

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/10GT(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

Standards	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

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

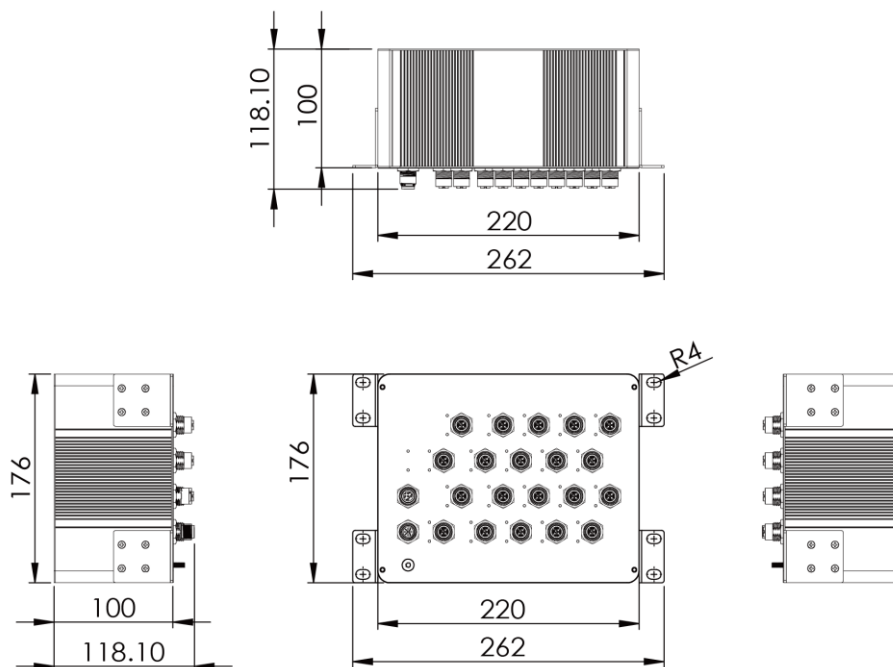
Environmental Limits

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)