MISCOM8036TSN-4XGF-24GF-8GT

36-Port 10G Rack Mount Layer 3 TSN Industrial Ethernet Switch

- 4*10G SFP + ports, 24*1G SFP ports and 8*1G RJ45 ports
- Support IEEE1588(PTP), IEEE802.1AS (gPTP) protocol, provide high precision clock synchronization
- Support TSN time-sensitive network series standards (IEEE802.1Qav/ Qbv / Qbu / CB / Qci / 802.3br), provide clock synchronization, low-latency flow control, reliability and network management mechanism
- Support MW-Ring, ERPSv1 / v2, STP / RSTP / MSTP to improve network reliability
- Support IPv4 / IPv6 static routing, RIPv 1 / v2, OSPF dynamic routing protocol, realize routing and forwarding
- Support AC85~264V / DC110~370V single or dual redundant power input
- High strength aluminum alloy shell, IP40 protection level, fanless heat dissipation, can reliably work in harsh industrial environments of -40 ℃~+75 ℃

Product Description

MISCOM8036TSN-4XGF-24GF-8GT layer 3 10G TSN industrial Ethernet switch support 4*10G SFP + ports, 24*1G SFP ports, and 8*1G RJ45 ports. It adopts a 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. It is built with high strength durable aluminum alloy shell, and fanless design for efficient heat dissipation, -40℃ ~ + 75℃ wide temperature work, high standard industrial protection design, can adapt to a variety of harsh working environment, stable communication performance.

The MISCOM8036TSN-4XGF-24GF-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 are provided, such as TSN, PTP, RIP, OSPF, VRRP, PIM, MW-Ring, ERPS, STP / RSTP / MSTP, VLAN, QoS, LACP, GVRP, IGMP Snooping, LLDP, 802.1X, ACL, RMON, DHCP Server / Snooping / Relay, NTP, port mirroring, DDM, Ping, Traceroute, and more. Support configuration file upload and download, mirror file online upgrade and backup and other system management. In terms of installation, you can flexibly choose either the rack mount or the desktop mount. The products are widely used in comprehensive energy, smart city, rail transit, intelligent transportation, industrial automation and other fields.

Product Features

- Support PTP precision clock synchronization protocol, provide sub-microsecond clock synchronization accuracy, and hardware cooperation to achieve higher clock accuracy
- Support TSN time-sensitive network standards such as IEEE802.1Qav credit-based shaping, IEEE802.1Qbu/802.3Qbr frame preemption, IEEE802.1Qbv time-aware shaping, IEEE802.1Qci single flow filtering and management, IEEE802.1CB frame replication and elimination
- Support link static aggregation and dynamic aggregation LACP, which can increase transmission bandwidth, improve link reliability and realize network load sharing
- Support ports statistics to count different bytes or types of data frames sent and received to realize the monitoring of port traffic
- Support 802.1Q VLAN, provide Access, Trunk, Hybrid interface easy to divide multiple broadcast domain, enhance the security of the network
- Support VLAN division based on MAC, protocol, IP subnetwork, and can be applied to networks in different environments
- Support GVRP, achieve dynamic distribution, registration and propagation of VLAN attributes, reduce manual configuration
- Support IGMP Snooping and multicast filtering, two-layer multicast forwarding or filtering, 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 ERPSv1/v2 Ethernet multi-ring protection technology, provide multi-ring networking, link backup, achieve fast convergence, improve network stability
- Support MW-RingV2 private ring network protocol and STP / RSTP / MSTP generation tree protocol, which can eliminate network loop and improve network reliability
- Support the loop detection to prevent the network ring from causing the network storm
- Support IPv4 and IPv6 static routing configuration, RIPv1/v2, OSPF dynamic routing protocol, realize routing and message forwarding
- Support VRRP virtual routing redundancy protocol, forming multiple routing devices into a virtual router to realize redundant backup and load sharing
- 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 security
- Support 802.1X port authentication, authentication and access control for access users

- Support AAA secure network management mechanism, verify, authorize and charge users through RADIUS and TACACS + to prevent illegal login
- Support ACL access control list, can customize a variety of frame type filtering rules, the specified message filtering or rate limit
- Support IPv4, IPv6 source defense attack, port, source IP, source MAC, VLAN binding, prevent source IP address spoofing
- Support ARP protection to prevent network interruption or information leakage caused by ARP flooding / deception attacks
- Support QoS service quality, give priority to voice, video and important data in network devices, and solve 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 DDM optical module temperature, voltage, transmit optical power, receive optical power, etc
- Support Ping IPv4 / v6, Traceroute IPv4 / v6 to detect network connectivity and locate fault points
- Support DHCP server, centralized dynamic management and configuration of user IP addresses
- Support DHCP Snooping, ensure that DHCP clients obtain IP addresses from a legitimate DHCP server to prevent DHCP attacks
- Support DHCP 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, MAC/IP subnetwork/protocol-based VLAN, VLAN translation, and PVLAN Support GVRP Support port aggregation, static aggregation, dynamic aggregation LACP Support MAC address aging and learning restrictions, static unicast or multicast MAC address binding Support port configuration, such as port rate, duplex mode, flow control, maximum frame length, etc Support storm detection and port statistics

Technical Specifications

TSN	Support PTP clock synchronization, and IEEE1588 / IEEE802.1AS configuration Support TSN time-sensitive networks: • IEEE802.1Qav Plastic surgery based on the credit value • IEEE802.1Qbu/802.3Qbr Frame preemption • IEEE802.1Qbv Time-perceived plastic surgery • IEEE802.1Qci Single flow filtering and management • IEEE802.1CB Frame replication and elimination
Redundancy	Support MW-RingV2 private ring network technology Support ERPSv1 / v2 Support STP/RSTP/MSTP
Broadcast	Support IGMP Snooping support PIM Support multicast filtering
Routing	Support IPv4/IPv6 static routing Support RIPv1/v2, OSPF dynamic routing support VRRP
Security Management	Support ACL, data filtering of L2-L4 layer Support port security and loopbacks detection Support HTTP, HTTPS, TELNET, and SSH access control Support 802.1 port authentication, AAA authentication, RADIUS, TACACS + protocol Support source IPv4 / IPv6 protection and ARP protection
Management and Maintenance	Support QoS, SP, DWRR queue scheduling, storm strategy Support DHCPv4 / v6 Client, DHCPv4 Server / Snooping / Relay The MW-Hello and MW-NMP management protocols are supported Support SNMPv1 / v2c / v3, SNMP Trap, RMON, LLDP Support port mirroring, DDM, Ping IPv4 / IPv6, and Traceroute IPv4 / IPv6 Support user rights management, log, NTP client, daylight saving time Support profile upload / download / activation / deletion, mirror double backup, restart, and restore factory settings
Switching	
Processing Type	Store-and-forward
Backplane Bandwidth	180Gbps
Cache Size	32Mbit
MAC Table Size	32K
Interface	
10G Fiber Port	4*10GBase-R SFP+ ports

Technical Specifications

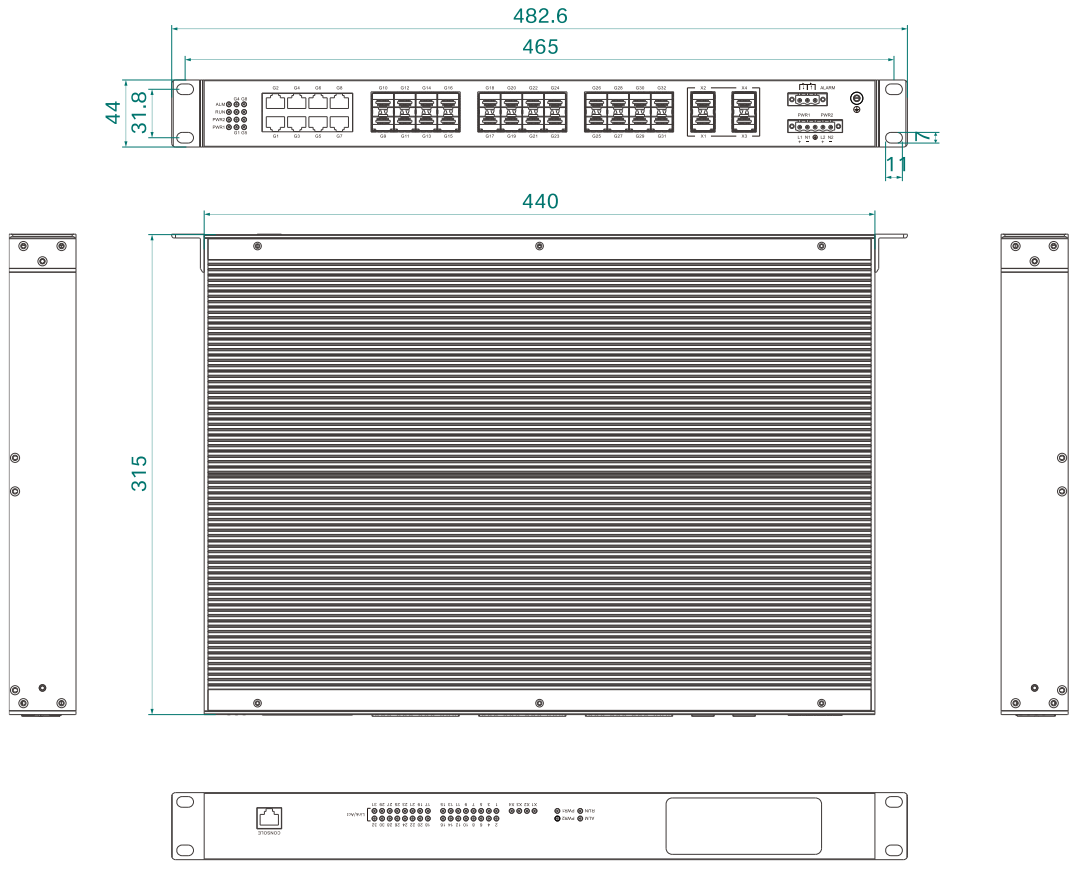
1G Fiber Port	24*1000Base-X SFP ports
1G Copper Port	8*10/100/1000Base-T(X) auto-sensing Gigabit RJ45 ports, full / half-duplex, auto MDI/MDI-X connection
Relay	1*relay alarm output, 3-pin 5.08mm terminal block
CONSOLE	1*RJ45 CONSOLE port of RS232 signal for equipment debugging and command line configuration
Status LED	Power indicator, operation indicator, alarm indicator, port indicator
Power Supply	
Input Voltage	AC85~264V / DC110~370V, dual power redundancy
Power Consumption	＜50W@AC220V(full load)
Connection	5-pin 5.08mm terminal block
Protection	Over current protection
Physical Characteristics	
Dimension	482.6×44×315 mm (Including mounting brackets)
Installation	Standard 19-inch 1U rack mount
IP Code	IP40
Weight	About 4.5kg
Working Environment	
Operating Temp	-40℃~+75℃
Storage Temp	-40℃~+85℃
Ambient Humidity	5%~95% (No condensation)
Industry Standard	

Technical Specifications

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, Copper port: ±2kV)

Installations

Unit: mm



Ordering Information

Standard Model	10G Fiber Port	1G Fiber Port	1G Copper Port	Input Voltage
MISCOM8036TSN-4XGF-24GF-8GT-2AD220	4	24	8	Dual AC85~264V / DC110~370V

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