

What are industrial switches for



Article Overview

Industrial switches are specialized networking devices designed to ensure reliable communication and data transfer in harsh industrial environments.

What Industrial Switches Are

Industrial switches, also known as industrial Ethernet switches, are network communication devices specifically engineered for industrial settings. Unlike commercial switches, which operate in controlled server rooms, industrial switches are built to withstand extreme temperatures, dust, humidity, vibration, and corrosive gases, often with protection ratings of IP40 to IP67 . They provide high-speed, stable, and reliable data transmission between devices in industrial automation systems and the Industrial Internet of Things (IIoT), . Many models also feature dual power redundancy and fanless cooling to maintain continuous operation under challenging conditions .

Key Features

- **Rugged Design:** Metal or reinforced enclosures to resist shock, vibration, and environmental hazards .
- **Temperature Tolerance:** Operate in extreme temperatures from -40°C to 85°C .
- **Advanced Networking:** Managed or unmanaged options, PoE (Power over Ethernet) support, and protocols like ERPS and Spanning Tree for network reliability .
- **Lightning and Surge Protection:** Some models include 6KV protection for outdoor applications

Article Content

What Is An Industrial Ethernet Switch? | Key Features Explained

What Is An Industrial Ethernet Switch? Learn its definition, functions, key features, differences from standard switches, applications,

What is an Industrial Switch? Industrial Ethernet Switch Guide 2026

An industrial switch (industrial Ethernet switch) is a hardened networking device designed for OT environments such as factories,

What Is an Industrial Managed Switch? | New Equipment Digest

Deep dive into what an industrial managed switch is, the difference between a managed and unmanaged industrial switch, all the

What is an industrial switch and its applications

The industrial switch is designed to meet the needs of industrial environments, providing reliable network connections between

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Industrial Internet of Things (IIoT) When Industrial Ethernet Switches interconnect devices that are also connected to the Internet, the

What is an industrial switch

Abstract of this article What is an industrial switch The role of industrial switches How to choose a switch What are the characteristics

Industrial Ethernet Switches

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Every Switch Type You Need to Know for Industrial Electronics

Industrial switches are a different breed of electromechanical product, built for heavy-duty work. A sourcing pro should

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

July 18, 2025 What is an industrial switch? And what are the differences between it and an ordinary switch? In modern factories,

What is an industrial switch and its applications

What is an industrial switch? Today industrial switch plays a significantly important role in various industries such as energy,

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