

Industrial Communication and 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 Network Products

Our Stratix 5410 Industrial Distribution Switches offer an all gigabit platform with four 10 gigabit port options and Network Address Translation (NAT) capabilities for networks where high performance is

SCALANCE

Find the perfect connection for every industrial application – from the automotive and chemical industries to the manufacturing and process industries. These solutions

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.

Fiber Optic Network Switches

Buy fiber network switches to extend ethernet network over fiber. Order Versitron high speed fiber optic network switches for fiber optic switches application. Our

Ethernet Switches

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

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

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.

Industrial Communication

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

Hilscher: The expert in industrial communication | Hilscher

Hilscher – Your Partner in Industrial Communication Hilscher is the leading technology and solution provider in industrial communication. With products and solutions from Hilscher, machines worldwide

Industrial Communication

What is industrial communication? The term industrial communication refers to communication between devices used in industrial automation technology. This involves the transfer and exchange of data

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. This gives you the flexibility to build powerful

Industrial Ethernet Switch USB RS232 RS485 RS422 Fiber Optic

Industrial Ethernet Switches, Industrial USB RS232 RS485 RS422 TTL Serial Fast and Gigabit Ethernet Fiber Optic Converters / Isolators / Extenders / Hubs, Modbus RTU ...

Industrial Ethernet Switches

Additionally, with multiple industrial certifications, our industrial Ethernet solutions not only provide the highest network reliability for Ethernet hubs and network

Industrial Networking Products & Communication Solutions Expert

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

Brainboxes | Trusted Connectivity: Switches, IoT, Serial,

Trusted UK manufacturer of industrial data connectivity. Upgrade: rugged Industrial Ethernet switches, IoT, serial converters & IO. Lifetime warranty & support

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

Industrial Ethernet Switches | WAGO

Industrial Switches WAGO's switch portfolio provides scalable Ethernet network infrastructure with excellent electrical and mechanical performance. These rugged devices are designed for industrial

Contact Us

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