

CS-0412XF

4+12 Port Industrial Managed L3 Switch with 10G Uplink



- 4x Gigabit Ethernet ports
- 12x 1/10 Gigabit Ethernet SFP+ Slot
- Built for harsh environments and wide temperature range application
- RSTP, MSTP, ERPS, LACP for Network Redundancy
- QoS CoS/DSCP to increase determinism
- Supports IGMP Snooping v1/v2/v3, up to 4096 groups
- DHCP Relay Option 82 for policies IP address assignment
- SNMP v1/v2c/v3 for network management
- Supports Storm Protection
- USB storage for configuration-free replacement
- Supports industrial automation protocols Ethernet/IP and Modbus TCP

Specifications

Technology

- IEEE 802.3 10BaseT
- IEEE 802.3u 100BaseTX
- IEEE 802.3ab 1000BaseT
- IEEE 802.3ae 10GBase over Fiber
- IEEE 802.3x Flow Control
- IEEE 802.3az Energy-Efficient Ethernet
- IEEE 802.3ad/802.1AX LACP
- IEEE 802.1D Spanning Tree Protocol
- IEEE 802.1w Rapid STP
- IEEE 802.1s Multiple STP
- ITU-T G.8032 / Y.1344 ERPS
- IEEE 802.1Q VLAN Tagging
- IEEE 802.1ad Stacked VLANs
- IEEE 802.1p Class of Service
- IEEE 802.1X Network Authentication
- IEEE 802.1AB LLDP
- IEEE 1588 PTP

Standards

Processing Type Store and Forward

Switch Properties

| | |
|------------------------|------------|
| Switch Fabric | 248Gbps |
| Priority Queues | 8 Queues |
| Jumbo Frame | 12288bytes |
| MAC Table Size | 32K |
| Packet Buffer | 32Mbits |
| VLAN Table | 4094 |

Size

| | |
|------------------------------------|--------------------------|
| IGMP Group | 4096 |
| ACL Group | 4096 |
| VLAN IP Entries | 256 |
| Routing Entries (IPv4/IPv6) | 16K/8K host, 16K/16K LPM |

Software Feature

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|----------------------------|--|
| Network Redundancy | RSTP, MSTP, G.8032 ERPSv2, Port Trunking with LACP |
| Security | 802.1X, RADIUS, TACACS+, SSL, SSH |
| Management | IPv4, IPv6, Web, Telnet, Serial Console, CLI, SNMP v1/v2c/v3, uPnP |
| Diagnostics | RMON, SNMP Inform/Trap, Syslog, SMTP, Port Mirroring, LLDP, DDM, RSPAN |
| Configuration | DHCP Server/Client, Relay Option 82, TFTP, USB |
| Filter | 802.1Q VLAN, Q-in-Q, IGMP Snooping v1/v2/v3, MLD Snooping v1/v2, IGMP Querier, Independent Vlan Learning |
| Time Sync. | NTP, IEEE1588v2 OC (Software Timestamp), TC (Hardware Timestamp) |
| QoS | CoS, DSCP, WRR/SPQ Queuing, Storm Protection |
| Industrial Profiles | Ethernet/IP, Modbus TCP, Profinet |

| | |
|-----------------------|--|
| L3 Switching | Static Routing, RIP v1/v2, RIPng, OSPF v2, OSPF v3, VRRP v2 |
| Interface | |
| RJ45 Port | 4x 10/100/1000T(x), auto negotiation speed duplex mode, auto MDI/MDI-X |
| Fiber Port | 12x 1/10 Gigabit Ethernet SFP+ Slot |
| LED Indicators | Per unit: PWR1, PWR2, Fault, Ring Master, Ring State Ports: Link/Active with highest speed(Green), low speed(Amber) |
| Alarm Contact | 1x relay output with current carrying capacity of 1A @ 24 VDC |
| Digital Inputs | 1x isolated input from the electronics. +13 to +30V for state "1" -30 to +3V for state "0" Max. input current: 8mA |
| Button | Multiple functions reset button |
| Serial Console | 1x RS232 in RJ45 connector with console cable, 115.2Kbps, 8N1 |
| Storage | 1x USB 2.0 storage for firmware update, configuration backup, restore, boot up and syslog |

Power Requirements

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|--------------------------|--|
| Operation Voltage | 12-48VDC, redundant dual inputs |
| Connection | 1x removable 4-contact terminal block |
| Power Consumption | 1.53A@24VDC |
| Protection | Overload Current Protected, Reverse Polarity Protected |

Mechanical Construction

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|-------------------|----------|
| Enclosure | Aluminum |
| Protection | IP30 |

| | |
|-------------------|--|
| Class | |
| Dimensions | 72x145x178 mm (WxHxD) |
| Weight | 1.58 kg |
| Mounting | DIN-Rail Mounting, Optional Wall Mounting Kits |

Environmental Limits

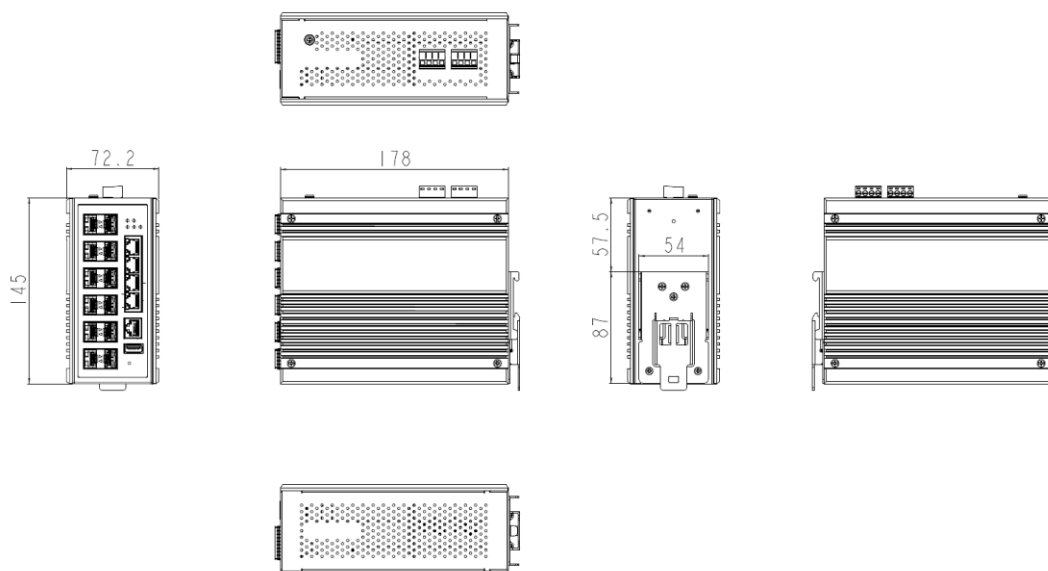
| | |
|----------------------------------|---|
| Operating Temperature | Standard: -10°C ~ 60°C (14°F ~ 140°F) Extended: -40°C ~ 75°C (-40°F ~ 167°F) |
| Storage Temperature | -40°C ~ 85°C (-40°F ~ 185°F) |
| Ambient Relative Humidity | 5 to 95%, (Non-Condensing) |

Regulatory Approvals

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|-----------------------|---|
| EMI | FCC Part 15 Subpart B Class A CE EN 55032 Class A |
| EMS | IEC61000-4-2 (ESD) IEC61000-4-3 (RS) IEC61000-4-4 (EFT) IEC61000-4-5 (Surge) IEC61000-4-6 (CS) IEC61000-4-8 (Magnetic Field) |
| Free Fall | IEC60068-2-32 |
| Shock | IEC60068-2-27 |
| Vibration | IEC60068-2-6 |
| Green | RoHS Compliant |
| Certifications | UL 60950-1/62368 (Pending) IEC 61000-6-2 IEC 61000-6-4 EN 50121-4 |
| MTBF | >100,000 hours |
| Warranty | 5 Years |

Features with star(*) implies those are under development. In a continuing effort of improvement and updated technology, product specifications are subject to change without notice.

Dimensions (unit = mm)



Ordering Information

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|--------------------|---|
| CS-0412XF | 4+12 Port Industrial Managed L3 Switch with 10G Uplink - 4x 10/100/1000T(x) + 12x 1/10 Gigabit Ethernet SFP+ Slot - Operating Temperature: -10°C ~ 60°C (14°F ~ 140°F) |
| CS-0412XF-T | 4+12 Port Industrial Managed L3 Switch with 10G Uplink - 4x 10/100/1000T(x) + 12x 1/10 Gigabit Ethernet SFP+ Slot - Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F) |

Optional Accessories

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|------------------|--|
| NDR-75-24 | 75W Industrial DIN-Rail Power Supply, 24VDC (metal case) |
| NDR-75-48 | 75W Industrial DIN-Rail Power Supply, 48VDC (metal case) |