MISCOM8216TSN-4XGF-4GF-8GT

16-Port 10G DIN-Rail Layer 3 TSN Industrial Ethernet Switch



- Support 4*10G SFP+ ports, 4*Gigabit SFP ports and 8*Gigabit RJ45 copper ports
- Support TSN Time sensitive Networking series standards (IEEE802.1AS/ Qbv/ Qbu/ CB/ Qci), provide clock synchronization, low-latency flow control and reliability mechanisms
- Support fast ring networking (MW-Ringv2), ERPSv1/v2, STP/RTSP/MSTP to improve network reliability
- Support IPv4/IPv6 static routing, RIPv1/v2, OSPF dynamic routing protocol, realize routing and forwarding
- Supports 1*AC85~264V / DC110~370V AC/DC power input, or 2*DC24V or DC48 power input optional, dual power supply redundancy
- High strength aluminum alloy shell, IP40 protection, fanless design for heat dissipation, can reliably work in harsh industrial environments of -40 ℃~+75 ℃

CE FC RoHS IP40

Product Description

MISCOM8216TSN-4XGF-4GF-8GT layer-3 10G TSN industrial Ethernet switch, can be transmitted low latency in data flow with reliability and certainty, supports 4*10G SFP+ ports, 4*Gigabit SFP ports, and 8*Gigabit RJ45 ports. It adopts the storage and forwarding mechanism and has strong bandwidth processing capabilities, automatically troubleshooting data packet errors, reducing transmission failures, and easily supporting 10G networking to ensure stable, reliable, and efficient data transmission. The product uses industrial grade components, combined with high standard system design and production control, with easy installation on 35mm DIN rails. It has high strength durable aluminum alloy shell, fanless efficient heat dissipation, -40℃ ~ + 70℃ wide temperature work, high standard industrial protection design, can adapt to a variety of harsh working environment, stable communication performance.

The MISCOM8216TSN-4XGF-4GF-8GT layer-3 switch follows the main communication standards in the industrial

field, and meets the technical requirements such as real-time communication, network security and so on. The product provides various ways of managing switches, such as accessing the switch command line (CLI) through the CONSOLE port or TELNET/SSH protocol, the switch WEB interface through HTTP / HTTPS, and the device MIB through the SNMP protocol. Multiple network protocols and industry standards, such as TSN, PTP, RIP, OSPF, VRRP, ERPS, MW-Ringv2, STP/RSTP/MSTP, VLAN, QoS, LACP, PIM, IGMP, IGMP Snooping, LLDP, 802.1X, ACL, RMON, DHCP Client/Server/Snooping/Relay, SNTP, port mirroring, DDM, Ping, Traceroute, etc. In terms of installation, you can flexibly choose either the rack mount type or the desktop mount type. This product can be widely used in comprehensive energy, smart city, rail transit, intelligent transportation, industrial automation and other fields.

Features and Benefits

- Support unicast frame, broadcast frame and unknown storm control, support broadcast and multicast packet storm detection to prevent network storm
- Support link static aggregation and dynamic aggregation LACP, which can increase transmission bandwidth, improve link reliability and realize network load sharing
- Support 802.1Q VLAN, provide Access, Trunk, Hybrid interface easy to divide multiple broadcast domain, enhance the security of the network
- Support MAC, protocol, and IP sub-network based VLAN
- Support MAC address table and aging time limit, static unitcast/multicast MAC address and interface binding to ensure the use of legal users
- Supports PIM, IGMP, IGMP Snooping and multicast filtering to reduce multicast data broadcast on the network and save network resources
- Support LLDP link layer discovery protocol, obtain LLDP neighbor device information, conduct link status monitoring, facilitate topology management and fault location
- Support ERPS Ethernet multi-ring protection technology, provide multi-ring networking, link backup, achieve fast convergence, improve network stability
- Support VRRP (Virtual Router Redundancy Protocol), to make multiple routing devices up to a virtual router to achieve redundant backup
- Support HTTP, HTTPS, TELENT, SSH, CONSOLE port and other login methods
- Support SNMPv1/v2c/v3, through the MIB network management system can be information query, information modification and troubleshooting, to achieve centralized management
- Support RMON remote network monitoring, make statistics and alarm of various types of data frames, and can be used for remote monitoring and management of network management system
- Support port security, convert dynamic MAC addresses to secure dynamic/static/ Sticky MAC, prevent illegal user access, and enhance device security
- Supports 802.1X port authentication, authentication and access control for access users
- Support AAA safe network management, and conduct authentication, authorization and billing of users through RADIUS and TACACS +, to prevent illegal users from logging in
- Support ACL access control list, can customize a variety of frame type filtering rules, the specified message filtering or rate limit
- Support QoS service quality, so that voice, video and important data in the network equipment priority transmission, to solve the network congestion
- Support port mirroring to collect port sent and received data for network detection and fault management
- Support DDM digital diagnosis and monitoring, and can detect the temperature, voltage, current, transmitting/receiving optical power for the DDM SFP optical module
- Support Ping IPv4/v6, Traceroute IPv4 / v6 to detect network connectivity and locate fault points
- Support the dual power supply redundant power alarm and port drop alarm, support relay alarm formula
- Support DHCPv4 server, centralized dynamic management and configuration of user IP addresses

- Support DHCPv4 snooping, ensure that DHCP clients obtain IP addresses from a legitimate DHCP server to prevent DHCP attacks
- Support DHCPv4 relay to assist DHCP server to dynamically assign network parameters to DHCP clients
- Support system logging for user operation, system security, system failure and other information, and support remote monitoring of Syslog server

Technical Specifications

Software	
Switching	Support 802.1Q VLAN Support VLAN based on port/MAC/IP subnetwork/protocol/stream, port isolation, VLAN mapping Support ports configuration, such as port rate, duplex mode, flow control, maximum frame length, etc Support port speed limit, storm control, storm detection, port count Support port aggregation, static port aggregation, LACP Support MAC address aging and learning restrictions, static unicast or multicast MAC address binding
TSN	IEEE 802.1AS (generalized PTP, gPTP) IEEE 802.1Qbu (Frame Preemption, FP) IEEE 802.1Qbv (Time-Aware Shaper, TAS) IEEE 802.1Qci (Per-Stream Filtering and Policing, PSFP) IEEE 802.1CB (Frame Replication and Elimination for Reliability, FRER)
Redundancy	Support fast ring networking (MW-Ringv2) private agreement Support ERPS Support STP/RSTP/MSTP
Broadcast	Support IGMP snooping Support multicast filtering Support IGMPv2/v3 Support PIM-SM
Routing	Support IPv4/IPv6 static routing Support routing control, routing encryption and routing access control list Support for RIPv1/v2, OSPF dynamic routing Support VRRPv2/v3
Security Management	Support HTTPS、SSH service control，HTTP/HTTPS、SNMP、TELNET/SSH access management Support 802.1 port authentication, AAA authentication, RADIUS, TACACS + protocol Support port secure, source IPv4/IPv6 protection, ARP protection Support ACL, filter the L2-L4 layer data Support loopback detection, relay alarm

Technical Specifications

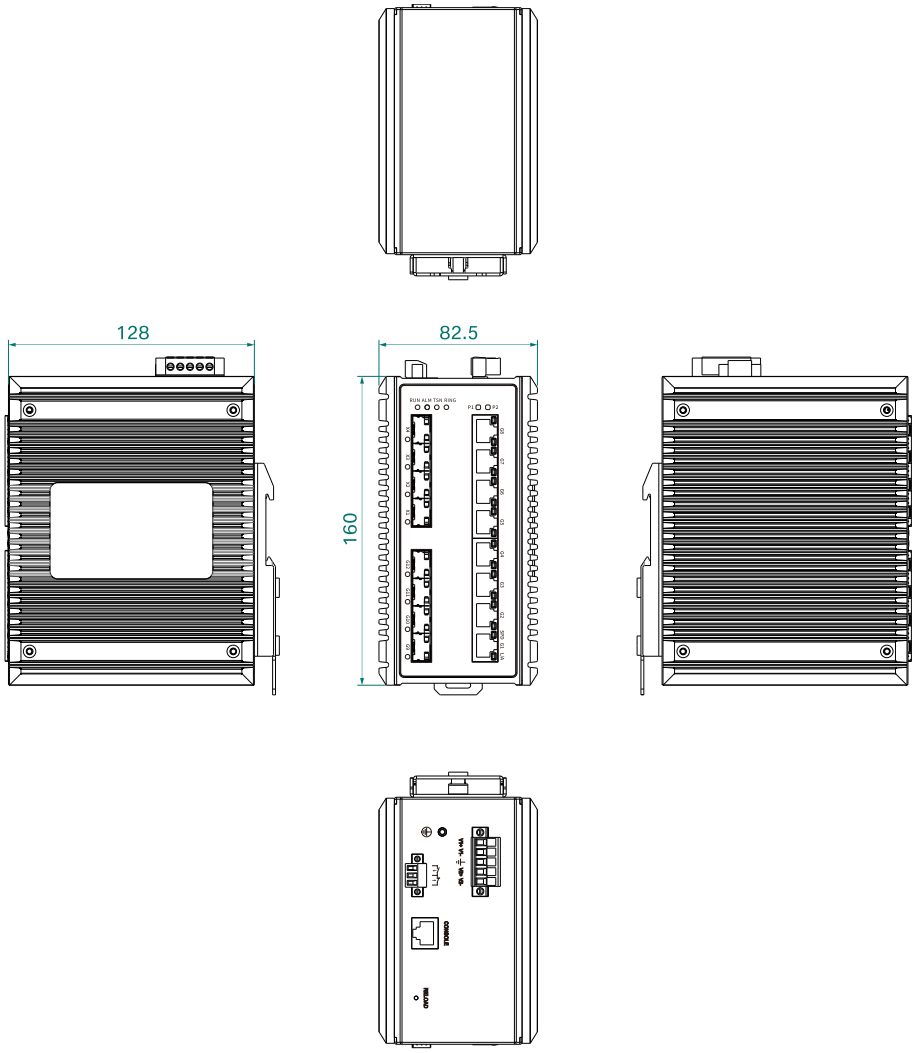
Time Management	Support IEEE 1588v2 (Precision Time Protocol, PTP） Support local time management and SNTP client Support summer time and time zone configuration
Management and Maintenance	Support QoS, SP, DWRR queue scheduling Support DHCPv6 Client, DHCPv4 Client/Server/Snooping/Relay Support SNMPv1/v2c/v3, SNMPv1/v2c/v3 Trap, RMON, LLDP、LLDP MED Support private network management agreement MW-NMPv2 Support port mirroring, DDM, Ping IPv4/IPv6, and Traceroute IPv4 / IPv6 Support user rights management, log management Support configuration file management, mirror upgrade and double backup, online restart, and restore factory settings
Switching	
Processing Type	Store-and-forward
Backplane Bandwidth	180G
Buffer Size	32Mbit
MAC Table Size	32K
Interface	
10G Fiber Port	4*10GBase-R SFP+ ports, compatible with 1000Base-X SFP and 1000Base-T SFP module
Gigabit Fiber Port	4*1000Base-X SFP ports, compatible with 100Base-FX SFP and 1000Base-T SFP module
Gigabit Copper Port	8*10/100/1000Base-T (X) auto-sensing RJ45 ports, full / half-duplex, auto MDI/MDI-X connection
Relay	1 relay alarm output, 3-pin 3.81mm terminal block
CONSOLE	1 RJ45 CONSOLE port of RS232 signal for equipment debugging and command line configuration
BUTTON	One-touch restart or restore to factory settings
Status LED	Power indicator, operation indicator, alarm indicator, Fiber port indicator, TSN indicator, Ring indicator, TX port speed and connection/activity indicator
Power Supply	

Technical Specifications

Power Input	DC model: DC24V or DC48V optional, dual power supply redundancy, anti-reverse connection AC model: AC85~264V / DC110~370V
Power Consumption	＜27W@DC48V (DC)，＜27W@AC220V (AC)
Connection	5-pin 5.08mm terminal block
Protection	Over current protection
Physical Characteristics	
Dimension	160×82.5×128(mm) (Including mounting brackets)
Installation	Standard 35mm DIN-rail mounting
IP Code	IP40
Weight	About 1.6kg
Working Environment	
Operating Temp	-40℃~+70℃
Storage Temp	-40℃~+85℃
Ambient Humidity	5%~95% (No condensation)
Industry Standard	
EMC	● IEC 61000-4-2(ESD): Level 4 (Contact discharge ±8kV, air discharge ±15kV) ● IEC 61000-4-5(Surge): Level 4 (Power: common mode ±4kV，differential mode ±2kV Network port: common mode ±6kV,differential mode ±2kV） ● IEC 61000-4-4(EFT): Level 4(Power: ±4kV, Network port: ±2kV)

Installations

Unit: mm



Ordering Information

Standard Model	10G Fiber Port	1G Fiber Port	1G Copper Port	Input Voltage
MISCOM8216TSN-4XGF-4GF-8GT-DC24	4	4	8	Dual power DC20~72V
MISCOM8216TSN-4XGF-4GF-8GT-DC48	4	4	8	
MISCOM8216TSN-4XGF-4GF-8GT-AD220	4	4	8	Single power AC85~264V / DC110~370V

Contact Us

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