3onedata
Reliable Connections

ICS5400PTP-12GT12GS4XS Series

Rack Mounting

28-port Gigabit /10Gigabit Layer 3 PTP Industrial Ethernet Switch

- Support 12 Gigabit Ethernet copper ports + 12 Gigabit Ethernet SFP fiber ports + 4 10Gigabit Ethernet SFP+ fiber ports
- Support Precision Time Protocol (PTP), provide sub-microsecond synchronization accuracy to meet requirements for high-precision time synchronization
- Adopt Ring patent technology, support single ring, coupling ring, chain ring, Dual-homing ring network function, automatic recovery time of network failure < 20ms
- Support multiple network protocols and industry standards, such as Ipv6, RIP, OSPF, PIM, VRRP, ISIS, NAT, MRP, STP/RSTP/MSTP, ERPS, VLAN, IGMP/MLD, IGMP/MLD Snooping, DHCP Server/Relay, LLDP, LACP
- Support dual DC/AC power redundancy, input voltage: 12~48VDC / 90~264VAC
- Support IP40 protection grade
- Support -40~60℃ wide operating temperature range

Industrial Grade

RPS

Fanless Desig

CONNECTING FOR A BETTER FUTURE

3onedata Co.,Ltd.

Introduction

ICS5400PTP-12GT12GS4XS series are 28-port Gigabit/10Gigabit switches, and layer 3 industrial Ethernet switches that integrate the characteristics of Precise Time Protocol (PTP). Provide a variety of interfaces such as Gigabit copper port, Gigabit SFP slot, 10Gigabit SFP+ slot, which can negotiate the port rate and duplex mode with the device at the opposite end through self-negotiation. Support 12~48VDC and 90~264VAC models, and adopt rack installation mode, which can meet the requirements of different application sites.

The network management system supports a variety of network protocols and industry standards, such as IPv6, PTP, RIP, OSPF, PIM, VRRP, ISIS, NAT, Ring, MRP, STP/RSTP/MSTP, ERPS, VLAN, IGMP/MLD, IGMP/MLD Snooping, DHCP Server/Relay, LLDP, LACP, port mirroring. It possesses complete management functions and supports SNMP centralized management, port statistics, storm suppression, network diagnosis, online upgrade, etc. CLI, HTTP, HTTPS, TELNET, SSH and other access methods can be supported. Network management system could bring you great user experience through its friendly interface design and easy and convenient operation.

The input power supply is two independent power supply circuits which can ensure the normal operation of the device when one power supply fails. The design of DIP switch could implement device factory setting recovery. The hardware adopts fanless, low power consumption and wide temperature design, which has passed rigorous industrial standard tests, and suits for the industrial scene environment with harsh requirements for EMC. It can be widely used in AP coverage, railway transportation, smart city, safe city, new energy, smart grid, intelligent manufacturing and other industrial fields.

Features and Benefits

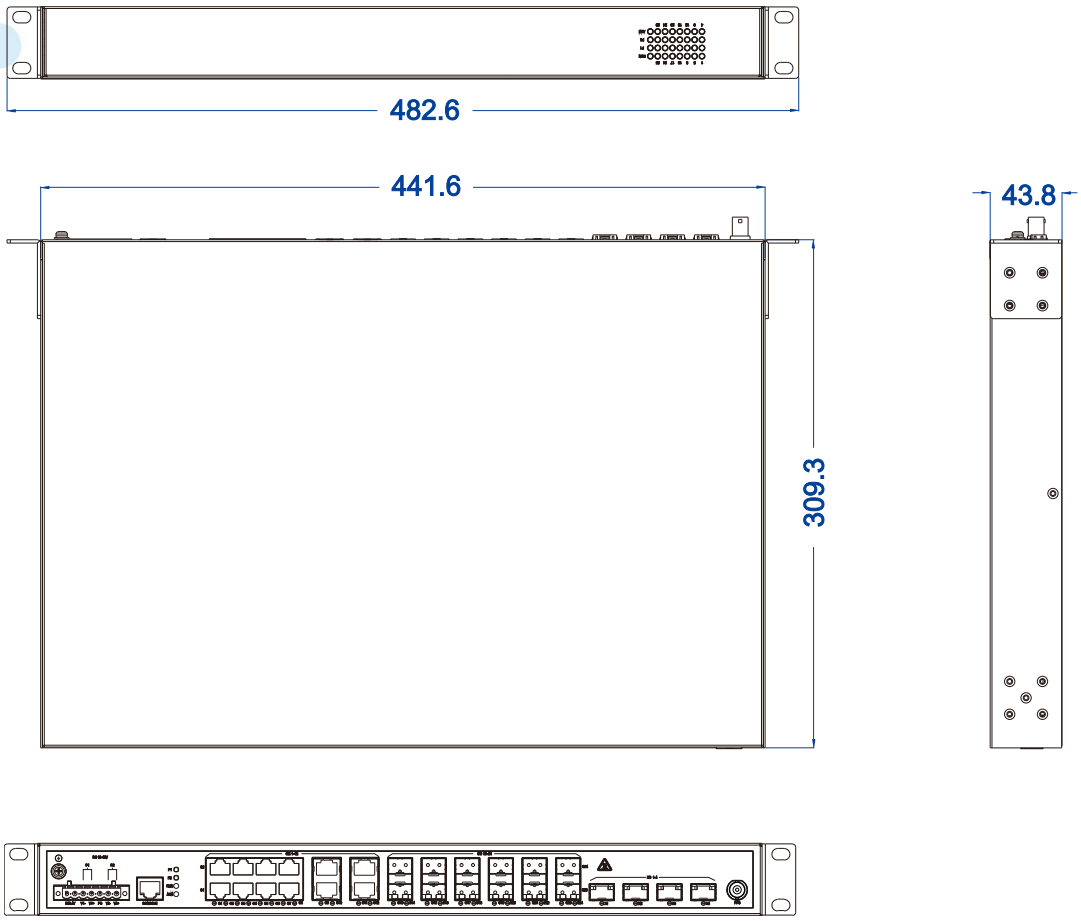
- SNMPv1/v2c/v3 is used for network management of various levels
- LLDP can achieve automatic topology discovery, which is convenient for visual management
- DHCP server and DHCP client could be used for allocating IP address of different strategies
- DHCP relay function can realize IP address, gateway, DNS configuration cross network segment
- File management is convenient for the device rapid configuration and online upgrading
- Log information and log server can record user operation, system failure, system security and other information locally and remotely
- User privilege classification configuration can set user privilege level
- SSH configuration and HTTPS configuration can improve device's management security and guarantee data access security
- Ring, MRP, STP/RSTP/MSTP can achieve network redundancy, preventing network storm

- EPRS function can realize link backup and improve the reliability of network
- Relay alarm is convenient for troubleshooting of construction site
- Storm suppression can restrain broadcast, unknown multicast and unicast
- VLAN is used for simplifying network planning
- Port Trunking and LACP can increase network bandwidth and enhance the reliability of network connection to achieve optimum bandwidth utilization
- IGMP/MLD Snooping can be used for filtering multicast traffic to save the network bandwidth
- IGMP/MLD can be used to manage and maintain multicast members
- ARP could be used for MAC address resolution
- VRRP, RIP/RIPng, ISIS, OSPF/OSPFv3 and BGP can realize dynamic routing configuration
- PIM-DM and PIM-SM can be used to create and maintain multicast routing table entries and realize multicast routing forwarding
- NAT maps private IP address to the legal IP address of external network, which can slow the consumption of IP address space
- Loop detection could efficiently eliminate the influence caused by port loopback by detecting the existence of loopback
- IPDT can track IP device status and realize interaction with other applications
- Smart Link link backup, providing reliable and efficient backup and fast switching mechanism
- Network diagnosis and troubleshooting could be conducted via Ping, Traceroute, cable diagnosis, SFP DDMI
- Port mirroring can conduct data analysis and monitoring, which is convenient for online debugging

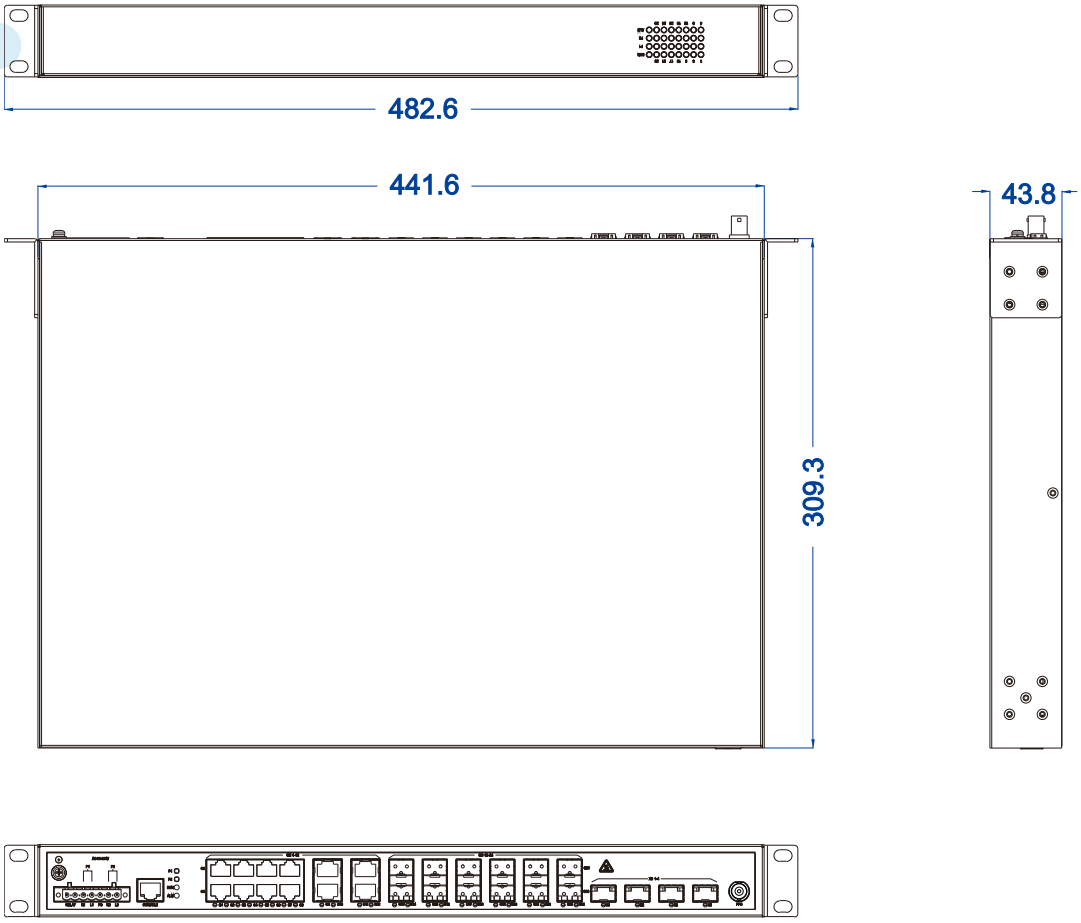
Dimension

Unit: mm

- ICS5400PTP-12GT12GS4XS-2LV



- ICS5400PTP-12GT12GS4XS-2HV



Specification

Standard & Protocol	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3ab for 1000Base-T IEEE 802.3z for 1000Base-X IEEE 802.3ae for 10GBase-X IEEE 802.1AS, IEEE1588 for PTP IEEE 802.3x for Flow Control IEEE 802.1D for Spanning Tree Protocol IEEE 802.1w for Rapid Spanning Tree Protocol IEEE 802.1s for Multiple Spanning Tree Protocol ITU-T G.8032 for ERPS IEEE 802.1Q for VLAN IEEE 802.1AB for LLDP IEEE 802.3ad for LACP
PTP (Precise Time Protocol)	IEEE1588, IEEE802.1AS
Management	SNMP v1/v2c/v3 centralized managed equipment, Port Mirroring, LLDP, DHCP Server, DHCP Relay, port speed limit, port isolation,

	port statistics, file management, online upgrade, log information, Syslog server
Security	User privilege classification, SSH/HTTPS protocol authorization, link flap protection, port loop detection, IPDT, IPv6DT, Smart-Link, NAT, port alarm and power alarm.
Switch Function	802.1Q VLAN, MAC, static aggregation, LACP, ARP, storm suppression
Unicast / Multicast	IGMP-Snooping, MLD-Snooping, IGMP, MLD, PIM-SM, PIM-DM, IPv6-PIM-SM, IPv6-PIM-DM
Redundancy Technology	Ring, MRP, STP/RSTP/MSTP, ERPS
Routing Technique	RIP, RIPng, OSPF, OSPFv3, ISIS, VRRP, IPv6 VRRP, BGP
Troubleshooting	Ping, Traceroute, Network Cable Diagnosis, DDMI
Time Management	NTP client/server, time zone configuration
Interface	Gigabit copper port: 10/100/1000Base-T(X), RJ45, Automatic Flow Control, Full/Half Duplex Mode, MDI/MDI-X Autotunning Gigabit SFP: 1000Base-X SFP slot 10Gigabit SFP+: 1000/10GBase-X self-adaptive SFP+ slot Console port: CLI command line management port(RS-232), RJ45 PPS port: support 1 PPS signal input; adopt BNC interface for connecting an external time source
Indicator	Running Indicator, Alarm Indicator, Power Supply Indicator, Interface Indicator
Switch Property	Transmission mode: store and forward Packet forwarding rate: 130.944Mpps MAC address: 32K Buffer: 32Mbit Backplane bandwidth: 128G Switch time delay: <10μs
Power Supply	• ICS5400PTP-12GT12GS4XS-2LV 12~48VDC, dual power supply redundancy, 7-Pin 5.08mm, power supply occupies 5 pins • ICS5400PTP-12GT12GS4XS-2HV

	90~264VAC, dual power supply redundancy, 7-Pin 5.08mm, power supply occupies 5 pins
Power Consumption	No-load: 18.24W@48VDC Full-load: 33.1W@48VDC
Working Environment	Operating temperature: -40~60℃ Storage temperature:-40~85℃ Relative humidity: 5%～95% (no condensation)
Physical Characteristic	Housing: IP40 protection, metal Installation: rack mounting Weight: about 4000g Dimension (W x H x D): 441.6 (exclude lugs) mm×43.8mm×309.3mm
Industrial Standard	IEC 61000-4-2 (ESD, electrostatic discharge), Level 3 ● Air discharge: ±8kV ● Contact discharge: ±6kV IEC 61000-4-4 (EFT, electrical fast transient pulses), Level 3 ● Power supply: ±2kV ● Ethernet port: ±1kV IEC 61000-4-5 (Surge), Level 3 ● Power supply: common mode±2kV, differential mode±1kV ● Ethernet port: common mode±2kV, differential mode±1kV Shock: IEC 60068-2-27 Free fall: IEC 60068-2-32 Vibration: IEC 60068-2-6
Authentication	CE, FCC
MTBF	382,614 hours

Ordering Information

Available Models	Gigabit Copper Port	Gigabit SFP	10Gigabit SFP+	Power Supply
ICS5400PTP-12GT12GS4XS-2LV	12	12	4	12~48VDC, dual power supply
ICS5400PTP-12GT12GS4XS-2HV	12	12	4	90～264VAC, dual power supply

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