ICS6420 Series

DIN-Rail/Wall Mounting

20-Port Gigabit/10Gigabit Layer 3 Industrial Ethernet Switch

- Support 4 10Gigabit fiber ports (SFP+ slots), 8/12 Gigabit copper ports, 4/8 Gigabit SFP slots

- Adopt SW-Ring patented technology, support single ring, coupling ring, chain, Dual-homing, automatic recovery time of network failure < 20ms

- Support ERPS and loop detection, which can eliminate loop effectively and prevent broadcast storm caused by data loop

- 10 Gigabit bandwidth can transmit large amounts of video, voice and data with high performance and high speed

- Support dual DC power redundancy, input voltage: 12~48VDC

- Support -40~75℃ wide operating temperature range

CE FC U.S.A RoHS SW-Ring <20ms RECOVERY Industrial Grade Fanless Desig RPS

Introduction

ICS6420 series are 20-port Gigabit/10 Gigabit layer 3 industrial Ethernet switches. They provide 10Gigabit SFP+ slots, Gigabit SFP slots and Gigabit copper ports. They adopt DIN-Rail/wall mounting. Abundant numbers of interfaces, bandwidth of Gigabit/10Gigabit combination and ability to transmit large amounts of video, voice and data with high performance and high speed meet the application requirements of large-scale industrial network.

Network management system supports a variety of network protocols and industry standards, such as ARP, VRRP, RIP, OSPF, BGP, NAT, ERPS, STP/ RSTP/MSTP, 802.1Q VLAN, QoS function, IGMP static multicast function, LLDP, port trunking, port mirror, etc. It has perfect management functions, supporting port configuration, port statistics, 802.1X authentication, network diagnosis, rapid configuration, online upgrade, etc. CLI, WEB, Telnet, SSH, SNMP 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 product supports dual DC power redundancy, and the power input is two independent power supply circuits to ensure the normal operation of the equipment in case of power failure in one circuit. When power supply or port has link failure, ALARM indicator will be bright and send out alarm, meanwhile, alarm device connected to the relay will send out alarm for rapid scene troubleshooting. Hardware adopts fanless, low power consumption, wide temperature and voltage design and has passed rigorous industrial standard tests, which can suit for the industrial scene environment with harsh requirements for EMC. It can be widely used in smart grid, rail transit, smart city, safety city, new energy, intelligent manufacturing and other industrial fields.
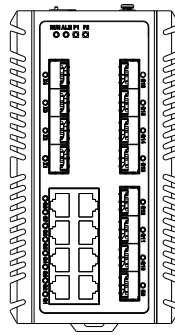
Features and Benefits

- SNMPv1/v2c/v3 is used for network management of various levels
- RMON can be used for efficient and flexible network monitoring
- Port mirroring can conduct data analysis and monitoring, which is convenient for online debugging
- QoS supports real-time traffic classification and priority setting
- LLDP can achieve automatic topology discovery, which is convenient for visual management
- DHCP server can be used for distributing IP address with different strategies
- DHCP Snooping can ensure DHCP client gets IP address from legal DHCP server
- 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
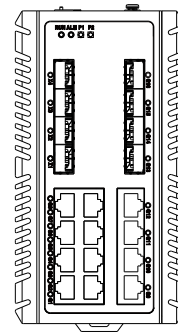- Log management records the information of booting, operation and connection

- Bandwidth management can reasonably distribute network bandwidth, preventing unpredictable network status
- Port statistics can be used for the port real time traffic statistics
- ARP could be used for MAC address resolution
- User password can conduct user hierarchical management to improve the device management security
- ACL can enhance network flexibility and security
- Relay alarm is convenient for troubleshooting of construction site
- Storm suppression can restrain broadcast, unknown multicast and unicast
- TELNET configuration and SSH configuration guarantee secure access to data
- VLAN is used for simplifying network planning
- Port Trunking can increase network bandwidth and enhance the reliability of network connection to achieve optimum bandwidth utilization
- PIM-DM/PIM-SM, IGMP Snooping, GMRP and static multicast can be used to filter multicast data to save network bandwidth
- Bandwidth management and flow control can reasonably distribute network bandwidth, preventing unpredictable network status
- Port isolation could achieve port isolation in the same VLAN and save VLAN resources
- Ring and STP/RSTP/MSTP can achieve network redundancy, preventing network storm
- Ping, Traceroute, Port Loopback and SFP Digital Diagnosis could achieve network diagnosis and troubleshooting
- VRRP, RIP, OSPF, BGP could achieve dynamic routing configuration
- NAT maps private IP address to the legal IP address of external network, which can slow the consumption of IP address space
- With high reliability and stability, ERPS could avoid broadcast storm caused by data loopback
- Loop detection could efficiently eliminate the influence caused by port loopback by detecting the existence of loopback
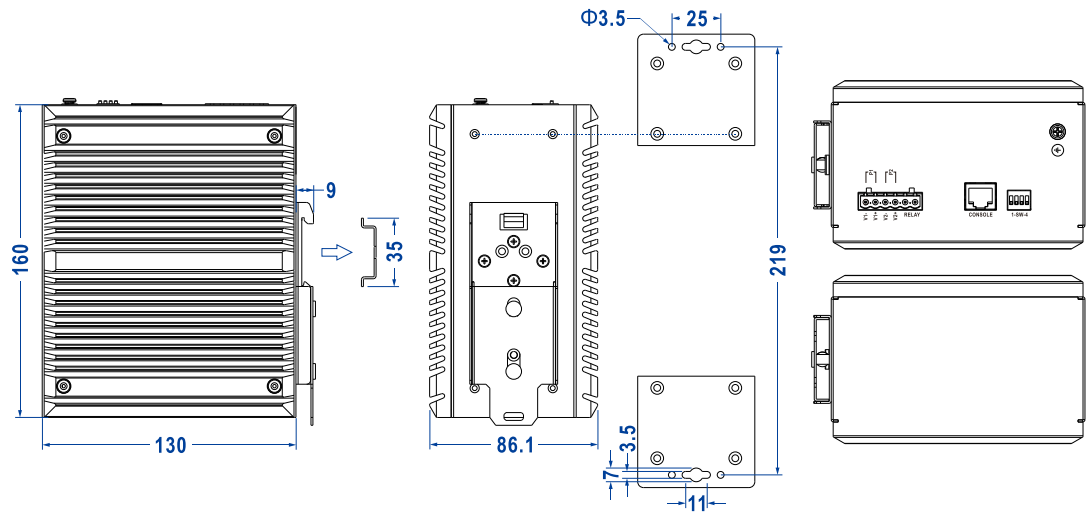
Dimension

Unit: mm

ICS6420-8GT8GS4XS-2P48　　　**ICS6420-12GT4GS4XS-2P48**

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 IEEE802.3ae for 10GBase-X SFP+ 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 port access control IEEE 802.1AB for LLDP
Management	SNMP v1/v2c/v3 Centralized Management Devices, RMON, Port Mirroring, QoS, LLDP, DHCP Server, File Management, Log Management, Port Statistics, ARP
Security	User permission rating, ACL, 802.1X authentication, port alarm,

	power alarm, storm suppression, Telnet configuration, SSH configuration, link flapping protection, NAT, DHCP snooping, loop detection, aggregation protection
Switch Function	802.1Q VLAN, Port Trunking, Bandwidth Management, Flow Control, Port Isolation
Unicast / Multicast	Static Multicast, IGMP-Snooping, PIM-DM, PIM-SM
Redundancy Technology	Ring, STP/RSTP/MSTP, ERPS
Troubleshooting	Ping, Traceroute, Port Loopback, SFP Digital Diagnosis
Routing Technique	VRRP, RIP, OSPF, BGP
Time Management	NTP Client, RTC
Interface	Gigabit copper port: 10/100/1000Base-T(X) self-adaptive RJ45, automatic flow control, support full/half duplex mode, MDI/MDI-X self-adaption Gigabit SFP: 100/1000Base-X self-adaptive SFP slot 10Gigabit SFP+: 1000/10GBase-X self-adaptive SFP+ slot Console port: CLI command line management port(RS-232), RJ45 Alarm port: 6-PIN 5.08mm pitch terminal blocks(relay occupies 2 pins), support 1 relay alarm output, current loading capacity is 1A/30VDC or 0.3A/125VAC
Indicator	Running Indicator, Port Indicator, Power Supply Indicator, Alarm Indicator
Switch Property	Transmission mode: store and forward MAC address: 16K Packet buffer size: 12Mbit Backplane bandwidth: 128G
Power Supply	Input voltage: 12~48VDC Redundant power supply: support dual power supply redundancy Overcurrent protection: 3A Connection protection: anti-reverse connection Access terminal: 6-PIN 5.08mm pitch terminal blocks (dual power supply occupies 4 pins)
Power Consumption	No-load: 9.6W@12VDC Full-load: 17.76W@12VDC

Working Environment	Operating temperature: -40~75℃ Storage temperature:-40~85℃ Relative humidity: 5%～95% (no condensation)
Physical Characteristic	Housing: IP40 protection, metal Installation: DIN-Rail/wall mounting Weight: 3176g Dimension (W x H x D): 86.1mm×160mm×130mm
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), 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	5 years

Ordering Information

Available Models	Gigabit Copper Port	Gigabit SFP Slot	10Gigabit SFP+ Slot	Power Supply
ICS6420-8GT8GS4XS-2P48	8	8	4	12~48VDC Dual power supply redundancy
ICS6420-12GT4GS4XS-2P48	12	4	4	