ICS5400PTP Series

19-inch 1U Rack Mounting
44-Port Gigabit/10Gigabit Layer 3 PTP Industrial Ethernet Switch

- Support 12/24 Gigabit copper ports, 16 Gigabit SFP slots, 4 10Gigabit SFP+ slots
- Support Precision Time Protocol (PTP), provide sub-microsecond synchronization accuracy to meet requirements for high-precision time synchronization
- Adopt Ring patented technology, support single ring, coupling ring, chain, 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
- 2 24/48VDC (12~55VDC) or 2 110/220VAC/DC (85~264VAC/DC) redundant power inputs
- Support -40~75℃ wide operating temperature range
- Support IP40 protection grade

Industrial Grade RPS Fanless Desig

ROBUST INDUSTRIAL CONNECTION

Introduction

ICS5400PTP series are 44-port Gigabit/10Gigabit layer 3 industrial Ethernet switches. Provide 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 12~55VDC or 85~264VAC/DC power supply scheme, 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. When power supply or port has link failure, ALM indicator will be bright and send out alarm, meanwhile, alarm device connected to the relay will send out alarm for rapid scene troubleshooting. 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 railway transportation, smart mining, smart city, new energy, smart grid, intelligent manufacturing smart medical care, petroleum and petrochemical industry 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

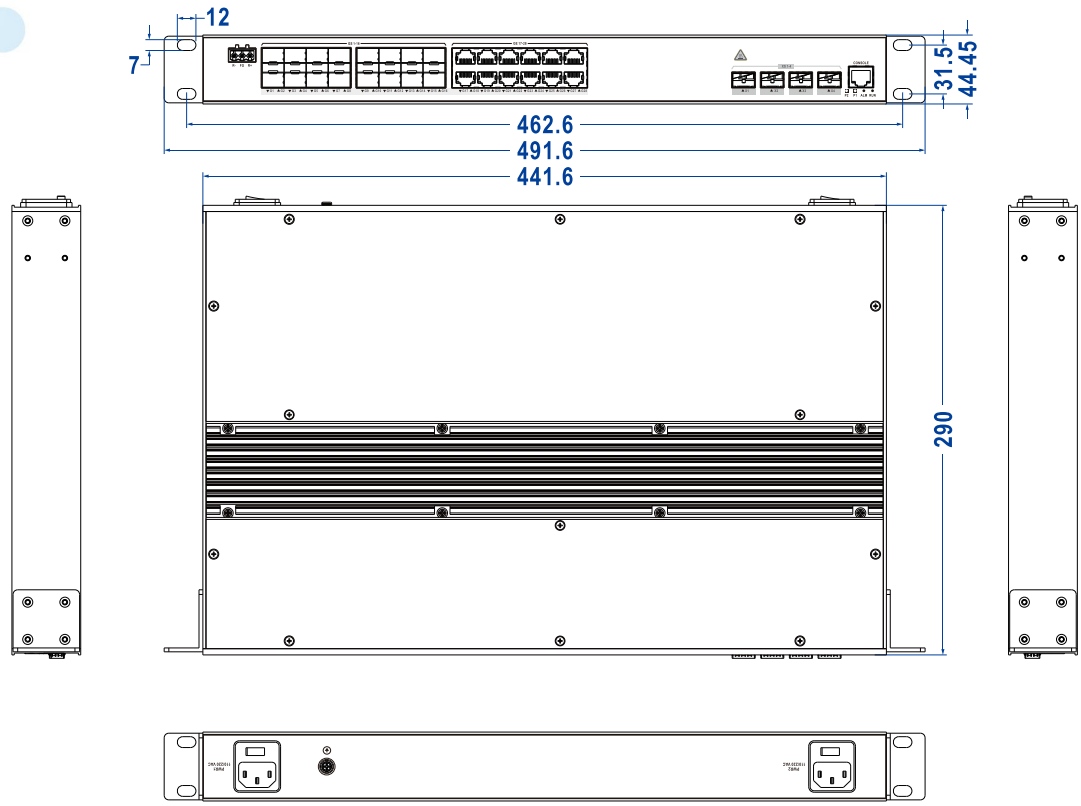
storm

- 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

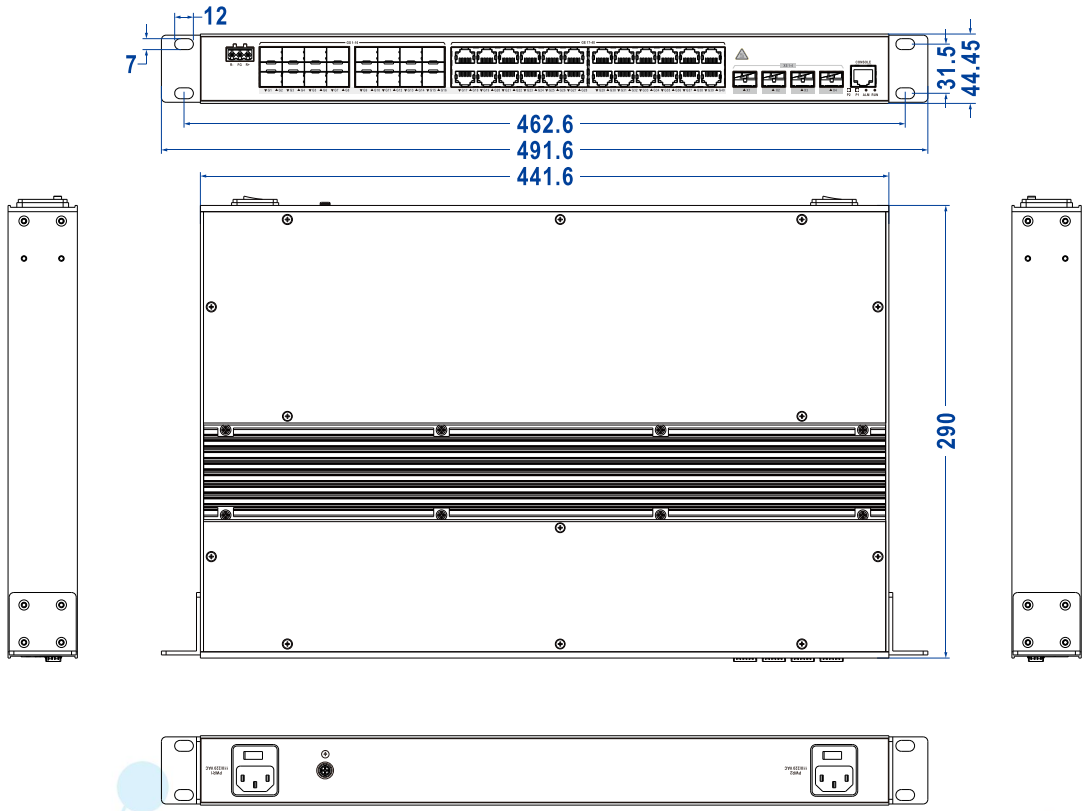
Dimension

Unit: mm

- ICS5400PTP-12GT16GS4XS-2HV



- ICS5400PTP-24GT16GS4XS-2HV



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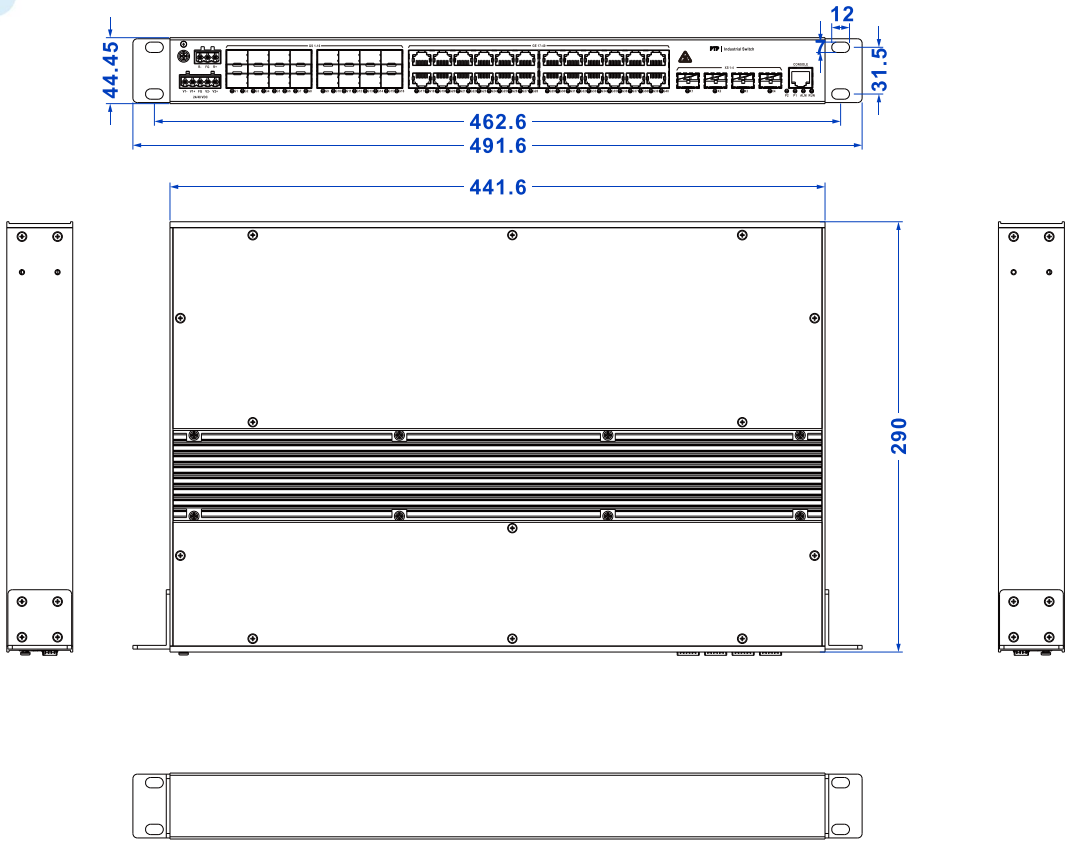

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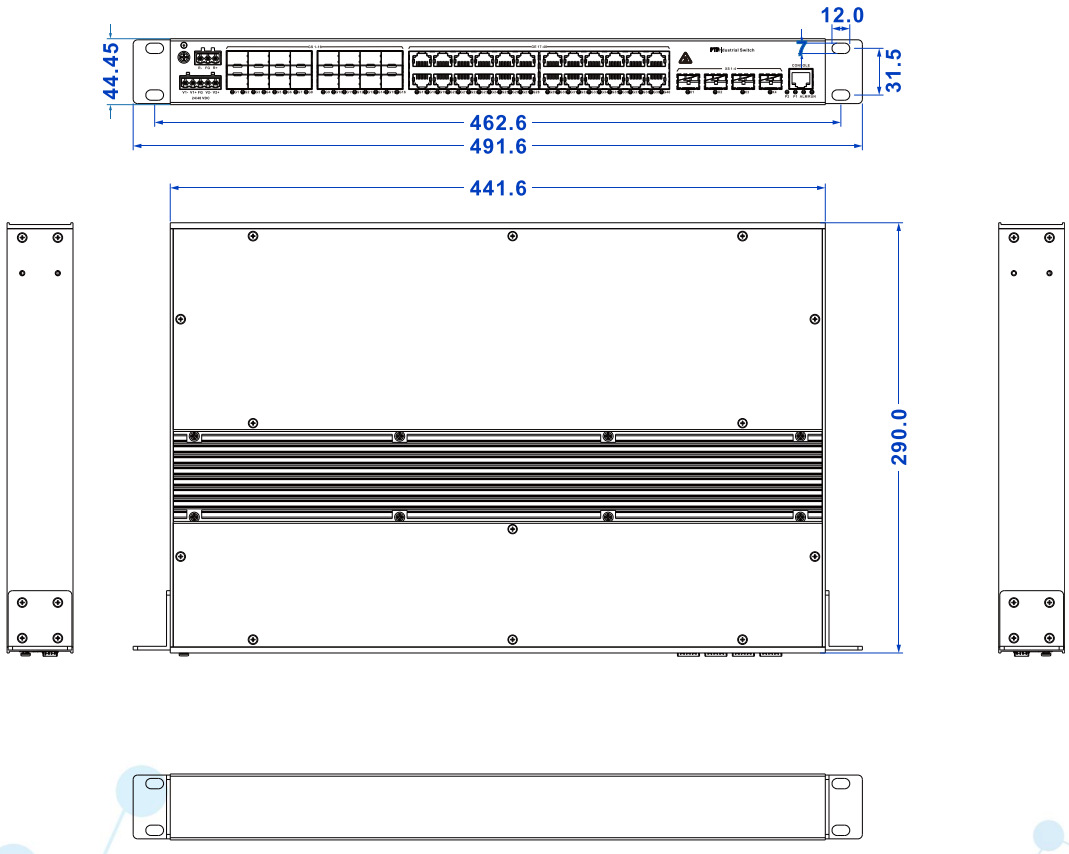

Specification

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 IEEE1588v2 for PTP IEEE 802.1AS for gPTP 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) self-adaption or forced mode, RJ45, Automatic Flow Control, Full/Half

	Duplex Mode self-adaption, MDI/MDI-X Autotunning Gigabit SFP Slot: 100/1000Base-X self-adaption or forced mode, SFP slot 10Gigabit SFP+ slot: 1G/2.5G/10G Base-X self-adaption or forced mode, SFP+ slot Console port: CLI command line management port (RS-232), RJ45 Relay: support 1 relay alarm information output, using 3-pin 5.08mm pitch terminal blocks, and the current load capacity is 1A@30VDC or 0.3A@125VAC
Indicator	Power indicator, running indicator, alarm indicator, interface indicator
Switch Property	Transmission mode: store and forward MAC address: 32K Cache: 32Mbit Backplane bandwidth: 64Gbps Switch delay: <10μs
Power Supply	● DC Product 110VAC/220VAC (85~264VAC/DC) power input, support dual power redundancy, use AC socket with switch. ● AC product 2 24/48VDC (12~55VDC), redundant power input, support anti-reverse connection, adopt 2 5-pin 5.08mm pitch terminal blocks
Power Consumption	ICS5400PTP-24GT16GS4XS-2HV: ● No-load: 19.5W@220VAC ● Full-load: 47.3W@220VAC
Working Environment	Operating temperature: -40~75℃ Storage temperature: -40~85℃ Relative humidity: 5%~95% (no condensation)
Mechanical Structure	Housing: IP40 protection, metal Installation: 19-inch 1U rack mounting Dimension (W x H x D): 441.6mm×44.45mm×290mm (lugs are not included)
Industrial Standard	IEC 61000-4-2 (ESD, electrostatic discharge), Level 3 ● Contact discharge: ±6kV

	• Air discharge: ±8kV IEC 61000-4-4 (EFT, electrical fast transient pulses), Level 3 • Power supply: ±2kV • Copper port: ±2kV IEC 61000-4-5 (Surge), Level 3 • Power supply: differential mode±1kV, common mode±2kV • Copper port: ±2kV Shock: IEC 60068-2-27 Free fall: IEC 60068-2-31 Vibration: IEC 60068-2-6
Authentication	CE, FCC, RoHS, IPv6 Ready LoGo
Warranty	5 years

Ordering Information

Model	Gigabit Copper Port	Gigabit SFP	10 Gigabit SFP+	Power Supply
ICS5400PTP-12GT16GS4XS-2HV-N	12	16	4	110VAC/220VAC (85~264VAC/DC), dual power supply redundancy
ICS5400PTP-24GT16GS4XS-2HV-N	24	16	4	
ICS5400PTP-12GT16GS4XS-2LV-N	12	16	4	24/48VDC (12~55VDC) dual power supply redundancy
ICS5400PTP-24GT16GS4XS-2LV-N	24	16	4	