

Article Overview

Industrial switches come in various types including Layer 2, Layer 3, Layer 4, managed, unmanaged, and PoE-enabled models, with examples from Cisco, Comxus, and other manufacturers.

Types of Industrial Switches

Layer 2 Switches: Forward data based on MAC addresses, suitable for connecting devices within the same LAN. Examples include L2 industrial switches from Comxus with multiple Ethernet ports, uplink options, and redundant power inputs .

Layer 3 Switches: Integrate routing functions for multi-subnet networks. Cisco Industrial Ethernet 5000 and 6000 series are examples, supporting VLANs, QoS, and advanced routing .

Layer 4 Switches: Manage traffic based on transport layer ports (TCP/UDP), ideal for prioritizing critical industrial applications like SCADA systems .

Unmanaged Switches: Plug-and-play devices for small networks or low-management scenarios, often used in local monitoring networks .

PoE (Power over Ethernet) Switches: Provide both data connectivity and power to devices such as IP cameras, sensors, and access points. Cisco IE 2000 and 3000 series offer high-wattage PoE options .

Manufacturer-Specific Models

Cisco Industrial Ethernet Series:

- o IE 2000, 3000, 4000, 5000, 6000 series
- o Features: Rugged design, PoE options, high-speed 10-GE uplinks, modular and compact configurations, advanced security, and device-to-cloud monitoring .

Comxus Industrial Switches:

- o L2 Industrial Switches (non-PoE) with 4, 8, 16 ports
- o Features: Redundant power inputs, surge/ESD protection, ERPS support, suitable for PLCs, HMIs, and SCADA nodes .

DirectIndustry Industrial Switches:

Complete List of Industrial Switch Models

o XT Series Toggle Switches, XCSK Magnetic Blowout Micro Switch, 90 Series Toggle Power Switches
o Features: High reliability, IP67/IP68 sealing, multiple pole configurations, non-contact safety switches, and analog/digital I/O support .

Key Features to Consider

- o Rugged Construction: Metal housing, DIN-rail or rack-mountable, IP-rated for dust and moisture protection .
- o Temperature Range: Typically -40°C to +85°C for industrial environments .
- o Power Resilience: Dual power inputs, wide voltage ranges, failover mechanisms .
- o Protocol Support: ERPS, RSTP, IGMP snooping, VLANs, and sometimes industrial fieldbus integration .
- o Management Options: SNMP, logging, remote diagnostics, modularity, and hot-swappable modules .

This list provides a comprehensive overview of industrial switch models, covering types, manufacturer examples, and key technical features to guide selection for industrial networking applications.

7 Common Industrial Switch Types in Electronics Switches come in a variety of shapes, sizes, and current ratings. An

Rugged, yet easy to use, Perle has over 734 models of Ethernet switches that feature Industrial Protocol Management support,

Industrial Automation are available at Mouser Electronics. Mouser offers inventory, pricing, & datasheets for Industrial Automation.

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

The Cisco IE switching portfolio offers ruggedized, secure, easy-to-use switches that bring proven IT proficiencies to harsh industrial

Comprehensive Analysis of Industrial Switches: An In-Depth Guide to Types, Pros and Cons, and Application

Each D-Link Industrial Switch series (DIS) delivers value for different applications" requirements. This allows users to choose the

Industrial switches are critical components in automated systems, used to control machinery, equipment and safety mechanisms.

Complete List of Industrial Switch Models

Cisco IE3500 Rugged Series switches provide the foundation for industrial AI-ready operations by

Cisco Industrial Ethernet Switches Cisco Industrial Ethernet Switches are designed to withstand extreme conditions. Especially

Our Industrial Ethernet Switch portfolio comprises Managed and Unmanaged Switches with Gigabit, PoE, IEC 61850 certification,

Leviton offers a wide range of lighting controls, wiring devices and networking to meet the needs of today's residential, commercial

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

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

Cisco network switches deliver performance, flexibility, and security. Cisco switches are scalable and cost

Cisco delivers a comprehensive portfolio of switching solutions for Enterprise Networks, data centers, and smaller businesses. These

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