

CISCOM8216PTP-4XGF-4GF-8GT

16-Port DIN Rail Layer 3 PTP Industrial Ethernet Switch



- 4×10GBase-R SFP+ ports, 4×1000Base-X SFP ports, 8×10/100/1000Base-T(X) RJ45 ports
- Supports IEEE1588 (PTP) and IEEE802.1AS (gPTP) protocols
- MW-Ring (recovery time < 20 ms @ 200 switches), ERPS, STP/RSTP/MSTP for network redundancy
- Support IPv4/IPv6 static routing, provides RIP, RIPng, and OSPFv2/v3 dynamic routing protocols
- Dual DC24, DC48 or AD220 inputs for power redundancy
- High strength aluminum alloy shell, IP40 protection
- -40°C to +70°C operating temperature range

Product Description

CISCOM8216PTP-4XGF-4GF-8GT is the layer 3 10GbE din-rail PTP industrial Ethernet switch, which realizes the reliability and low-latency transmission, supports 4x10GbE SFP+ ports, 4xGigabit SFP ports and 8xGigabit copper ports. Its store-and-forward mechanism ensures powerful bandwidth processing, while its automatic packet error troubleshooting significantly reduces transmission failures. With industrial-grade components, CISCOM8216PTP-4XGF-4GF-8GT 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.

CISCOM8216PTP-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 provides a variety of network protocols and industry standards, such as PTP, RIP, OSPF, VRRP, ERPS, STP/RSTP/MSTP, VLAN, QoS, LACP, PIM, IGMP, IGMP Snooping, MLD Snooping, LLDP, 802.1X, ACL, RMON, DHCPv4 client/server/listener/relay, DHCPv6 snooper/relay, NTP client, port mirroring, DDM, OAM, CFM, UDLD, line diagnosis, SFlow, Ping, Traceroute, etc. It supports system management functions such as configuration file upload and download, image file online upgrade and backup. The product is widely used in integrated energy, smart city, rail transit, intelligent transportation, industrial automation and other fields.

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
- Supports PIM, IGMP, IGMP Snooping, MLD Snooping and multicast filtering to 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 ERPS 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 to centrally manage and configure user IP addresses dynamically
- Support DHCPv4/v6 snooping to ensure that DHCP clients obtain IP addresses from legitimate DHCP servers and prevent DHCP attacks
- Support DHCPv4/v6 relay to assist DHCP servers in dynamically allocating network parameters to DHCP clients
- Support system logs to record user operations, system security, system failures and other information, and Syslog server remote monitoring

Technical Specifications

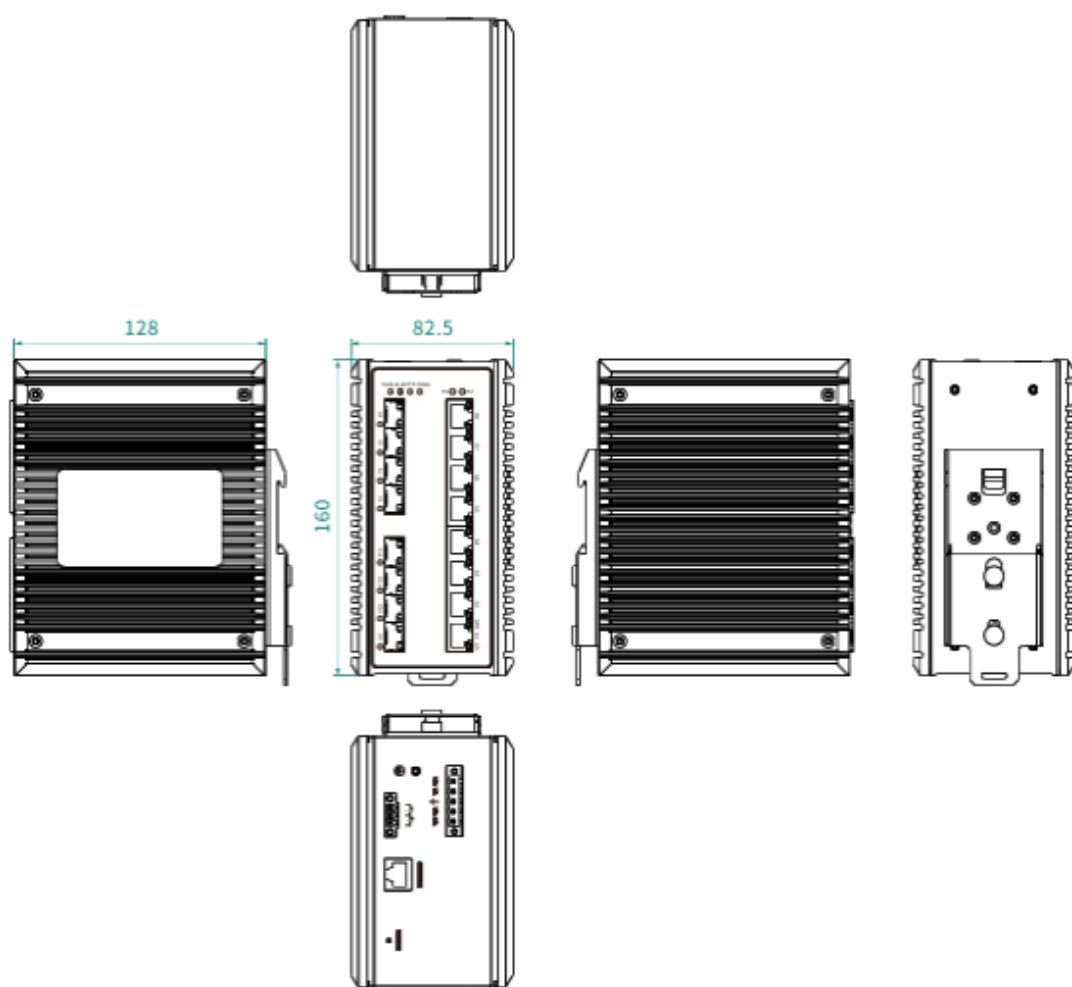
Software	
Switching	Support port configuration, port speed limit, storm suppression, storm detection, port aggregation, LACP, port statistics Support 802.1QVLAN, VLAN based on MAC/protocol/subnet, port isolation, VLAN mapping Support MAC address aging and learning limit, static unicast or multicast MAC address binding
PTP	IEEE 1588v2 (Precision Time Protocol, PTP) IEEE 802.1AS (generalized PTP, gPTP)
Redundancy	Support fast ring network (MW-Ring) proprietary protocol Support ERPS Support STP/RSTP/MSTP
Multicast	Support IGMP Snooping, MLD Snooping Support multicast filter Support IGMPv2/v3 Support PIM-SM
Routing	Support IPv4/IPv6 static routing Support routing control, routing encryption and routing access control list Support RIP, RIPng, OSPFv2/v3 dynamic routing Support VRRPv2/v3
Security Management	Support HTTP/HTTPS, SSH service control, HTTP/HTTPS, SNMP, TELNET/SSH access management Support privilege level, port security Support 802.1X port authentication, AAA authentication, RADIUS, and TACACS+ protocols Support source IPv4/IPv6 protection, ARP protection Support ACL, filter data at L2-L4 layers Support loopback detection and alarm

Management & Maintenance	Support DHCPv6 client/snooping/relay, DHCPv4 client/server/snooping/relay Support QoS, SNMPv1/v2c/v3, SNMPv1/v2c/v3 Trap, RMON, LLDP, LLDP MED Support proprietary network management protocol MW-NMPv2 Support port mirroring, DDM, OAM, CFM, UDLD, sFlow, link diagnosis, Ping, Traceroute Support user rights management, log management, local time management and NTP client Support configuration file management, mirror upgrade and backup, online restart and factory reset
Switch Capability	
Processing Type	Store-and-forward
Backplane Bandwidth	180Gbps
Buffer Size	32Mbit
MAC Address Table	32K
Interface	
10G Fiber Port	4x10GBase-R SFP+ ports, compatible with 1000Base-X and 1000Base-T SFP modules
1G Fiber Port	4*1000Base-X SFP ports, compatible with 100Base-FX and 1000Base-T SFP modules
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, PTP Indicator, Ring Indicator, Copper Port Rate and Connection/Activity Indicator
Power Supply	
Input Voltage	DC Model: DC20-72V, dual power inputs, anti-reverse connection AC Model: AC85~264V/DC110~370V

Power Consumption	<27W@DC48V(full load), <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
CISCOM8216PTP-4XGF-4GF-8GT-DC24	4	4	8	Dual DC20~72V power input
CISCOM8216PTP-4XGF-4GF-8GT-DC48	4	4	8	
CISCOM8216PTP-4XGF-4GF-8GT-AD220	4	4	8	Single AC85~264V/DC110~370V power supply



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