

CTS7116BP-M12-4GT-8TPoE

16-Port M12 Gigabit Rack Mount L2 Managed Industrial Switch



- Support 4 x Gigabit copper ports, 8 x 100M PoE copper ports and 4 x 100M copper ports
- Gigabit copper support Bypass function, which can be directly connected after the device loses power
- Complies with IEEE802.3af/at standard, single-port PoE maximum output power 30W
- Support Ring, ERPS, STP/RSTP ring network redundancy protocols to improve network reliability
- Support DC 77V~150V power input, with short circuit, over current and over voltage protection
- High-strength aluminum alloy shell, IP20
- -40°C to +65°C operating temperature range

Product Description

CTS7116BP-M12-4GT-8TPoE is a Layer 2 managed PoE industrial Ethernet switch. It is a 16-port vehicle-mounted Layer 2 high-performance industrial Ethernet switch developed for the rail transit industry. The product supports 4 x Gigabit copper ports, 8x100M PoE copper ports and 4 x 100M copper ports. PoE is applicable to and supplies power to powered devices (PD) that comply with the IEEE802.3af/at standard. The Gigabit copper port supports the Bypass function, which can be directly connected after the device loses power, bypassing the faulty node, avoiding network interruption and ensuring normal network operation. The Ethernet uses the M12 connector, which meets the requirements of the rail transit industry standards, ensures the sealing and firmness of the port connection, and is suitable for application scenarios with strong vibration and impact.

The product provides multiple ways to manage the switch, such as accessing the switch through the CONSOLE port, accessing the switch WEB interface through HTTP/HTTPS, and accessing the device MIB through the SNMP protocol. It also provides a variety of network protocols and industry standards, such as Ring, ERPS, STP/RSTP, VLAN, QoS, IGMP Snooping, GMRP, LLDP, 802.1X, ACL, NTP, PoE, port aggregation, port mirroring, Ping, etc. It supports system management such as configuration file upload and download, image file online upgrade, etc. In terms of structural installation, it supports embedded installation.

Product Features

- Support rate limiting of broadcast packets, multicast packets, and unknown unicast packets to suppress network storms
- Support PoE Ethernet power supply, customizable interface power supply priority, and power supply for standard PD devices through network cables
- Support QoS service quality, giving priority to voice, video, and important data transmission in network devices
- Support 802.1Q VLAN, provide Access, Trunk, Hybrid interfaces to easily divide multiple broadcast domains and enhance network security
- Support IGMP Snooping, GMRP and other multicast protocols to reduce the broadcast of multicast data in the network and save network resources
- Support ACL access control list to filter TCP/UDP and other messages based on source/destination IP and MAC addresses
- Support LLDP link layer discovery protocol to obtain LLDP neighbor device information, monitor link status, and facilitate topology management and fault location
- Support ERPS Ethernet multi-ring protection technology, provides multi-ring networking, performs link backup, achieves fast convergence, and improves network stability
- Support static link aggregation, which can increase transmission bandwidth and improve link reliability
- Support RSTP spanning tree protocol, compatible with STP protocol, can eliminate network loops and improve network reliability
- Support observers and administrators, hierarchical management of user permissions
- Support WEB login control, HTTP, HTTPS protocol access control, login IP address restriction
- Support 802.1X port authentication, identity authentication for access users, and provides local and RADIUS login authentication
- Support MAC address table and aging time limit, static MAC address and interface binding to ensure the use of legitimate users
- Support SNMPv1/v2c and SNMP TRAP, which can be centrally managed through the MIB network management system
- Support port statistics, counts different types of data frames sent and received, and realizes the monitors of port traffic
- Support port mirroring and can collect port inlet, outlet, and bidirectional data for network detection and fault management
- Support connection information, operation information logging, and log email

Technical Specifications

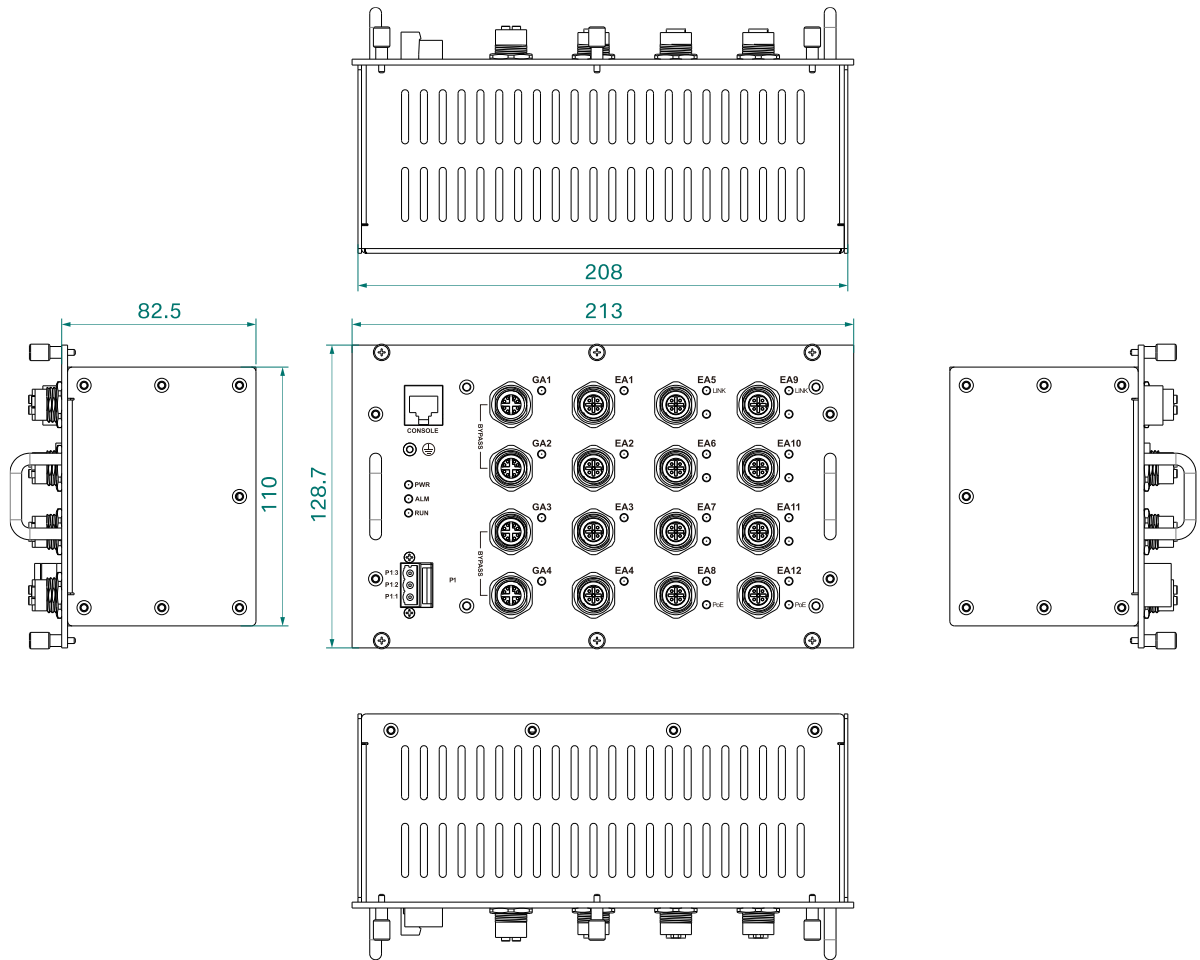
Software	
Switching	<p>Support port configuration, such as port rate, duplex mode, port enablement, flow control, etc.</p> <p>Support port-based or 802.1Q VLAN</p> <p>Support ingress and egress rate limiting, storm suppression, static port aggregation</p> <p>Support sent frame statistics, received frame statistics, total flow statistics, MAC address table</p>
Redundancy	<p>Support MW-Ring proprietary ring network protocol</p> <p>Support ERPSv1/v2</p> <p>Support RSTP, compatible with STP</p>
Broadcast	<p>Support GMRP</p> <p>Support IGMP Snooping</p> <p>Support static multicast MAC forwarding table</p>
Security Management	<p>Support WEB login control</p> <p>Support ACL, L2-L4 layer data filtering</p> <p>Support 802.1X port authentication, RADIUS authentication database</p> <p>Support static MAC port locking</p> <p>Support network storm and port disconnection alarm</p> <p>Support Email log</p>
Management and Maintenance	<p>Support PoE management, maximum power, priority configuration</p> <p>Support QoS service quality, 802.1P/DSCP/port priority mapping, absolute and relative priority control</p> <p>Support SNMP v1/v2c, SNMP Trap, LLDP</p> <p>Support port mirroring, Ping</p> <p>Support user rights management, log management, local time management and NTP</p> <p>Support online restart, restore factory settings, system upgrade, configuration file upload/download</p>
Switching	
Processing Type	Store and Forward

Backplane Bandwidth	12.8Gbps
Cache Size	3Mbit
MAC Table Size	8K
Interface	
1G Copper Port	4 x 10/100/1000Base-T(X) auto-sensing copper ports, using M12 (X-Code 8-Pin Female), supporting full/half duplex, auto MDI/MDI-X; ports GA1 and GA2 are a group of Bypass, ports GA3 and GA4 are a group of Bypass
100M POE Copper Port	8 x 10/100Base-T(X) auto-sensing PoE ports, using M12 (D-Code 4-Pin Female), supporting full/half duplex, auto MDI/MDI-X; PoE/PoE+ power supply complies with IEEE802.3af/at standards, single-port PoE maximum output power 30W; PoE power supply pins: 1, 3 are positive, 2, 4 are negative
100M Copper Port	4x10/100Base-T(X) auto-sensing copper ports, using M12 (D-Code 4-Pin Female), supporting full/half duplex, auto MDI/MDI-X
CONSOLE	1 x CONSOLE port, RS232 signal RJ45 port, used for equipment debugging
Status LED	Power indicator, alarm indicator, operation indicator, interface indicator, PoE indicator
Power Supply	
Input Voltage	DC110V (DC77V~150V)
Power Consumption	<15W@DC110V (no PD load), <150W@DC110V (full PD load)
Connection	3-position 5.08mm pitch terminal block
Power Protection	Support short circuit, over current and over voltage protection
Physical Characteristics	
Dimension (L*W*H/ mm)	213 × 128.7 × 82.5 mm
Installation	Embedded Installation
IP Protection	IP20

Weight	About 1.5kg
Working Environment	
Operating Temp	-40°C to +65°C
Storage Temp	-40°C to +85°C
Ambient Humidity	5%~95% (no condensation)
Industry Standard	
EMC	<p>IEC 61000-4-2 (ESD): Level 4 (contact discharge $\pm 8\text{kV}$, air discharge $\pm 15\text{kV}$)</p> <p>IEC 61000-4-5 (Surge): Level 3 (Power supply: common mode $\pm 4\text{kV}$, differential mode $\pm 2\text{kV}$; network port: common mode $\pm 2\text{kV}$, differential mode $\pm 1\text{kV}$)</p> <p>IEC 61000-4-4 (EFT): Level 2 (power supply: $\pm 1\text{kV}$, network port: $\pm 2\text{kV}$)</p>

Dimensions

Unit: mm



Ordering Information

Standard Model	1G Copper Port	100M PoE Copper Port	100M Copper Port	Input Voltage
CTS7116BP-M12-4GT-8TPoE-DC110	4	8	4	DC77V~150V



Contact Us

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