

Industrial-grade switches



Overview

Extreme Industrial Switches are a family of ruggedized Layer 2 switches designed to operate under harsh environments and extended temperature conditions.

Key Takeaways

Industrial grade switches are rugged network devices designed to provide reliable, secure, and high-performance connectivity in harsh industrial environments.

Overview

Industrial switches are specialized Ethernet switches built to withstand extreme temperatures, vibration, dust, moisture, and electrical interference commonly found in factories, transportation systems, utilities, and smart city applications. They ensure continuous network uptime, support high-speed data transfer, and often include Power over Ethernet (PoE) to power devices like cameras, sensors, and wireless access points.

Key Features

Rugged Design: Industrial switches are engineered for durability, with extended temperature ranges and protection against environmental hazards. **Managed vs. Unmanaged:** Managed switches allow configuration, monitoring, and advanced network management, while unmanaged switches provide plug-and-play simplicity.

Redundancy and Resilience: Many industrial switches support ring topologies, dual homing, and failover protocols to maintain network reliability in case of faults.

Security: Features like VLANs, port security, microsegmentation, and zero-trust access help protect industrial networks from cyber threats.

Po

E Support: Industrial switches often provide IEEE 802.3af/at/bt PoE, delivering up to 90W per port to power connected devices without additional cabling. High Bandwidth and Low Latency: Designed for time-sensitive applications, these switches support Gigabit and 10-Gigabit uplinks with ultra-low jitter for industrial AI and automation.

Applications

Manufacturing: Connecting PLCs, sensors, and automation systems for real-time monitoring and control. Transportation: Rail, traffic management, and intelligent transportation systems using EN 50155-compliant switches. Utilities and Energy: Grid substations and smart meters requiring secure, high-availability networks.

Smart Cities: Surveillance, IoT devices, and wireless networks powered via PoE.

Leading Brands and Options

Cisco Industrial Ethernet Switches: Modular, AI-ready, with advanced security and high-speed uplinks. Moxa: Offers managed, unmanaged, PoE, rackmount, and EN 50155 switches for rail and industrial applications.

NH

P / Allen-Bradley Stratix Series: Provides managed and unmanaged options with embedded Cisco technology and FactoryTalk integration.

Extreme Networks IS

W Series: Rugged Layer 2 switches with flexible PoE, redundant ring technology, and Fabric Attach for zero-touch provisioning. Industrial grade switches are essential for maintaining reliable, secure, and high-performance networks in environments where standard commercial switches would fail, supporting both operational technology (OT) and IT integration for modern industrial applications.

Article Content

Industrial Ethernet Switches

Built for diverse industrial applications, these switches feature all-gigabit, high-density, all-copper or mixed copper and fiber ports, PoE options, and resiliency

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

Industrial Switches (ISW) | Extreme Networks

Extreme Industrial Switches are a family of ruggedized Layer 2 switches designed to operate under harsh environments and extended temperature conditions. They provide continuous uptime,

Durable Industrial Switches

The DIS switches are designed to easily handle hot and cold temperature variances,* and can cold start at their coldest temperatures. With superior environmental protections to commercial switches, these

Industrial Ethernet Switches | Phoenix Contact

Das Portfolio unserer Industrial Ethernet Switches umfasst Managed und Unmanaged Switches mit Gigabit, PoE, Zertifizierung nach IEC 61850 und zur Tragschienenmontage.

Industrial Ethernet Switches | Industrial Network Switch | Perle

Industrial-grade Ethernet Switches are specifically designed to connect devices in network environments that are subject to extreme operating temperatures of -40°C to 75°C, vibrations, and shocks.

Industrial Ethernet Switches

Our managed Ethernet switches, fiber switches, and router switches provide fast Ethernet and gigabit combo ports as well as numerous network protocols, such

huijue+4-port+industrial-grade+switch

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Industrial Toggle Switch Selection Guide

Understanding Industrial Toggle Switch Configurations: A Technical Overview When sourcing or selling toggle switches on Alibaba , understanding the technical specifications is critical for matching

Hubbell HBL1223GY 3-Way 20A Industrial Grade Gray Ac Switch

Overview Hubbell HBL1223GY 3-Way 20A Industrial Grade Gray Ac Switch Product Specifications UPC: 78358543180 Color: Gray Wiring: Back, Side Size: 1.31 Inch Width x 1.13 Inch Depth x 4.06 Inch

Arrow Hart extra heavy-duty industrial grade switches

Arrow Hart's broad line of extra heavy-duty industrial grade switches feature superior engineering, reliable performance and ease of installation. Available in toggle, lighted, pilot light, Corbin and

PoE Switches

PoE Switches We provide a wide range of PoE/PoE+/PoE++ switches with up to 90 W output per port to deliver high-speed data transmission while powering high-power devices over long distances. With

L2+ Managed Industrial 8-Port 1000T 802.3at PoE + 4-Port 1G/2.5G

The UTP UF-MIS6408GP-2FBP is the highly reliable managed industrial Bypass PoE switch with 8-port 10/100/1000-T PoE, 4-port 1G/2.5GBase-X fiber SFP and 2 channels single LC Bypass or 1 channel

Moxa EDS-510E-3GTXSFP Ethernet Switch, 10 Port, Managed GB, 3

DIN-rail Managed SwitchesOur DIN-rail managed switches feature industrial-grade reliability, network redundancy, and security features based on the IEC 62443 standard. The compact DIN-rail

Moxa EDS-G509-T Ethernet Switch, 8 Port, Managed, 5 Combo SFP

DIN-rail Managed SwitchesOur DIN-rail managed switches feature industrial-grade reliability, network redundancy, and security features based on the IEC 62443 standard. The compact DIN-rail

Advantech ADAM-6520-BE Ethernet Switch,

ADAM-6520 is a 5-port industrial-grade switch with Ethernet connectivity and from 10 to 100 Mbps transfer rates (Auto-negotiation). Just like any other product in

Industrial Ethernet Switches

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

Moxa EDS-4008-LV-T Managed Ethernet Switch, 8 x 10/100BaseT

DIN-rail Managed SwitchesOur DIN-rail managed switches feature industrial-grade reliability, network redundancy, and security features based on the IEC 62443 standard. The compact DIN-rail

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