

CT-1604X-M12

20 Port M12 Industrial Managed PoE+ Booster Gigabit L3 Switch with 10G Uplink



- Compliant with EN50155
- 16x 10/100/1000T(x) M12 connector with IEEE 802.3at PoE+
- 4x 1G/10G(x) M12 connector, with 2x relay bypass
- Support Bypass function for non-stop communication even when no power exists
- 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 512 groups
- DHCP Relay Option 82 for policies IP address assignment
- SNMP v1/v2c/v3 for network management
- Supports Storm Protection
- Supports industrial automation protocols Ethernet/IP and Modbus TCP
- Supports PoE PD Alive Check Function for PoE Device Power Recycle
- Isolated redundant PoE power 190W

Specifications

Technology

- IEEE 802.3 10BaseT
- IEEE 802.3u 100BaseTX
- IEEE 802.3ab 1000BaseT
- IEEE 802.3an 10GBase over copper
- IEEE 802.3x Flow Control
- IEEE 802.3af Power over Ethernet
- IEEE 802.3at PoE+
- 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	112Gbps
Priority Queues	8 Queues
Jumbo Frame	9216bytes
MAC Table Size	16K
Packet Buffer	12Mbits
VLAN Table Size	4094
IGMP Group	512
ACL Group	512
VLAN IP Entries	64
Routing Entries (IPv4/IPv6)	512/256 host, 64/64 LPM

Software Feature

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, RSPAN
Configuration	DHCP Server/Client, Relay Option 82, TFTP
Filter	802.1Q VLAN, Q-in-Q, IGMP Snooping v1/v2/v3, IGMP Querier, Independent Vlan Learning
Time Sync.	NTP, IEEE1588v2 OC (Software Timestamp), TC (Hardware Timestamp)
QoS	CoS, DSCP, WRR/SPQ Queuing, Storm Protection
PoE	Powering Status, PoE Monitoring, Scheduling, PD Alive Check, PoE Priority
Industrial Profiles	Ethernet/IP, Modbus TCP, Profinet

Interface

Network Connector	16x 10/100/1000T(x) M12 Female X-coded 8-pole with PoE+, 4x 1G/10GT(x) M12 Female X-coded 8-pole, auto negotiation speed duplex mode, auto MDI/MDI-X
LED Indicators	Per unit: PWR, Status Ports: Link/Active with highest speed(Green), low speed(Amber) PoE: Output Power
Alarm Contact	1x relay output with current carrying capacity of 1A @ 24 VDC
Serial Console	1x RS232 in M12 Male A-coded 5-pole connector with console cable, 115.2Kbps, 8N1

Power Requirements

Operation Voltage	24VDC, 48VDC, HV: 72-110VDC, redundant dual inputs
Connection	M12 Male S-coded 4-pole
Power Consumption	30W
PoE Power Budget	Max. 30 W per PoE port. Max. total output power for PD: 190W@24V input.

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.

Protection	Overload Current Protected, Reverse Polarity Protected
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Mechanical Construction

Enclosure	SECC/Aluminum
Protection Class	IP40/IP54(Optional)
Dimensions	220x176x100 mm (WxHxD)
Weight	8.0 kg
Mounting	Wall Mounting Kits, Optional DIN-Rail Mounting

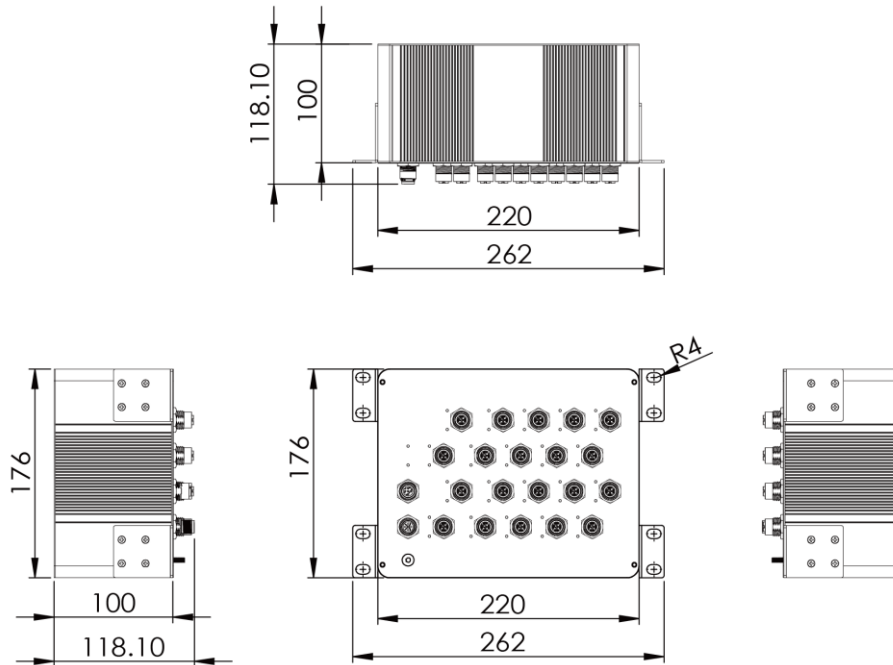
Environmental Limits

Operating Temperature	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

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	IEC61373
Vibration	IEC61373
Green	RoHS Compliant
Certifications	EN 50155 EN 45545-2
MTBF	>100,000 hours
Warranty	5 Years

Dimensions (unit = mm)



Ordering Information

CT-1604X-M12-24V2U-T	20 Port M12 Industrial Managed PoE+ Booster Gigabit L3 Switch with 10G Uplink - 16x 10/100/1000T(x) with 30W PSE + 4x 1G/10GT(x) M12 connector - Power Input: 24VDC - Max. Power Budget: 190W - Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F) - Protection Class: IP40
CT-1604X-M12-24V2U-WT	20 Port M12 Industrial Managed PoE+ Booster Gigabit L3 Switch with 10G Uplink - 16x 10/100/1000T(x) with 30W PSE + 4x 1G/10GT(x) M12 connector - Power Input: 24VDC - Max. Power Budget: 190W - Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F) - Protection Class: IP54
CT-1604X-M12-48V2U-T	20 Port M12 Industrial Managed PoE+ Booster Gigabit L3 Switch with 10G Uplink - 16x 10/100/1000T(x) with 30W PSE + 4x 1G/10GT(x) M12 connector - Power Input: 48VDC - Max. Power Budget: 190W - Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F) - Protection Class: IP40
CT-1604X-M12-48V2U-WT	20 Port M12 Industrial Managed PoE+ Booster Gigabit L3 Switch with 10G Uplink - 16x 10/100/1000T(x) with 30W PSE + 4x 1G/10GT(x) M12 connector - Power Input: 48VDC - Max. Power Budget: 190W - Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F) - Protection Class: IP54
CT-1604X-M12-HV2U-T	20 Port M12 Industrial Managed PoE+ Booster Gigabit L3 Switch with 10G Uplink - 16x 10/100/1000T(x) with 30W PSE + 4x 1G/10GT(x) M12 connector - Power Input: 72-110VDC - Max. Power Budget: 156W - Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F) - Protection Class: IP40
CT-1604X-M12-HV2U-WT	20 Port M12 Industrial Managed PoE+ Booster Gigabit L3 Switch with 10G Uplink - 16x 10/100/1000T(x) with 30W PSE + 4x 1G/10GT(x) M12 connector - Power Input: 72-110VDC - Max. Power Budget: 156W - Operating Temperature: -40°C ~ 75°C (-40°F ~ 167°F) - Protection Class: IP54

Optional Accessories

NDR-240-24	240W Industrial DIN-Rail Power Supply, 24VDC (metal case)
NDR-480-24	480W Industrial DIN-Rail Power Supply, 24VDC (metal case)