

Communication Industrial Switches



AI Overview

Industrial communication switches are specialized network devices designed to ensure reliable, high-speed data exchange in harsh industrial environments, supporting both managed and unmanaged configurations with PoE and redundancy features.

Overview Industrial communication switches are network devices that manage data flow within industrial Ethernet or fieldbus systems, connecting PLCs, HMIs, sensors, actuators, and other devices. They are engineered to withstand extreme temperatures, vibration, electrical noise, and harsh environmental conditions, ensuring uninterrupted communication in factories, utilities, transport, and smart manufacturing applications.

Types of Industrial Switches

- Managed Switches:** Offer advanced features such as VLANs, QoS, RSTP redundancy, Layer 2/3 routing, and network monitoring. Examples include Phoenix Contact EP4000 series and Siemens SCALANCE X-300/X-400.
- Unmanaged Switches:** Simple plug-and-play devices for small networks, providing basic connectivity without configuration. Examples include Siemens SCALANCE X-100 and compact narrow switches from Phoenix Contact.
- PoE (Power-over-Ethernet) Switches:** Deliver power to connected devices like IP cameras or sensors, supporting up to 90W per port with IEEE 802.3bt compliance.
- DIN-Rail and Panel-Mount Switches:** Designed for easy installation in industrial cabinets or control panels, often with ruggedized enclosures.
- High-Speed and Fiber-Optic Switches:** Support Gigabit or 10G connections, fiber/copper ports, and long-distance signal transmission for large-scale industrial networks.

Key Features

- Rugged Design:** Operation in temperatures from -40°C to +85°C, IP65/IP67 protection, and resistance to vibration and electrical interference.
- Redundancy and Reliability:** Support for RSTP, network segmentation, and failover to maintain continuous operation.
- Compliance and Standards:** Tested to EN 62368-1, IEC 61000-6-4:2019, IEC 61000-6-2:2019, and IEC 61850 for industrial networking.
- Flexi...**

Article Content

Industrial Ethernet Switch USB RS232 RS485 RS422

Industrial Ethernet Switches, Industrial USB RS232 RS485 RS422 TTL Serial Fast and Gigabit Ethernet Fiber Optic Converters / Isolators / Extenders / Hubs, port GmbH industrial real time communication

port - your leading partner for industrial communication technology. We offer Switch IP Cores, Stacks, Driver and Tools for industrial Ethernet, CANopen, PROFINET and many more.

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Industrial Network Solutions

Industrial Communication Protocols Future-proof Industrial Networking with Standard Ethernet and IP EtherNet/IP™ is an open industrial Ethernet network capable of handling discrete, safety, motion,

Cisco Industrial Ethernet switches

Modernize your operations with Cisco Industrial Ethernet switches: Increase productivity, boost security, and empower industrial AI.

Communication switch design resources | TI

Our integrated circuits and reference designs help you to build an industrial grade communication switch for harsh environments, long service life and the ability to protect the network against attacks. Design

Industrial Communication & Networking Solutions

Advantech provides complete industrial communication products from industrial switches, fiber and PoE media converters, to industrial gateways, 5G, LTE and LAN cellular routers.

SCALANCE

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

Industrial communication, gateways & switches | Schneider Electric ...

Schneider Electric Australia. Communication protocols from basic to advanced architectures and secure intelligent web gateways & managed switches for flexible Ethernet integration.

Comprehensive Analysis of Industrial Switches

Comprehensive Analysis of Industrial Switches: An In-Depth Guide to Types, Pros and Cons, and Application Scenarios. In the wave of the Industrial Internet, industrial switches, serving as

Managed switches 2200, 2300, 2400 & 2500 | Phoenix

The 2200, 2300, 2400, and 2500 industrial managed switches are particularly flexible to use, with flexible numbers of ports and various approvals.

SCALANCE X Industrial Ethernet Switches

A graduated portfolio of switches all the way to communication processors with integrated switch, offers the best solution for all types of industrial communication in any environment – from production in

PROFINET | Siemens

PROFINET is a globally trusted, highperformance communication standard that delivers openness, flexibility, efficiency, and outstanding performance. It seamlessly connects machines and systems

What is an industrial switch? And what are the differences between it ...

An industrial switch is a network communication device specifically designed for industrial environments, facilitating efficient and reliable data transmission between devices in industrial

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

Industrial Communication

With multiple wiring terminals and extensive software support, Advantech provides industrial Ethernet managed/unmanaged switches switched with reliable,

Ethernet Switches

4181 more ready to ship on August 8, 2026 1: \$233.28/each Download Datasheet FL Switch 1000 Series Din Rail | Panel Mount -10-60 °C 8

Industrial Switches in Industrial Automation

Industrial switches are widely used in industrial automation architecture. They are used to establish reliable communication infrastructure, connect various industrial automation equipment,

Mixed-signal and digital signal processing ICs | Analog

Get to Know Us Together, with our customers, we co-create solutions across aerospace, automotive, communications, consumer, energy, industrial

[AXIS T8504-R Industrial PoE Switch | Axis Communications](#)

AXIS T8504-R Industrial PoE Switch is a 4-port managed industrial PoE Gigabit switch. In addition, the switch is equipped with two RJ45 and two SFP data ports that allows for extra devices to be connected.

[Comnet | Industrial Networking Solutions](#)

Comnet has Industrial Ethernet switches, media converters & secure networking solutions for mission critical infrastructure worldwide.

[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.

[Fiber Optic Network Switches](#)

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