



ICS5000-C24GP4XS

19-Inch 1U Rack Mounting

24 Gigabit self-adaptive RJ45 ports, 4 1/10 Gigabit SFP ports Layer 3 Managed Industrial Ethernet PoE Switch

- Support STP/RSTP/MSTP protocol, ERPS protocol and other redundancy protection mechanisms
- Support static routing, RIP, OSPF routing protocols
- Advanced hardware architecture design, hardware realizes hierarchical scheduling and protection of messages, and supports the prevention of DoS, TCP SYN Flood, UDP Flood, broadcast storm, large flow and other attacks on device
- Support 100~240VAC input voltage
- Support -10~50°C wide operating temperature range

Introduction

ICS5000-C24GP4XS products adopt the industry's advanced hardware architecture. On the basis of providing high-performance L2/L3/L4 line-speed switching services, it further integrates IPv6, network security and other network services, and combines many high-reliability technologies such as uninterrupted upgrade, link detection and redundancy protection to ensure the longest uninterrupted communication capability of the network. It can be widely used in safe city, intelligent transportation, high-speed tunnels and other fields.

Features and Benefits

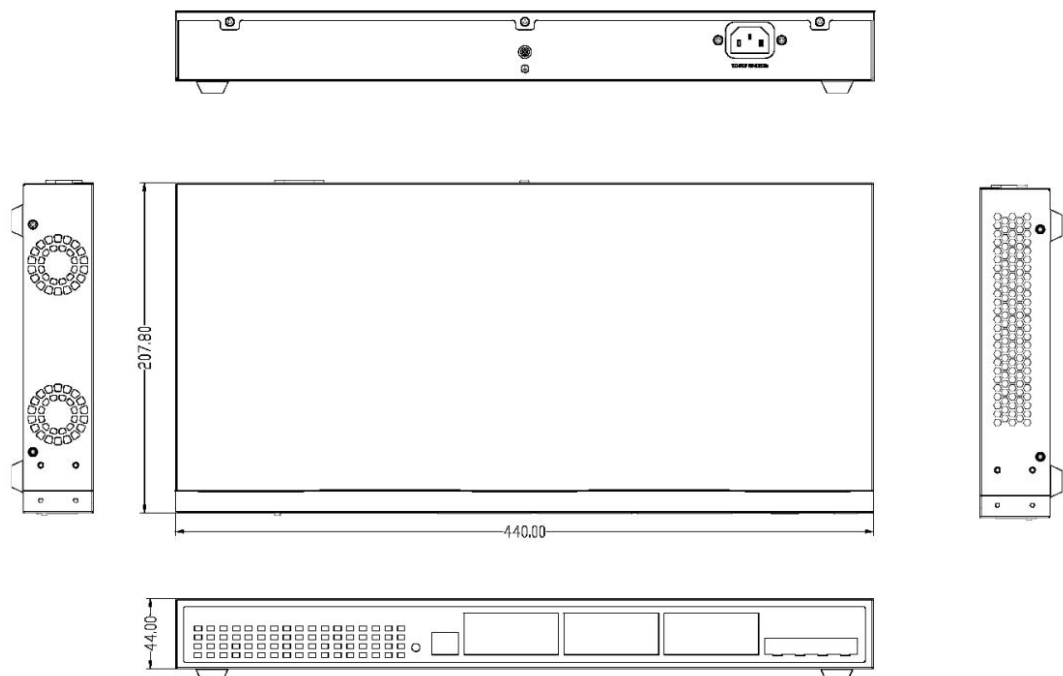
- ⦿ Supports stacking, up to 16 devices can be stacked simultaneously. Simplifying the management of network devices and topology greatly improves network operational efficiency, thereby effectively reducing operational and maintenance costs.
- ⦿ With advanced hardware architecture design and the highest port density in the industry, 24 gigabit4 1/10 port densities are achieved on the 1U box switch.
- ⦿ Support ERPS ring network protection protocol, protection switching time < 50ms; at the same time, it supports simple and efficient redundancy protection mechanisms such as STP/RSTP/MSTP protocol, LACP link aggregation to meet the requirements of high reliability.
- ⦿ Powerful ACL function, it supports data access and control based on physical port, VLAN, MAC, IP, protocol port number, etc. in L2~L7 layer, and provides users with flexible and diverse policy control methods.
- ⦿ Support system upgrade without interrupting operations, which can ensure uninterrupted forwarding of user data during system upgrade.
- ⦿ Support rich layer-2 multicast functions, including IGMP-Snooping, user fast leave mechanism and cross-VLAN multicast replication.
- ⦿ Support layer-3 routing protocol, static routing, RIP, OSPF, VRRP routing protocol; it can meet the needs of various types of network interconnection, and set up super-large campus network, enterprise network and industry user private network.
- ⦿ Support classification of complex flows based on VLAN, MAC, source address, destination address, IP protocol, priority, etc., and support the re-tagging of priority, which provides a reliable and effective means for users to optimize services.
- ⦿ Provide flexible bandwidth control strategy, support port-based or stream-based rate-limiting function, and ensure the line-speed forwarding of each port, thus effectively ensuring the quality of high-quality network services such as voice, video and data.
- ⦿ Each port supports 8 priority queues, and supports SP, WRR or SP+WRR and other queue scheduling algorithms.
- ⦿ Support IPv6-based Ping, Traceroute, Telnet, SSH,HTTPS, ACL, IPv6 neighbor discovery, etc., which can meet the needs of pure IPv6 network device management

and operational control.

- ⦿ Device-level security protection: advanced hardware architecture design, realizing hierarchical scheduling and protection of messages; Support prevention of DoS, TCP SYN Flood, UDP Flood, broadcast storm, heavy traffic and other attacks on device; support hierarchical protection of command line, and users at different levels have different administration privilege.
- ⦿ Support IEEE 802.1x, Radius, BDTacacs+, etc., which can provide users with a complete security authentication mechanism.
- ⦿ Support the suppression function of broadcast, multicast and unknown unicast messages, and ensure the normal operation of device under bad network conditions.
- ⦿ Provide security features such as port isolation, DHCP-Snooping, IP+MAC+ port binding in the same VLAN, which further ensures the security of user data.
- ⦿ Support Console, Telnet, SSH, SNMP, WEB and other management methods, which is convenient for the installation and debugging of engineering and maintenance personnel.
- ⦿ Adopt fanless design, which greatly improves the reliability and service life of the product.
- ⦿ It supports 802.3AF/AT standard, with built-in high-power power supply. The 48 port model is compatible with both AC and DC inputs. When the whole equipment is hot restarted, the POE power supply is uninterrupted.

Dimension

Unit:mm



Specification

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| Standard & Protocol | IEEE 802.3 for 10Base-T |
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| | <p>IEEE 802.3u for 100Base-TX IEEE 802.3ab for 1000Base-T IEEE 802.3z for 1000Base-X IEEE802.3ae for 10GBase-X 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 IEEE 802.1Q for VLAN IEEE802.1p for CoS IEEE 802.1X for 802.1X Authentication IEEE802.3 at/af</p> |
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MAC Switching

- Support static configuration and dynamic MAC address learning
- Support MAC address viewing and clearing
- The aging time of MAC address is configurable
- Support quantity limit of MAC address learning
- Support MAC address filtering
- Support IEEE 802.1AE MacSec security control

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| VLAN | <p>Support 4K VLAN entry Support GVRP Support QinQ function Support Private VLAN Support Voice VLAN</p> |
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Ring Network Protection

- Support 802.1D(STP), 802.1W(RSTP) and 802.1S(MSTP)
- Support BPDU protection, root protection and loop protection
- Support automatic protection protocol of EAPS Ethernet link
- Support EAPS Ethernet ring protection protocol

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| Multicast | <p>Support IGMP v1/v2/v3 Support IGMP Snooping Support IGMP Fast Leave Support strategy and quantity limit of multicast group Support across-VLAN multicast traffic replication</p> |
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IP Routes

- Support IPv4/IPv6 dual-stack protocol
- Support static routing
- Support RIP and OSPF dynamic routing
- Support VRRP virtual routing

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| IPv6 | <p>Support ICMPv6, DHCPv6, ACLv6 and IPv6 Telnet Support IPv6 neighbor discovery Support Path MTU discovery Support MLD v1/v2 Support MLD Snooping</p> |
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DHCP Support DHCP Server

Support DHCP Relay
Support DHCP Client
Support DHCP Snooping

ACL

Support L2, L3, and L4 ACL
Support IPv4, IPv6 ACL
Support VLAN ACL

QoS

Support traffic classification based on the fields of L2/L3/L4 protocol header
Support CAR traffic limit
Support 802.1P/DSCP priority re-tagging
Support SP, WRR, SP+WRR and other queue scheduling methods
Support Tail-Drop, WRED and other congestion avoidance mechanisms
Support traffic regulation and traffic shaping

Safety Characteristics

Support L2/L3/L4-based ACL flow identification and filtering security mechanism
Support DDoS attack, SYN Flood attack of TCP, UDP Flood attack, etc.
Support the suppression function of multicast, broadcast and unknown unicast messages
Support port isolation
Support port security, IP+MAC+Port Binding
Support DHCP Snooping, DHCP option82
Support IEEE/802.1x authentication
Support Radius, Tacacs+ authentication
Support hierarchical protection of command line

Reliability

Support static/LACP link aggregation
Support UDLD unidirectional link detection
Support Ethernet OAM
Support system upgrade without interrupting ISSU operations

Management and Maintenance

Support Console, Telnet, SSH 2.0
Support ZTP (Zero Touch Provisioning)

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| | Support browser-based WEB management Support SNMP v1/v2/v3 Support file upload and download management via TFTP Support RMON event history record |
| Jumbo Frame | 9KByte |
| Number of Ports | 24 10/100/1000Mbps self-adaptive RJ45 ports (Auto MDI/MDIX) 4 1/10 Gigabit SFP ports 1 RJ45 Console serial port |
| PoE Ports(RJ45) | 24 PoE ports compliant with IEEE802.3at/af |
| Power Pin | 1/2(+),3/6(-) |
| LED Indicator of Per Port | 10/100Mbps Link/Act: Orange 1000Mbps Link/Act: Green PoE: Yellow |
| LED Indicator of Power and System | Power: Green SYS: Green |
| System | IP Configuration(IPV4, IPV6) User Configuration Time Settings(SNTP) SysLog Management SNMP(V2) RMON |
| Power Supply | 100~240VAC, 50Hz ±10%, single power supply |
| Power Consumption | <400W |
| Working Environment | Operating temperature: -10~50°C Storage temperature:-20~70°C Relative humidity: 5%~95% (no condensation) |
| Physical | Shell: IP20 protection, metal shell |

Characteristic

Installation: 19-inch 1U rack mounting

Dimension (W x D x H, mm)

440×210×44

Industry standard

IEC 61000-4-2 (ESD, electrostatic discharge), Level 3

- Air discharge: 8kV
- Contact discharge: 6kV

IEC 61000-4-4 (EFT, electrical fast transient), Level 3

- Power supply: 2kV
- Signal: 1kV

IEC 61000-4-5 (Surge), Level 3

- Power supply: differential mode 1kV, common mode 2kV
- Signal: differential mode 1kV, common mode 2kV:

Shock: IEC 60068-2-27

Free fall: IEC 60068-2-32

Vibration: IEC 60068-2-6

Authentication

CE, FCC, RoHS

Warranty

3 years

Ordering Information

| Available Models | Switching Capacity | Packet Forwarding Rate | MAC Capacity | POE Power Budget | Port Description |
|--------------------|--------------------|------------------------|--------------|------------------|--|
| ICS5000-C24GP4XS-N | 336Gbps | 124Mpps | 16K | 370W | 24 GE POE ports , 4 10GE SFP+ ports |