

8-Optical-4-Electrical Ring Network Switch



Article Overview

An 8-electrical + 4-optical port industrial ring network switch provides high-speed, reliable, and self-healing connectivity for harsh industrial environments.

Overview

An 8-optical-4-electrical ring network switch is a specialized industrial Ethernet switch designed to handle high data throughput while maintaining network reliability and redundancy. It features 8 Gigabit electrical Ethernet ports for connecting local devices and 4 Gigabit SFP optical ports for long-distance fiber connections, enabling flexible network topologies such as single ring, cascade, or multi-ring structures .

Key Features

- **Self-Healing Ring Network:** Supports ERPS (Ethernet Ring Protection Switching) or ITU G.8032 protocols, providing fault recovery in less than 20ms, ensuring zero interruption in critical industrial operations .
- **Industrial-Grade Design:** Fanless, low-power consumption, and capable of operating in extreme temperatures from -30°C to 75°C. Resistant to electromagnetic interference, vibration, shock, and salt spray .
- **Layer 2 Management:** Supports VLAN, QoS, IGMP Snooping, RSTP, port trunking, and port mirroring, allowing efficient traffic management and network segmentation .
- **Durable Construction:** Typically housed in an aluminum alloy rail-mounted enclosure with IP40 protection, providing excellent heat dissipation and mechanical...

Article Content

May 01, 2026

Multi-Drop Ethernet Fiber Optic Switch

The TC3720 10/100M 6-Port Self-Healing Ring Ethernet Switch is a low cost solution for linking multiple RTUs & PLCs in industrial

Mar 15, 2026

industrial gigabit ethernet ring switches+supplier, HCH

This industrial gigabit ethernet ring switch is equipped with 8 gigabit SFP optical fiber interfaces and 8 gigabit Ethernet electrical

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Fiber Optic Network Switches | Ethernet to Fiber Switches

VERSITRON manufactures a wide range of fiber optic switches that provide links for your 10Base, 100Base, 1000Base Gigabit, and

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4×4 Silicon Optical Switch based on Double-Ring ...

PDF | We present the experimental demonstration of a 4×4 silicon electro-optic (EO) switch fabric based on a Benes

Jun 07, 2026

Buy ORingNet Ethernet Switches online Webshop

Ethernet switches are the basic components in every network. They connect the nodes to form a local area network (LAN). For

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Managed Industrial DIN-Rail 8-Port Gigabit Ethernet + 4-Port Gigabit ...

This product series features an industrial DIN-rail design. The 8-Port Electrical + 4-Port Optical Managed Gigabit Redundant

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What is Ring Switching?

What is Ring-Switching within a Shared-Ring Protection-Switching System?

COMMENT: Throughout this post, I will

Apr 25, 2026

An Ultra-Compact 4 × 4 and 8 × 8 Optical Switch Based on Dual

We demonstrate an optical switch array based on the topology of Butterfly by using dual-microring resonators which can be used in

Dec 19, 2025

Industrial Ethernet Switches

ERPS provides sub-50ms protection and recovery switching for Ethernet traffic in a ring topology and at

Mar 04, 2026

Ethernet Switches

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

Dec 11, 2025

Industrial Ethernet Switch

ORing offers a comprehensive portfolio of rugged industrial Ethernet switches, from cost-effective unmanaged and PoE models to

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TSN-6325-8T4S4X

Redundant Ring, Fast Recovery for Critical Network Applications The TSN-6325-8T4S4X supports redundant ring technology and

Jan 10, 2026

8-Port Managed Ethernet Switch / Redundant-Ring Fiber Optic

The MSW-1208 is a rugged, fan-less, industrial-grade, managed 10/100M Ethernet switch (layer 2) to fiber optic media converter that

Sep 20, 2025

Fiber Optic Ring Redundancy Design for Industrial Ethernet Switches

Fiber Optic Ring Redundancy Design for Industrial Ethernet Switches: In-Depth Practice in Building the "Self-Healing Heart" of

Jan 15, 2026

Nano-optical Switch Based on Photonic Crystal Ring Resonator

In recent trend, the ultra-speed nanophotonics components are highly attractive for the scientific community and next

Sep 15, 2025

What do's and don'ts on a ring network : r/networking

What do's and don'ts on a ring network Hey everybody, Lately I've been struggling with a ring network made up of 9 switches. Switch

Oct 05, 2025

DNA PÓS

A Bolsa pós-graduação online EAD foi pensada especialmente para enfermeiros que desejam evoluir

Oct 10, 2025

Optical ring resonator as an optical filter and optical switch

In this paper, a general analysis for non-linear micro-ring resonator as all optical switch is discussed in a vertically

Aug 05, 2025

8 Port Industrial Fast Ring Managed PoE++ Switch with 4 SFP+

Toggle the dip switch to create a failover link (ERPS supported), ensuring rapid recovery under 20ms. Support 4x10G uplinks for

Mar 27, 2026

Optical Switch

Optical switches are defined as devices used in optical communications networks to switch signals optically rather than

Jun 27, 2026

Opto-isolator

An opto-isolator (also called an optocoupler, photocoupler, or optical isolator) is an electronic component that transfers electrical

Nov 01, 2025

Industrial Ethernet Switches | Phoenix Contact

PoE+ Ethernet switch, 8 Ethernet ports in M12 format, automatic detection of the data transmission speed

Jul 11, 2026

A switchable high-speed fiber-optic ring net topology and its method of ...

To solve these problems, this paper has conducted an investigation into the proposed switchable high-speed fiber

Jun 08, 2026

MCSESM103F2CS0

It comes with 8 copper cable transmission ports and 2 ports for single-mode fiber optic. It provides simple

Mar 23, 2026

Ethernet Ring Protection Switching

Ethernet Ring Protection Switching (ERPS) is an effort at ITU-T under G.8032 Recommendation to provide sub-50ms protection and

Contact Us

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