Industrial-grade switch with optical port



Overview

Industrial Ethernet Switches Built for secure industrial automation and a wide range of use cases, these modular switches with PoE options support advanced.

Key Takeaways

Industrial-grade Ethernet switches with optical ports provide rugged reliability, high-speed fiber connectivity, and support for harsh environments. Key FeaturesIndustrial-grade switches are designed to operate in extreme conditions, including temperatures from -40°C to 75°C, high vibration, and shock, while maintaining network reliability and security. Optical ports (SFP/SFP+/fiber) enable long-distance, high-speed data transmission, making them ideal for connecting remote devices, backbone networks, or high-bandwidth applications like video streaming and cloud computing.

Types of Industrial Switches

Unmanaged Switches: Plug-and-play, simple to deploy, often with fiber uplinks for long-distance connectivity. Example: PLANET IGS-1000-8T4X features 8 Gigabit copper ports and 4 SFP+ fiber ports with 10G uplinks, operating in -40°C to 75°C environments. Managed Switches: Offer advanced features like VLAN, QoS, IGMP snooping, redundancy protocols (MRP, STP/RSTP/MSTP), and industrial protocol support (PROFINET, Modbus TCP).

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Perle ID

S Managed Switches support fiber ports and provide enterprise-grade security and network redundancy. PoE/PoE+ Switches: Supply power over Ethernet to devices like IP cameras or wireless access points while supporting fiber uplinks for backbone connectivity. Industrial Certifications and StandardsIEC 61850-3 / IEEE 1613: For power and critical infrastructure applications.

E

N 50155: Rail industry compliance.

IE

C 62443: Industrial network security.

NEM

A TS2: Intelligent transportation systems. Advantages of Optical PortsLong-distance connectivity: Fiber links can span kilometers without signal degradation. High bandwidth: Supports 1G, 2.

5G, 10G speeds for demanding applications. Reduced interference: Immune to electromagnetic interference common in industrial environments. Scalable network design: Fiber uplinks allow easy integration into backbone networks or distributed industrial systems.

Recommended Use Cases

Industrial automation and process controlTransportation and rail networksSurveillance and security systemsHarsh outdoor or factory environmentsHigh-bandwidth applications requiring reliable long-distance connectionsExample ModelsPLANET IGS-1000-8T4X: 8 copper ports, 4 SFP+ fiber ports, 10G uplinks, DIN-rail mount, -40°C to 75°C operation.

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S Series: Managed and unmanaged options, fiber support, PoE, industrial protocol support, redundancy features. Moxa Layer 2/3 Managed Switches: Support multiple industrial protocols, fiber uplinks, PoE, and certifications for rail, power, and transportation systems.

Phoenix Contact FL SWITC

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H 5900: Managed switches with flexible port options, TSN support, and fiber connectivity for critical infrastructure. Cisco Industrial Switches: Compact, ruggedized, with all-fiber or mixed ports, PoE options, and advanced security for industrial AI and automation. Industrial-grade switches with optical ports are essential for reliable, high-speed, and secure networking in harsh environments, providing flexibility for both access and backbone connections while supporting industrial protocols and redundancy.

Article Content

Industrial Ethernet Switches

Built for secure industrial automation and a wide range of use cases, these modular switches with PoE options support advanced resiliency protocols and network

Ethernet Switches

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

Industrial Fiber Optic Switches

Many of our switches support 1 or 2 fiber ports which are advantageous when daisy chain configurations are required. The managed switches in this category provide support for both 100Base and

Industrial Fiber Optic Ethernet Switches | SFP, Single-Mode

Explore industrial fiber optic Ethernet switches from a direct manufacturer. SFP, single-mode and multimode fiber switches available in unmanaged and managed designs.

Industrial Ethernet Switch | Industrial lan Light Switch

USR-ISG Industrial Ethernet Switch have 5/8/16 ports and optical ports (SFP slots), and PoE combinations. Compatible with 10/100/1000Mbps speed, the product adopts fanless heat dissipation

Industrial Ethernet Switches

Our switches are built for high network flexibility, cyber security and durability and are suitable for use in mission-critical environments.

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.

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Industrial Ethernet Switches

Unmanaged industrial Ethernet switches provide low-cost network connections with options supporting 10/100/1000BaseT, PoE++ capability, IP67 M12 connections,

Industrial Ethernet Switches with 8/16/24 Ports for Harsh

FS Industrial Ethernet Switches with robust design for harsh industrial and outdoor environments subject to vibrations, shocks and extreme temperature fluctuations from -40℃ to 75℃ generally.

Industrial Ethernet Switches | WAGO

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

75M/246FT Outdoor Armored LC to LC Fiber Optic Cable, 4 Core

About This 1 dustrial-Grade Durability: Engineered with a rugged 5.0mm industrial TPU jacket and dual-layer armor (steel tube + stainless mesh), this LC to LC fiber optic cable resists water, UV,

ITPro Today, Network Computing, IoT World Today combine

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Network Switches

Our rack-mount industrial switches provide versatile connectivity with PoE, high-speed ports, stacking capabilities, and built-in security. These attributes make

Fiber Optic Network Switches | Ethernet to Fiber Switches

Our Ethernet network switches with fiber ports comes in managed or unmanaged formats combined with both Industrial and Commercial grades. Utilize our PoE switches to power your Ethernet devices

Industrial Ethernet Switches

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

Industrial Ethernet Switches

Advantech''s industrial Ethernet switch solutions provide an abundance of options, including Gigabit Ethernet switches.

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Managed Network Switches | Industrial Managed Switches

Get managed network switches connect end-users, servers, and storage via flexible core, distribution, and access layers, enabling high port density, stacking, and flexible management.

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