MISCOM7208TSN-2GF-6GT

8-Port Layer 2 Full Gigabit Managed DIN Rail TSN Industrial Ethernet Switch

- 2 Gigabit SFP ports, 6×10/100/1000Base-T(X) ports (RJ45 connector)
- Support TSN standard (IEEE 802.1AS/Qbv/Qbu/CB/Qci), providing clock synchronization, low latency flow control and reliability mechanisms
- Support redundancy protocols such as Fast Ring (MW-Ring), ERPSv1/v2, STP/RSTP/MSTP, to improve network reliability
- Support dual DC9~60V power input and single AC85~264V/DC110~370V power supply
- With IP40 high-strength aluminum alloy shell and fanless design, the device can reliably work in harsh industrial environment ranging from -40°C to +75°C

Product Description

MISCOM7208TSN-2GF-6GT series is 8-port full Gigabit layer 2 managed DIN rail TSN industrial Ethernet switch, which achieves reliable and deterministic low latency transmission of flows and support 2 Gigabit SFP ports and 6×10/100/1000Base-T(X) ports. It has strong bandwidth processing capabilities. It can automatically detect data packet errors, reduces transmission failures, and easily supports Gigabit networking, ensuring stable, reliable, and efficient data transmission. It uses industrial grade components, combined with high standard system design and production control, 35mm standard DIN-rail installation, high-strength aluminum alloy shell, sturdy and durable. Fanless and efficient heat dissipation, work at a wide temperature range of -40℃ to +75℃. High standard industrial protection design, adapt to various harsh working environments, and with stable communication performance.

MISCOM7208TSN-2GF-6GT series switch follows the main communication standards in the industrial field, meets with real-time communication and network security. It provides multiple ways to manage the switch, such as accessing the switch command line (CLI) through the CONSOLE port or TELNET/SSH protocol, accessing the switch web interface through HTTP/HTTPS, and accessing the device MIB through the SNMP protocol. It supports various network protocols and industry standards, such as TSN, PTP, ERPS, MW-Ring, STP/RSTP/MSTP, VLAN, QoS, LACP, IGMP Snooping, LLDP, 802.1X, ACL, RMON, DHCPv4 client/server/listener/relay, NTP, port mirroring, DDM, Ping, Traceroute, etc. It supports system management of uploading and downloading configuration files, upgrading and backing up image files online. In terms of structural installation, DIN-rail mounting or wall mounting are optional. This product is widely applicable in fields of comprehensive energy, smart cities, rail transit, intelligent transportation and industrial automation.

Features and Benefits

- Support link static aggregation and dynamic aggregation LACP, which can increase transmission bandwidth, improve link reliability, and achieve network load sharing
- Support port statistics, count different bytes or types of data frames sent and received, and monitor port traffic
- Support 802.1Q VLAN and provides Access, Trunk, and Hybrid interfaces for easy partitioning of multiple broadcast domains, enhancing network security
- Support VLAN partitioning based on MAC, protocols, IP subnets, streams, and other methods, suitable for networks in different environments
- Support IGMP snooping and multicast filtering for layer 2 multicast forwarding or filtering, saving network resources
- Support Link Layer Discovery Protocol (LLDP), enabling the acquisition of LLDP neighbor device information for link status monitoring, facilitating topology management and fault localization
- Support Ethernet Ring Protection Switching (ERPS), providing multi-ring networking, link backup, fast convergence, and enhanced network stability
- Support fast ring network MW-Ring private protocol and STP/RSTP/MSTP spanning tree protocol, which can eliminate network loops and improve network reliability
- Support loop back detection to prevent network storms
- Support various login methods such as HTTP, HTTPS, TELNET, SSH, and CONSOLE ports
- Support SNMPv1/v2c/v3, enabling information queries, modifications, and troubleshooting through the MIB network management system, achieving centralized management
- Support RMON remote network monitoring, perform statistics and alarms on various types of data frames, and can be used for remote monitoring and management of network management systems
- Support port security, converting dynamic MAC addresses into secure dynamic/static/Sticky MAC, enhance device security
- Support 802.1X port authentication for user identity verification, providing both local and RADIUS-based login authentication.
- Support AAA secure network management mechanism, authentication, authorization, and billing through radius and TACACS+ to prevent illegal user login
- Support ACL access control list, customizable filtering rules for multiple frame types, filtering or rate limiting specified packets
- Support IPv4 and IPv6 source defense attacks, bind ports, source IP, source MAC, and VLAN to prevent source IP address spoofing
- Support ARP protection to prevent network interruption or information leakage caused by ARP flooding/spoofing attacks
- Support Quality of Service (QoS) to prioritize voice, video, and critical data for transmission, addressing network congestion.
- Support port mirroring, allowing the collection of data from ingress and egress ports for network diagnostics and fault management.
- Support DDM digital diagnostic monitoring, detecting temperature, voltage, transmitted optical power,

received optical power of the DDM fiber module

- Support Ping IPv4/IPv6 and Traceroute IPv4/IPv6 to detect network connectivity and locate fault points
- Support DHCPv4 server, centrally manage and configure user IP addresses dynamically
- Support DHCPv4 listening, ensuring that DHCP clients obtain IP addresses from legitimate DHCP servers to prevent DHCP attacks
- Support DHCPv4 relay to assist DHCP servers in dynamically allocating network parameters to DHCP clients
- Support system logging of user operations, system security, system failures, and remote monitoring of Syslog servers
- Support dual power redundancy failure alarm and port disconnection alarm, and Support relay alarm mode

Specification

Software	
Switching	Support 802.1Q VLAN, VLAN based on MAC/IP subnet/protocol/stream, VLAN translation, PVLAN Support port configuration, such as port speed, duplex mode, flow control, maximum transmission unit, and etc. Support port speed limit, storm suppression, storm detection, and port statistics Support port aggregation, static aggregation, dynamic aggregation LACP Support MAC address aging and learning limitations, static 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 private protocol Support ERPSv1/v2 Support STP/RSTP/MSTP Support loop back detection
Multicast	Support IGMP Snooping Support multicast filtering
Security Management	Support HTTPS, SSH service control, HTTP/HTTPS, SNMP, TELNET/SSH access management Support privilege level and port security Support 802.1X port authentication, AAA authentication, radius, TACACS+ protocols Support source IPv4/IPv6 protection and ARP protection Support ACL and filters data from L2-L4 layers
Management and Maintenance	Support IEEE 1588v2 (Precision Time Protocol, PTP) Support QoS, SP, DWRR queue scheduling Support DHCPv6 clients, DHCPv4 clients/servers/listeners/relays Support SNMPv1/v2c/v3, SNMP Trap v1/v2c/v3, RMON, LLDP, LLDP MED Support port mirroring, DDM, Ping IPv4/IPv6, Traceroute IPv4/IPv6 Support user permission management, logging, NTP client, and daylight saving time Support configuration file upload/download/activation/deletion, dual mirror backup, restart, and factory reset
Switch Capability	
Processing Type	Store-and-Forward
Backplane Bandwidth	23Gbps
Buffer Size	1.25Mbit

Specification

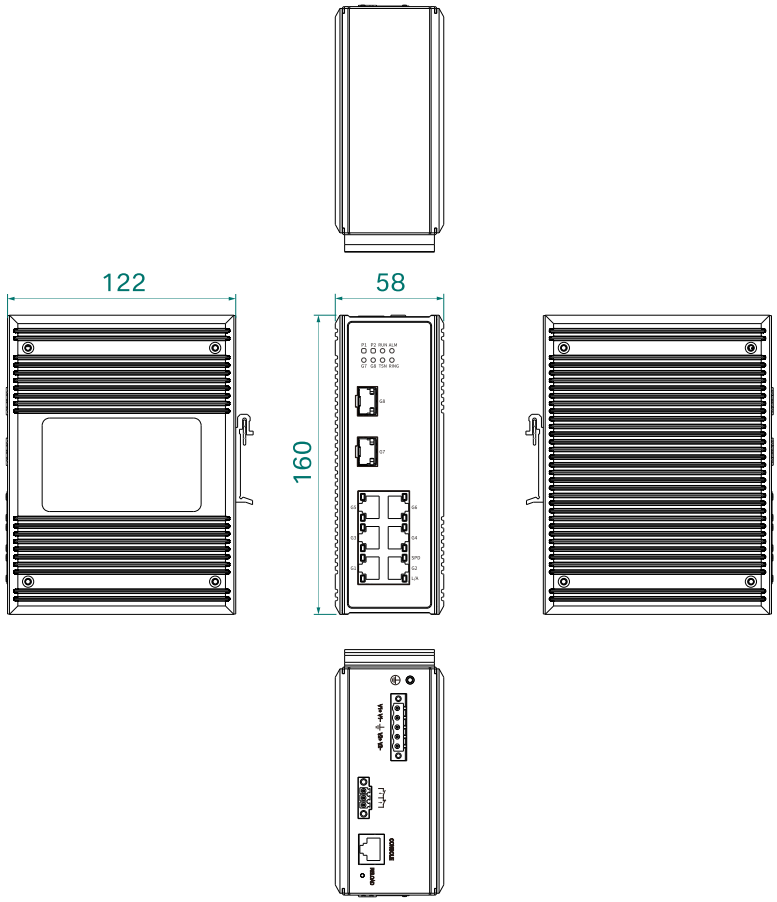
Mac Address Table	8K	
Interface		
1G Fiber Port	2×1000Base-X SFP ports	
1G Copper Port	6×10/100/1000Base-T(X) auto-sensing RJ45 ports, support full/half duplex and auto MDI/MDI-X	
Relay	1 relay alarm output, 5.08mm pitch 3-pin terminal block	
CONSOLE	1 console port with RS232 signal on a RJ45 connector, used for device debugging	
Button	One-click restart or restore the factory settings	
Indicator Light	Power indicator, operation indicator, alarm indicator, optical port indicator, TSN indicator light, ring indicator, TX port speed and connection/activity indicator	
Power Supply	**MISCOM7208TSN-2GF-6GT**	**MISCOM7208TSN-2GF-6GT-AD220**
Input Voltage	Dual DC9~60V power input, non-polarity	Single AC85~264V/DC110~370V power supply
Power Consumption	＜12W@DC12V(full load)	＜12W@AC220V
Connection	5.08mm pitch 5-pin terminal block	
Protection	Built-in over-current protection	
Physical Characteristics		
Dimensions	160×58×122 mm (DIN rail mounting clip excluded)	
Installations	Easy installation on 35mm DIN rails	
IP Code	IP40	
Weight	DC model is about 0.86kg and AC model is about 0.9kg	
Working Environment		
Operating Temp	-40℃~+75℃	
Storage Temp	-40℃~+85℃	
Relative Humidity	5%~95% (non-condensing)	

Specification

Industry Standard	MISCOM7208TSN-2GF-6GT	MISCOM7208TSN-2GF-6GT-AD220
EMC	IEC 61000-4-2 (ESD): Level 4 • Contact discharge ± 8kV • Air discharge ± 15kV IEC 61000-4-5 (Surge): Level 4 • Power supply: common mode ± 4kV, differential mode ± 2kV • Ethernet port: common mode ± 4kV, differential mode ± 2kV IEC 61000-4-4(EFT): Level 4 • Power supply: ± 4kV • Ethernet port: ± 2kV	IEC 61000-4-2 (ESD): Level 4 • Contact discharge ± 8kV • Air discharge ± 15kV IEC 61000-4-5 (Surge): Level 3 • Power supply: common mode ± 2kV, differential mode ± 2kV • Ethernet port: common mode ± 4kV, differential mode ± 2kV IEC 61000-4-4(EFT): Level 4 • Power supply: ± 4kV • Ethernet port: ± 2kV
Certification	CE, FCC, RoHS	

Dimensions

Unit: mm



Ordering Information

Standard Model	1G Fiber Port	1G Copper Port	Input Voltage
MISCOM7208TSN-2GF-6GT	2	6	Dual DC9~60V power input
MISCOM7208TSN-2GF-6GT-AD220	2	6	Single AC85~264V/DC110~370V power supply

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