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Communication Networks

Industrially Hardened High Speed 12-port Managed PoE Ethernet Switch
8 × GE PSE + 2 × 2.5GE SFP + 2 × 10GE SFP+ Ports

CNXE2GE2TX8MSPOE

DIN RAIL | -40˚ TO 75˚ C | FLEXIBILITY | IEEE802.3af/at | 2 SFP+ | 2 | 8

The ComNet CNXE2GE2TX8MSPOE is a twelve-port Managed Ethernet Switch designed to reliably operate in harsh, environmentally challenging applications. It features eight 10/100/1000BASE-TX ports supporting IEEE 802.2af/at PSE with a total power budget of 240 watts with a maximum of thirty watts per port to provide power in a PoE application. It also provides two 100/1G/2.5GBASE-X ports and two 1G/10GBASE-X SFP+ ports. The SFP ports are configurable by the use of compatible ComNet SFP+ modules. These network-managed layer 2 switches are compatible with any IEEE802.3 compliant Ethernet device.

FEATURES

› High Speed 12-port Managed PoE Ethernet Switch:
- 8 × 10/100/1000BASE-TX PoE ports with total power budget of 240W (max 30 W per port)
- 2 × 100/1G/2.5GBASE-X ports
- 2 × 1G/10GBASE-X SFP+ ports

› Supports MSTP(RSTP/STP compatible) Redundancy

› IEEE 802.3af/at compliant, up to 30 W of PoE+ power available per port. 240 W total PoE power available.

› Designed to meet full compliance with the environmental requirements (ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/ lowline voltage conditions and transient voltage protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.

› Fast Redundant Ethernet Ring: C-Ring. Recovery time <30ms, with > 250 switches within the ring

› Supports IEEE 1588v2 clock synchronization

› Supports IPV6 new internet protocol version

› Supports Modbus TCP protocol

› Supports IEEE 802.3az Energy-Efficient Ethernet technology

› Provided HTTPS/SSH protocol to enhance network security

› Supports SMTP client and NTP server protocol

› Supports IP-based bandwidth management

› Supports application-based QoS management

› Supports Device Binding security function

› Supports DOS/DDOS auto prevention

› IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic

› Supports SNMP v1/v2c/v3 & RMON & 802.1Q VLAN Network Management

› Supports ACL, TACACS+, RADIUS and 802.1X User Authentication for security

› Supports 10K Bytes Jumbo Frame

› Syslog/SNMP Trap notification for warning of unexpected event

› Supports UPnP(Universal Plug ad Play Protocol)

› Supports ERPS Ethernet Ring Protection Switching G.8032

› Windows utility, eConsole, supports centralized management, and is web-based configurable, or by Telnet and console (CLI) ports

› Rigid aluminum housing design provides for DIN-Rail or wall mounting

** Small Form-Factor Pluggable Module. Sold separately.*

SPECIFICATIONS

Connectors

1000/10GBASE-X	2 × SFP+ Ports[1]
100/1000/2.5GBASE-X	2 × SFP Ports[1]
10/100/1000BASE-T(X)	8 × RJ-45 Ports, with Auto MDI/MDIX
Serial Console	RS-232 @ 115,200 bps 8,N,1 w/ console cable (incl.)
Power	Dual DC inputs 50~57VDC on 6-pin terminal block

Ethernet Standards Supported

IEEE 802.3 for 10Base-T
IEEE 802.3u for 100Base-TX and 100Base-FX
IEEE 802.3ab for 1000Base-T
IEEE 802.3z for 1000Base-X
IEEE 802.3x for Flow control
IEEE 802.3ad for LACP (Link Aggregation Control Protocol)
IEEE 802.1p for COS (Class of Service)
IEEE 802.1Q for VLAN Tagging
IEEE 802.1d for STP (Spanning Tree Protocol)
IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol)
IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol)
IEEE 802.1x for Authentication
IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
IEEE 802.3af/at PoE specification

Switch Properties

Packet Buffer	32 MBits
Switching latency	7 us
Switching bandwidth	66Gbps
Throughput	49.1Mpps@64Bytes packet
Max. Available VLANs	4096
VLAN ID Range	VID 0 to 4095
IGMP multicast groups	64 for each VLAN
Port rate limiting	User Define
Priority Queues	8
Processing	Store-and-Forward

Management

DHCP	Client, Server, Option66/67/82
Access	SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
Security Access	SSH2.0, SSL
Software Upgrade	TFTP, HTTP
NTP	SNTP client

Software Features

Redundant Ring (C-Ring) with recovery time less than 30ms
Quality of Service (802.1p) for real-time traffic
VLAN (802.1Q) with VLAN tagging
IGMP Snooping
IP-based bandwidth management
Application-based QoS management
Port configuration, status, statistics, monitoring, security
DHCP Server/Client/Relay
SMTP Client
Modbus TCP
NTP server/client
UPnP

Multicast Features

IGMP v1, v2, v3
Reverse IGMP
IGMP MLD snooping
IGMP/MLD querier
Multicast Filtering
256 static or dynamic L2 multicast group

Security Features

Device Binding security feature
Enable/disable ports, MAC based port security
Port based network access control (802.1x)
VLAN (802.1Q) to segregate and secure network traffic
RADIUS/TACACS+ centralized password management
SNMPv3 encrypted authentication and access security
HTTPS / SSH / SSL enhance network security
DOS/DDOS auto prevention
IP Source Guard
Supports Secure Copy Protocol SCP for secure file transfer

QoS

TOS/Diffserv supported
CoS
Application based QoS
IP based bandwidth management

Additional Features

Embedded watchdog
TFTP loadable startup-configuration
Configuration Backup

Network Redundancy

C-Ring
STP/RSTP/MSTP (IEEE 802.1 d/w/s)
G.8032 ERPS Ethernet Ring Protection Switching

PoE Management

PoE configuration
PoE Status
PoE Scheduling(turn on/off the PoE device)
Auto-Ping check(Reboot PDs if there is no responses)

SPECIFICATIONS

Power

Input Power	Redundant Dual 50-57 VDC Inputs
Operating Voltage Range	50 to 57 VDC
Power Consumption	19 W, Typical (without PoE)
PoE Power Budget	240 W, Max. 30 W per port
Current Protection	Overload Current Protected
Polarity Protection	Reverse Polarity Protected
PoE pin assignment	RJ45 port #1 - #24 support IEEE802.3at End-point Alternative A mode. Positive (VCC+): RJ45 pin 1, 2 Negative (VCC-): RJ45 pin 3, 6

Fault Relay

Output	1A @ 24 VDC

Electrical & Mechanical

LED Status Indicators	PWR, SYS, Alarm, R.M., Ring, Fault Ports: Link, Speed, Activity
Size	2.93 × 4.92 × 6.05 in (7.4 × 12.5 × 15.4 cm)
Enclosure	IP-30 Aluminum
Installation	DIN Rail (35 mm Track) or Wall Mount
Shipping Weight	2.7 lb / 1.1 kg

Environmental

MTBF	>495,000 hours
Operating Temperature	-20˚ C to +60˚ C @ 2.5G/10G SFP -40° C to +75° C @ 1G
Storage Temperature	-40˚ C to +85˚ C
Relative Humidity	5% to 95% (non-condensing)

Regulatory Approvals

EMC	CE EMC (EN 55024, EN 55032), FCC Part 15 B
EMI	EN 55032, CISPR32, EN 61000-3-2, EN 61000-3-3, FCC Part 15 B class A
EMS	EN 55024 (IEC/EN 61000-4-2 (ESD), IEC/EN 61000-4-3 (RS),IEC/EN 61000-4-4 (EFT), IEC/EN 61000-4-5 (Surge), IEC/EN 61000-4-6 (CS), IEC/EN 61000-4-8(PFMF), IEC/EN 61000-4-11 (DIP))
Shock	IEC60068-2-27
Free Fall	IEC60068-2-31
Vibration	IEC60068-2-6
Safety	EN60950-1

AGENCY COMPLIANCE

FC PART 15 COMPLIANT CE RoHS

ORDERING INFORMATION

Part Number	Description
CNXE2GE2TX8MSPOE	Industrial 12-port layer2 managed Gigabit PoE Ethernet switch with 8 × 10/100/1000Base-T(X) P.S.E ports and 2 × 100/1G/2.5GBase-X + 2 × 1G/10GBase-X SFP+ socket
Included Accessories	DIN-Rail Kit, Wall Mount Kit, Console cable, Product Support CD

[1] Multimode fiber needs to meet or exceed fiber standard ITU-T G.651. Single mode fiber needs to meet or exceed fiber standard ITU-T G.652. This product requires a fiber installation with a minimum 30 dB connector return loss.

The use of Super Polish Connectors is recommended. Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J.

In a continuing effort to improve and advance technology, product specifications are subject to change without notice.

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