

# Industrial Ethernet Network Switches



## AI Overview

Industrial Ethernet switches are rugged network devices designed to provide reliable, secure, and high-performance connectivity in harsh industrial environments. Overview Industrial Ethernet switches are specialized networking devices used to connect multiple Ethernet-enabled devices in industrial settings such as factories, energy plants, transportation systems, and critical infrastructure. Unlike standard commercial switches, they are built to withstand extreme temperatures, vibration, dust, moisture, and electromagnetic interference while maintaining high network reliability and uptime. Types of Industrial Ethernet Switches Managed Switches: Offer advanced features such as VLANs, QoS, redundancy protocols, network monitoring, and security functions. Examples include Phoenix Contact's EP4000 series and Cisco's industrial switches, which support time-sensitive networking (TSN) and industrial AI integration. Unmanaged Switches: Simple plug-and-play devices with fixed configurations, ideal for standard industrial applications. Phoenix Contact's 1000 series and WAGO's unmanaged switches provide compact designs and flexible installation options. PoE (Power over Ethernet) Switches: Supply both data and power over a single Ethernet cable to devices like IP cameras, sensors, and access points. PoE options range from 30W to 90W per port depending on the model. Fiber and SFP Module Switches: Support long-distance communication and high-speed uplinks, often used in control rooms or for connecting remote devices. SFP modules can handle multimode or single-mode fiber for distances up to 80 km. Key Features Rugged Design: IP-rated enclosures (IP40-IP67) and extended temperature ranges (e.g., -40°C to 85°C) for harsh environments. Redundancy and Reliability: Ring redundancy protocols (e.g., Xpress Ring) and redundant power supplies ensure uninterrupted communication. High Performance: Gigabit Ethernet ports, jumbo frame support, and low-latency switching for time-sensitive industrial applications ....

## Article Content

### TN-5300A Series

The ToughNet TN-5300A Series M12 unmanaged Ethernet switches are designed for industrial applications in harsh environments. The TN-5300A Series switches

Industrial Switch: Understanding Industrial Ethernet

How do Industrial Ethernet Switches work? Learn about industrial network switch and Ruggedized Industrial Ethernet Switch solutions. Browse FiberPlex industrial

Managed Industrial DIN-Rail 8-Port Gigabit Ethernet + 4-Port Gigabit ...

This product series features an industrial DIN-rail design. The 8-Port Electrical + 4-Port Optical Managed Gigabit Redundant Ethernet Switch represents a new generation of multi-service access switches,

### EDS-2005-EL Series

Introduction The EDS-2005-EL series of industrial Ethernet switches have five 10/100M copper ports, which are ideal for applications that require simple

Industrial Switch: Understanding Industrial Ethernet

An industrial Ethernet switch is a type of network switch designed to operate in harsh industrial environments. Oil rigs, railways, manufacturing plants, and

Industrial Ethernet Switch

Our range includes unmanaged, PoE, Lite-Managed, and Layer 2/3 managed switches that help support secure communication, better network control, and resilient infrastructure across industrial

Reliable SCADA Networking for a 700MW Desert Wind Farm

The Maisvch Solution Maisvch designed a site-wide industrial Ethernet network with MISCOM7028 Series industrial Ethernet switches at the core.

Industrial Ethernet Switches | WAGO

Industrial Switches WAGO's switch portfolio provides scalable Ethernet network infrastructure with excellent electrical and mechanical performance. These

Cisco Industrial Ethernet switches

Cisco Industrial Ethernet switches Secure connectivity, purpose-built for modern operations Elevate your industrial operations with an AI-ready, rugged network

Industrial Networking Products & Communication

Maisvch is a leading manufacturer of industrial networking products, including rugged Ethernet switches, gateways, routers, media converters, serial/fieldbus

## SCALANCE

SCALANCE X Ethernet-Switches SCALANCE S Security Appliance SCALANCE M Industrial Routers SCALANCE W Industrielles WLAN Industrial Ethernet Industrial 5G Remote Network Management

Industrial Ethernet Switches – Cost-Effective,

WAGO's range of switches ensures the scalability of your ETHERNET network infrastructure, while providing outstanding electrical and mechanical

Industrial Ethernet Switches – Simple and effective

Our Ethernet switches are designed for use in industrial environments. They are robust, impact-resistant and temperature-resistant. All products fulfil the highest

Hirschmann

Hirschmann In today's fast-moving industrial world, your network needs more than just connectivity - it demands reliability, security, and seamless efficiency. That's

Industrial Ethernet Switches | Phoenix Contact

Our Industrial Ethernet Switch portfolio comprises Managed and Unmanaged Switches with Gigabit, PoE, IEC 61850 certification, and for DIN rail mounting.

All Switches Products

Cisco has a comprehensive portfolio of network switches and switching solutions for enterprise networks, data centers and small businesses. Learn more.

Building Network Resilience: Redundancy Protocols and Design in ...

Industrial Ethernet switches employ sophisticated redundancy protocols and design strategies to maintain network availability even when individual components fail.

## SCALANCE

SCALANCE network components form the basis of communication networks in manufacturing and process automation. Specially designed for use in industrial

Ethernet Switches

Moxa provides a wide range of industrial Ethernet switches that feature industrial-grade reliability, network redundancy, strengthened security, easy management,

3onedata | Industrial Communication Solutions

3onedata is a leading supplier of industrial communication solutions, we have been dedicated to IIoT for over 20 years. Our main products include industrial Ethernet

## Industrial Ethernet Switches

FS Industrial Ethernet Switches with robust design for harsh industrial and outdoor environments subject to vibrations, shocks and extreme temperature fluctuations

### Cisco Industrial Ethernet switches

Built to endure the demanding conditions of factories, transportation infrastructure, grid substations, and other harsh environments, Cisco Industrial Ethernet switches come in a wide range of form factors to

## Contact Us

For more information, pricing, or custom solutions, please contact us:

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