2-Optical-4-Electrical Management Switch



Overview

2 Optical 4 Electrical Gigabit Managed Industrial BL167GM-SFP is a managed industrial Ethernet switch with 2 Gigabit SFP ports 2-Optical 4-Electrical Ether.

Key Takeaways

A 2-Optical-4-Electrical managed industrial Ethernet switch provides 2 Gigabit SFP ports and 4 Gigabit RJ45 ports with advanced Layer 2 management, ideal for industrial networking in harsh environments.Key Features
• Port Configuration: 2 Gigabit SFP (optical) ports for uplink or long-distance fiber connections, and 4 Gigabit RJ45 (electrical) ports for standard Ethernet devices .

• Management Capabilities: Supports Layer 2 protocols including VLAN (IEEE 802.1Q), port aggregation, STP/RSTP/MSTP, IGMP snooping, ACLs, and broadcast storm suppression, ensuring network stability and security .

• Industrial Reliability: Designed for harsh environments with wide operating temperatures (-40°C to +75°C), fanless low-power operation, strong EMC performance, vibration and dust resistance, and IP40 protection in some models .

• Network Protection: Features loop protection, RUN Ring technology for self-healing ring networks (as fast as 10ms), and multi-ring Ethernet protection for high availability .

• Management Interfaces: Can be managed via Console, Telnet, SSH, Web GUI, SNMP, and mobile or PC terminals, with some models supporting cloud-based visual management .

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• Alarm and Monitoring: Supports power supply, port, and abnormal state relay alarms, as well as port speed limits and flow control .
Applications

These switches are widely used in industrial automation, intelligent transportation, video surveillance, and factory networking, providing reliable connectivity for critical systems in environments with extreme temperatures, electrical noise, or mechanical stress .

Advantages
• Flexible Network Expansion: Modular design allows easy integration of optical and electrical connections.

• Enhanced Security: 802.1X authentication and VLAN segmentation protect against unauthorized access.

• High Performance: Full Gigabit throughput ensures fast and stable data transmission.

• Maintenance Efficiency: Remote and local management options simplify monitoring and troubleshooting. In summary, a 2-Optical-4-Electrical managed industrial Ethernet switch combines high-speed fiber uplinks with standard Ethernet ports, robust Layer 2 management, and industrial-grade reliability, making it suitable for demanding industrial networking applications .

Article Content

1 Introduction to all optical switching technologies

The conventional way to switch the information is to detect the light from the input optical fibers, convert it to an electrical signal, and

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