

Article Overview

An 8-Optical-8-Electrical Ring Network Switch is an industrial-grade Ethernet switch with 8 optical SFP ports and 8 electrical Ethernet ports, designed for high-reliability ring network applications with self-healing capabilities.

Key Features

Port Configuration: The switch includes 8 gigabit SFP optical fiber interfaces for long-distance transmission and 8 gigabit Ethernet electrical ports for connecting terminals, enabling flexible network deployment in industrial environments . **Ring Network and Redundancy:** It supports self-healing ring network technology such as ERPS (Ethernet Ring Protection Switching), RSTP, MSTP, and proprietary O-Ring or O-Chain protocols. These technologies allow the network to automatically recover from a fiber or link failure, typically within 20-50 milliseconds, ensuring zero or minimal communication interruption . **Industrial Reliability:** Designed for harsh environments, the switch operates in a wide temperature range from -30°C to 75°C or -40°C to 75°C depending on the model, with fanless, low-power design to reduce noise and improve durability . It also provides strong anti-interference and surge protection, making it suitable for factory floors, transportation systems, and outdoor installations . **Management and Monitoring:** Many models, such as the IES-3080 series, are managed switches that allow centralized configuration and monitoring via utilities like Open-Vision. They support VLANs, QoS, and advanced redundancy management for mission-critical applications . **Applications:** These switches are widely used in factory automation, intelligent transportation, video surveillance, power distribution, water management, oil and gas, mining, and high-speed rail networks. Their combination of optical and electrical ports allows integration of both long-distance fiber links and local Ethernet devices . **Installation Flexibility:** Industrial switches often support DIN-rail or wall mounting, enabling efficient use of cabinet space in control rooms or roadside cabinets .

Summary

An 8-Optical-8-Electrical Ring Network Switch provides a robust, high-speed, and fault-tolerant network solution for industrial environments. Its combination of optical and electrical ports, fast self-healing ring protocols, wide operating temperature range, and managed network capabilities make it ideal for critical infrastructure and automation networks where reliability and uptime are essential .

BL169GM-SFP is a network managed industrial Ethernet switch that complies with FCC, CE and RoHS standards. Support 4 gigabit

GAOTek ring network switch adopts industrial rail design, 16 GE + 4 OPTIC network switch is a new generation of multi-service

In this paper, a photonic crystal ring resonator (PCRR)-based optical demultiplexer is reported for Dense Wavelength

In this paper, we have designed and evaluated two 8-channel optical demultiplexers using photonic crystal ring

Abstract We demonstrate an optical switch array based on the topology of Butterfly by using dual-microring resonators

A reliable ring network can be accomplished only with easy configuration, saving many complicated steps and time. Compliant with

Learn how to design a fiber optic ring network with practical diagrams, topologies, and

The switch, which is designed for a temperature range of -40°C to $+70^{\circ}\text{C}$ in protection class IP20, has a redundant power supply (12

For a conventional PON system, the communication will be interrupted when the feeder fiber break without fiber

An eight-channel wavelength demultiplexer by cascading of ring resonators (RRs) in photonic crystal (PhC) structure

Nvidia's new optical network switch, announced at GTC, promises to revolutionize AI data

ORing's industrial Ethernet switch portfolio is built for reliable industrial connectivity and enhanced OT cybersecurity. Our range

The one-dimensional (1D) PT-symmetric ring optical waveguide network (PTSROWN) designed in this work not only

Dual-ring eight-phase control defined by NEMA nomenclature Ring-barrier-phase control logic (Figure 2-2) is the essence of any

Aguinaldo R, Aguinaldo R, Forencich A et al. Wideband silicon-photonic thermo-optic switch in a wavelength-division

MEMS 4X8 8X8 Optical Switch is a compact,single mode or multimode fiber optical switch,and high-performance,fully non-blocking

Web: <https://bssoda.pl>

