CISCOM8216TSN-4XGF-4GF-8GT

16-Port DIN Rail Layer 3 TSN Industrial Ethernet Switch



- 4×10GBase-R SFP+ ports, 4×1000Base-X SFP ports, 8×10/100/1000Base-T(X) RJ45 ports
- Support the TSN standards (IEEE 802.1AS/Qbv/Qbu/ CB/Qci), with clock synchronization, low-latency flow control and reliability mechanisms
- MW-Ring (recovery time < 20 ms @ 200 switches), ERPS, STP/RSTP/MSTP for network redundancy
- Support IPv4/IPv6 static routing, and RIPv1/v2, OSFP dynamic routing protocols
- Support single AC85~264V/DC110~370V power supply, or dual DC24V, DC48V redundant power input
- High strength aluminum alloy shell, IP40 protection
- Fanless design, case heat dissipation
- -40°C to +70°C operating temperature range

Product Description

CISCOM8216TSN-4XGF-4GF-8GT is the layer 3 10GbE din-rail TSN industrial Ethernet switch, which realizes the reliability and low-latency transmission, supports 4x10GbE SFP+ ports, 4xGigabit SFP ports and 8×Gigabit electrical ports. Its store-and-forward mechanism ensures powerful bandwidth processing, while its automatic packet error troubleshooting significantly reduces transmission failures. With industrial-grade components, CISCOM8216TSN 16-port switch meets the highest standards in system design and production control. Its 35mm standard DIN rail mounting and high-strength aluminum alloy shell ensure durability and stability. Fanless design and efficient heat dissipation maintain optimal performance even in extreme temperatures, ranging from -40°C to +70°C.

CISCOM8216TSN-4XGF-4GF-8GT layer 3 switch is designed to meet the stringent communication standards required in industrial settings, offering solutions for real-time communication and network security challenges. It supports various management methods, including accessing the CLI via the CONSOLE port or TELNET/SSH protocols, accessing the WEB interface via HTTP/HTTPS, and accessing the MIB via SNMP. It also supports a wide range of network protocols, 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, DHCPv4,

SNTP, port mirroring, DDM, Ping, Traceroute, and more. The switch supports system management functions such as configuration file upload and download, online upgrade, and backup of image files.

Product Features

- Support storm suppression on broadcast frame, multicast frame and unknown frame, and storm detection on broadcast and multicast packet to prevent network storms
- Support static aggregation and dynamic aggregation LACP, which can increase transmission bandwidth, improve link reliability, and achieve network load balancing
- Support 802.1Q VLAN, provide Access, Trunk, and Hybrid interfaces
- Support VLAN division based on MAC, protocol, IP subnet, flow, etc.
- Support MAC address table and aging time limit, static unicast/multicast MAC address binding to interface, to ensure the use of legitimate users
- Support PIM, IGMP, IGMP Snooping and multicast filtering, reduce the broadcast of multicast data in the network, and save network resources
- Support LLDP link layer discovery protocol, obtain LLDP neighbor device information, and monitor the link status, which is convenient for topology management and fault location
- Support ERP Ethernet multi-ring protection technology, provide multi-ring networking, link backup, achieve fast convergence, and improve network stability
- Support VRRP virtual routing redundancy protocol, which allows multiple routing devices to form a virtual router for redundant backup
- Support HTTP, HTTPS, TELNET, SSH, CONSOLE port and other login methods
- Support SNMPv1/v2c/v3, information query, information modification and troubleshooting can be carried out through the MIB network management system to achieve centralized management
- Support RMON remote network monitoring, statistics and alarms for various types of data frames, which can be used for remote monitoring and management of network management system
- Support port security, convert dynamic MAC address into secure dynamic/static/sticky MAC to enhance device security
- Support 802.1X port authentication to authenticate and control access rights of access users
- Support AAA secure network management mechanism, authentication, authorization and accounting through RADIUS and TACACS+ to prevent unauthorized users from logging in
- ACL access control lists, multiple frame type filtering rules can be customized, and specified packets can be filtered or rate-limited
- Support QoS quality of service, so that voice, video and important data are preferentially transmitted in network equipment to solve network congestion

- Support port mirroring, which can collect data sent and received by the port for network detection and fault management
- Support DDM digital diagnosis and monitoring, which can monitor the working temperature, voltage, current, sending/receiving optical power and other parameters of the DDM SFP optical module
- Ping IPv4/IPv6 and Traceroute IPv4/IPv6 to detect network connectivity and locate fault points
- Support dual power supply redundant power-off alarm and port disconnection alarm, and support relay alarm mode
- Support DHCPv4 server, centralized dynamic management and configuration of user IP addresses
- Support DHCPv4 detection
- DHCPv4 snooping is supported to ensure that the DHCP client obtains the IP address from the legitimate DHCP server to prevent DHCP attacks
- Support DHCPv4 relay to assist the DHCP server to dynamically allocate network parameters to the DHCP client
- Support system log to record user operation, system security, system fault and other information, and support remote monitoring of syslog server

Technical Specifications

Software	
Switching	Support 802.1Q VLAN Support port/MAC/subnet/protocol/flow-based VLAN segmentation, and port isolation, VLAN mapping Support port configuration, like rate, duplex mode, flow control, maximum frame length Support port rate limit, storm suppression, storm detection, port statistics Support (static)port aggregation, dynamic LACP Support MAC address aging and learning configuration, static unicast/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 network (MW-Ring) proprietary protocol Support ERPS Support STP/RSTP/MSTP

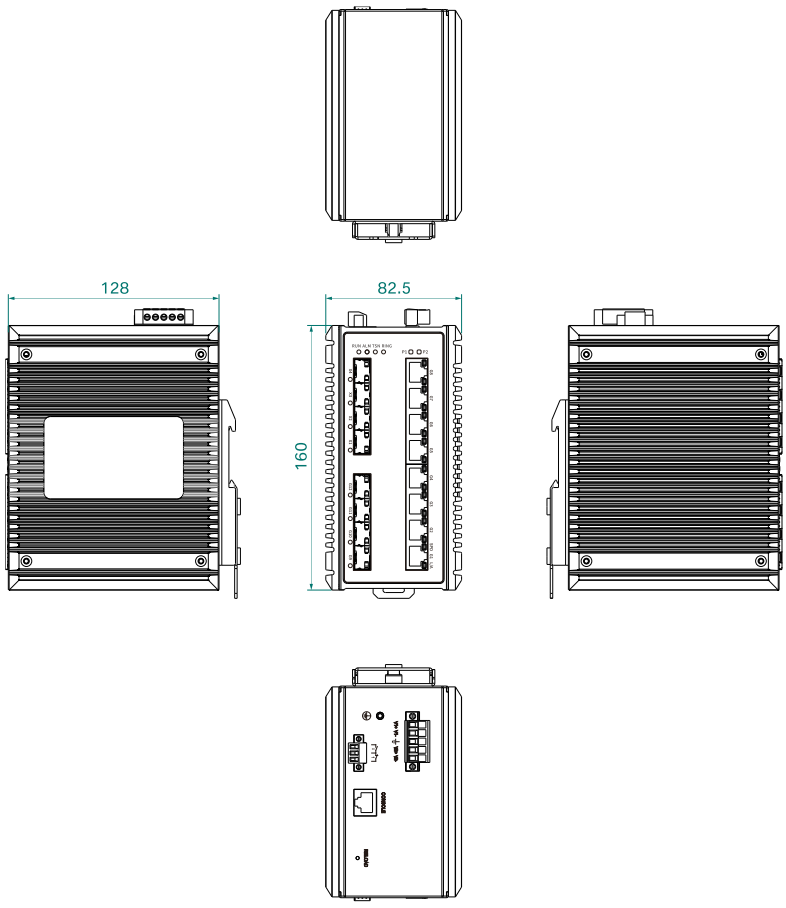
Multicast	Support IGMP Snooping Support multicast filter Support IGMPv2/v3 Support PIM-SM
Routing	Support IPv4/IPv6 static routing Support route control, encryption, ACL Support RIPv1/v2, OSPF dynamic routing Support VRRPv2/v3
Security Management	Support HTTPS, SSH service control, HTTP/HTTPS, SNMP, TELNET/SSH access management Support 802.1X port authentication, AAA authentication, RADIUS, and TACACS+ protocols Support port security, source IPv4/IPv6 protection, ARP protection Support ACL, filter data at L2-L4 layers Support loopback detection and alarm
Time	Support IEEE 1588v2 (Precision Time Protocol, PTP) Support local time management and SNTP clients Support daylight saving time and time zone configuration
Management & Maintenance	Support QoS, SP, DWRR queue scheduling Support DHCPv6 client, DHCPv4 client/server/listening/relay Support SNMPv1/v2c/v3, SNMP Trap, RMON, LLDP, LLDP MED Support MW-NMP network management protocol Support port mirroring, DDM, Ping IPv4/IPv6, Traceroute IPv4/IPv6 Support user permission management, log Support configuration file management, mirroring upgrade and dual backup, online reboot and factory reset
Switch Capability	
Processing Type	Store-and-forward
Backplane Bandwidth	180Gbps
Buffer Size	32Mbit
MAC Address Table	32K
Interface	
10G Fiber Port	4*10GBase-R SFP+ ports, compatible with 1000Base-X SFP module and 1000Base-T SFP copper module

1G Fiber Port	4*1000Base-X SFP ports, compatible with 100Base-FX SFP module and 1000Base-T SFP copper module
1G Copper Port	8*10/100/1000Base-T(X) auto-sensing RJ45 ports, support full/half duplex, auto MDI/MDI-X connection
Relay	1*relay alarm output, 3-position 3.81mm pitch locking terminal blocks
CONSOLE	1*CONSOLE port, RS232 signal RJ45 port, used for debugging and command line configuration
Button	One-click reboot or factory reset
Status LED	Power Indicator, Operation Indicator, Alarm Indicator, Fiber Port Indicator, TSN Indicator, Ring Indicator, Copper Port Rate and Connection/Activity Indicator
Power Supply	
Input Voltage	DC Model: DC24V or DC48V, dual power input, anti-reverse connection AC Model: AC85~264V / DC110~370V
Power Consumption	DC Model: < 27W@DC48V(full load) AC Model: < 27W@AC220V(full load)
Connection Method	5 position 5.08mm pitch locking terminal blocks
Protection	Overcurrent protection
Physical Characteristics	
Dimensions	160×82.5×128 mm (DIN rail mounting clip excluded)
Installations	35mm standard DIN rail mounting
IP Code	IP40
Weight	1.6kg
Working Environment	
Operating Temp	-40°C to +70°C
Storage Temp	-40°C to +85°C
Relative Humidity	5%~95% (non-condensing)

Industry Standard	
EMC	IEC 61000-4-2(ESD): Level 4 IEC 61000-4-5(Surge): Level 3 IEC 61000-4-4(EFT): Level 4
Certification	CE, FCC, RoHS

Dimensions

Unit: mm



Ordering Information

Standard Model	10G Fiber Port	1G Fiber Port	1G Copper Port	Input Voltage
CISCOM8216TSN-4XGF-4GF-8GT-DC24	4	4	8	Dual DC20~72V power input
CISCOM8216TSN-4XGF-4GF-8GT-DC48	4	4	8	
CISCOM8216TSN-4XGF-4GF-8GT-AD220	4	4	8	Single AC85~264V/DC110~370V power supply

Contact Us

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