical noise, making them ideal for deployment outdoors and in demanding industrial settings like factory floors, offshore wind farms, mines, and oil fields.

These IP66/IP67-rated switches feature the same robust, reliable, secure networking and low-latency, high-bandwidth communications as Cisco's DIN rail industrial switches and help extend the infrastructure necessary to support AI applications and accelerate innovation to outdoor settings and other severe environments. The switches feature industrial-strength resilience with enterprise-grade scalability and manageability for building scalable and agile industrial networks. Cisco® IP66/IP67-rated industrial switches integrate security features that allow you to assess your security posture, dynamically segment your network, provide

secure remote access to OT assets, and protect crucial infrastructure from cyberattacks. Some models can provide Power over Ethernet (PoE), which allows the delivery of both power and data over a single cable, simplifying the deployment of cameras, sensors, and wireless access points. Certain models also feature both copper and fiber ports for added flexibility, as well as 2.5GE and 10GE high-speed ports.



### **Catalyst IE3100 Heavy Duty Series**

Compact form factor  
Up to 8x FE and 1GE  
M12 ports



### **Catalyst IE3400 Heavy Duty Series**

Up to 24x FE and 1GE  
M12 ports



### **IE3500 Heavy Duty Series**

Power over Ethernet  
Fiber and copper ports  
Up to 24x FE and 1GE M12 ports

The Cisco IP66/IP67-rated industrial switches bring scale, agility, security, and the power of AI to industrial applications with the following capabilities.

Table 1. Features and benefits.

Feature	Benefit
Robust industrial design	<ul style="list-style-type: none"> <li>• IP66/IP67 rated, providing protection against dust and submersion in water</li> <li>• Built for harsh outdoor environments and an extended temperature range (-40° to 75°C, -40° to 167°F)</li> <li>• Fanless, convection cooled with no moving parts for extended durability</li> <li>• Hardened for vibration, shock and surge, and electrical noise</li> <li>• Compliant with multi-industry specifications for automation, intelligent transportation system, and substation environments</li> </ul>
Multiple form factors	<ul style="list-style-type: none"> <li>• Adds flexibility to network design with a compact size designed especially for deployment in constrained spaces</li> <li>• Packs up to 24 Fast Ethernet and 1 Gigabit Ethernet (GE) ports</li> <li>• Available with 10GE fiber and 2.5GE copper ports</li> </ul>
High-density industrial PoE	<ul style="list-style-type: none"> <li>• Support for up to 14 PoE/PoE+ and up to 60W per port with a total power budget of up to 240W per switch</li> <li>• Controls costs by limiting the need for wiring, distribution panels, and circuit breakers</li> <li>• Reduces equipment needs, thus requiring less space and reducing heat dissipation</li> <li>• Innovative PoE features help ensure an uninterrupted power supply to industrial assets</li> </ul>
Swap Drive: “zero-config” replacement	<ul style="list-style-type: none"> <li>• True zero-touch provisioning and simple switch replacement in case of a failure</li> <li>• No networking expertise required</li> <li>• Helps ensure fast recovery</li> </ul>
Built-in and embedded visibility and security for a unified OT security and networking architecture	<ul style="list-style-type: none"> <li>• Cyber Vision sensor to gain granular visibility into connected assets and traffic flows, assess vulnerabilities, and define segmentation policies</li> <li>• Automated and dynamic segmentation for ISA/IEC 62443-based creation of zones and conduits to restrict traffic flows and contain malware</li> <li>• Secure Equipment Access gateway for zero-trust remote access, providing a simple, scalable, controlled, and secure way to configure, maintain, update, and monitor industrial assets remotely</li> <li>• Edge Intelligence to collect process data in real time to improve governance and enable better business decisions</li> </ul>





Feature	Benefit
Low-latency, high-bandwidth communications	<ul style="list-style-type: none"><li>• Deterministic time-sensitive data transfers and high-bandwidth ports enable rapid and efficient transfer of operational data to AI applications, boosting industrial innovation</li></ul>
ThousandEyes Assurance for Industrial Networks	<ul style="list-style-type: none"><li>• Embedded ThousandEyes agent provides comprehensive visibility and insights into complex networking environments and offers a powerful solution for industrial organizations seeking to improve the reliability, security, and performance of both their owned and unowned networks</li></ul>
Intelligent management	<ul style="list-style-type: none"><li>• Cisco Catalyst Center automates routine networking tasks, monitors performance, helps identify and resolve issues, and enforces consistent policies across both the enterprise and industrial networks</li><li>• Certain models can also be managed by the cloud-based Meraki® dashboard</li></ul>

## Use cases

Following are some examples of use cases for the Cisco IP66/IP67-rated industrial switches.

### Ruggedized networks

Extend the enterprise network to outdoor installations exposed to weather elements like rain, snow, and dust, and to rugged environments such as parking lots, garages, warehouses, distribution centers, sports stadiums, entertainment venues, airports, etc., to gain the same level of efficient management and security as the enterprise.

### Manufacturing

Enable seamless, reliable, low-jitter communications and data flow between diverse machinery, sensors, and control systems, particularly on manufacturing floors with dust, debris, moisture, and potential liquid spills.

### Utilities

Help ensure reliable and secure communication across critical infrastructure and facilitate real-time exchange of data from Intelligent Electronic Devices (IEDs) and monitoring systems, enabling precise control and automation of power distribution and grid stability.

### Roadways

Provide the network infrastructure for intelligent transportation systems, enabling communication between traffic cameras, sensors, variable message signs, and control centers to facilitate real-time traffic monitoring, incident management, and automated traffic signal control.

### Custom industrial solutions

Connect individual components within complex sophisticated machines for custom-built turnkey industrial solutions.

## Key benefits

With the Cisco IP66/67-rated industrial switches, you can:

- **Protect your operations against dust and water ingress** in industrial environments such as manufacturing plants, construction sites, mining operations, and the outdoors, for more reliable operations.
- **Enable industrial AI strategies:** Low-jitter data transfers, high-speed ports, resilient connectivity, end-to-end visibility, high-wattage PoE, and robust cybersecurity help to maximize uptime, assist in software-defined automation, and ease use of AI applications.
- **Gain more flexible deployment options** with the ability to install these switches closer to the equipment they need to connect, even in challenging locations, without the need to build additional protective enclosures.
- **Ease deployment, help ensure performance, lower costs, and increase security** in industrial networks by using the same proven management and security tools that you use in the enterprise.
- **Connect and power** cameras, sensors, wireless access points, and more with high-wattage PoE outdoors and in demanding industrial settings. Deploy devices more flexibly and shrink cabling costs.
- **Install them almost anywhere.** Compact sizes of certain models are perfect for installations in space-constrained spaces.
- **Qualify and securely deploy services more quickly** using the programmable, open, and standards-based APIs of the Cisco IOS® XE operating system.
- **Protect critical industrial assets.** Embedded applications in Cisco IP66/IP67-rated switches give you deep visibility into connected assets, protect them with multilevel segmentation, and provide controlled secure remote access. These switches also meet stringent secure-by-design requirements and are IEC 62443-4 certified to comply with strict cybersecurity regulations such as Europe's NIS-2 Directive.
- **Have machine-to-cloud visibility:** A ThousandEyes agent can be installed on certain switch models for end-to-end visibility by employing a combination of active and passive monitoring techniques, providing a comprehensive view of network and application performance across various environments.
- **Facilitate IT/OT partnerships:** A common operating system, management platform, and security applications fosters collaboration, allowing IT and OT teams to work together more effectively toward shared operational goals.

### Discover more

To learn more about the Cisco IP66/IP67-rated industrial switches, visit:

- [cisco.com/go/ie](https://cisco.com/go/ie)
- [cisco.com/go/ie3400h](https://cisco.com/go/ie3400h)
- [cisco.com/go/ie3100h](https://cisco.com/go/ie3100h)
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