



The ComNet™ CNGE2FE8MSPOE+ is a hardened Managed Ethernet Switch. It provides IEEE 802.3at (30W) PoE+ to eight 10/100BASE-T(X) and has two-gigabit combination SFP or RJ-45 ports. Up to 240 watts of PoE or PoE+ power is available for distribution across all 8 TX ports. All SFP ports utilize ComNet SFP* modules for fiber and connector type and distance. The CNGE2FE8MSPOE+ is a redundant switch offering multiple Ethernet redundancy protocols, C-Ring (recovery time <10ms over 250 units of connection), ComRing, and MSTP/RSTP/STP (IEEE 802.1 s/w/D). This redundancy feature protects your applications from network interruptions or temporary malfunctions by redirecting transmission within the network. Network management is supported by eConsole, a powerful, easy-to-use Windows-based utility, as well as Web-based telnet, and Console (CLI) configurations. This environmentally hardened switch is designed for direct deployment in difficult out-of-plant or roadside operating environments.

FEATURES

- › 5.6 Gbps Switching bandwidth: 2 Combo Gigabit Ports
8 10/100T(X) Ports
- › Designed to meet full compliance with the environmental requirements (ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/low-line voltage conditions and transient voltage protection) of NEMA TS-1/TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.
- › IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic & Port Trunking for ease of bandwidth management
- › STP/RSTP/MSTP supported
- › Easy implementation of point-to-point, linear add-drop, drop-and-repeat, star, or true self-healing ring and mesh network system architectures
- › Operating Temperature: -40° to +75°C (-40° to +167°F). Functional to +85°C (185°F)
- › Exclusive ComNet C-Ring fast recovery technology protects mission-critical applications from network interruptions or temporary malfunctions. Recovery time <10ms, with > 250 switches within the ring
- › Redundant DC inputs for uninterrupted operation in the event of a loss of operating power or a power supply failure
- › Centralized management via Windows utility, eConsole, configurable via browser, or by Telnet and console (CLI) ports
- › Supports LLDP (Link Layer Discovery Protocol)
- › Event notification through Syslog, E-mail, SNMP trap, and Relay Output
- › Port lock to prevent access from unauthorized MAC address
- › SNMP v1/v2c/v3 for secure network management
- › PTP Client (Precision Time Protocol) for clock synchronization
- › C-RSTP supports network applications with complex topology
- › Rigid aluminum housing design provides for DIN-Rail or wall mounting
- › Lifetime Warranty

APPLICATIONS

- › 10/100/1000Mbps Ethernet
- › ITS Networks with Streaming Video

* Small Form-Factor Pluggable Module. Sold separately.

SOFTWARE SPECIFICATIONS

Network Redundancy	ComRing Legacy Ring STP MSTP	C-Ring C-RSTP RSTP
Switch Properties	Switching Latency Switching Bandwidth Max. Available VLANs IGMP Multicast Groups Port Rate Limiting MAC Table Priority Queues Processing	7µs 5.6Gbps 4096 1024 User-defined 8192 MAC Addresses 4 Store-and-Forward
Security Features	Enable/Disable Ports, MAC based port security Port-Based Network Access Control: 802.1x VLAN (802.1Q): To segregate and secure network traffic Supports Q-in-Q VLAN for performance & security to expand the VLAN space Radius Centralized Password Management SNMPv3 Encrypted Authentication and Access Security TACACS	
Software Features	STP/RSTP/MSTP (IEEE 802.1D/w/s) C-Ring Redundant Ring: Recovery time <10ms, with over 250 units TOS/Diffserv Supported Quality of Service (802.1p) for Real-Time Traffic VLAN (802.1Q) with VLAN Tagging and GVRP Supported IGMP Snooping for Multicast Filtering Port Configuration, Status, Statistics, Monitoring & Security DHCP Server / Client support Port Trunk Support MVR (Multicast VLAN Registration) support	
Ethernet Standards	IEEE 802.3 for 10BASE-T IEEE 802.3u for 100BASE-TX and 100BASE-FX IEEE 802.3z for 1000BASE-X IEEE 802.3ab for 1000BASE-T IEEE 802.3x for Flow control IEEE 802.3ad for LACP (Link Aggregation Control Protocol) IEEE 802.1D for STP (Spanning Tree Protocol) IEEE 802.1p for COS (Class of Service) IEEE 802.1Q for VLAN Tagging 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 802.3at for Power Sourcing Equipment (PSE) and PoE (up to 30 watts per port)	

Connectors

8 × 10/100BASE-TX Ports in RJ45 with Auto MDI/MDIX
 Gigabit Combo Ports with 2 × 10/100/1000BASE-T(X) & 2 × 100/1000BASE-X SFP

HARDWARE SPECIFICATIONS

Alarm & Monitoring Systems	Relay Output Syslog Server / Client SMTP Serial Console Port	For fault event alarming To record and view events For event warning notifications via email RS-232 @ 9600bps in RJ45 connector with console cable.
Indicating LEDs	3 × Power Indicators C-Ring Indicator 10/100BASE-TX RJ45 Port Indicator 100/1000BASE-X SFP Port Indicator PSE Power Output Indicator	Ring Master Indicator Fault Indicator
PoE pin assignment	RJ45 port #1 - #8 support IEEE802.3at End-point Alternative A mode. Positive (VCC+): RJ45 pin 1, 2 Negative (VCC-): RJ45 pin 3, 6	
Power	Redundant Input Power Power Consumption (Typ.) Overload Current Protection Polarity Protection	Dual 48 - 57VDC input terminal block 249W Max with PoE+ on all ports; 9W Max w/o PoE+ Present Not Present
Electrical & Mechanical	Size (W × D × H) Weight	2.84 × 4.13 × 5.98 in (7.2 × 10.5 × 15.2 cm) 820g / 1.8lb
Environmental	Storage Temperature Operating Temperature Operating Humidity MTBF Installation	-40 to 85°C (-40 to 185°F) -40 to 75°C (-40 to 167°F) 5% to 95% Non-condensing >100,000 hours DIN Rail and Wall Mount Design
Regulatory Compliance	EMI EMS Shock Free Fall Vibration Safety	FCC Part 15, CISPR (EN55022) class A EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11 IEC60068-2-27 IEC60068-2-32 IEC60068-2-6 EN60950-1
Fully compliant with the environmental requirements (ambient operating temperature, storage temperature, mechanical shock, vibration, humidity with condensation, high-line/lowline voltage conditions, and voltage transient protection) of NEMA TS-1/TS-2 and the Caltrans specification for Traffic Signal Control Equipment.		
<i>In a continuing effort to improve and advance technology, product specifications are subject to change without notice.</i>		



Order Part Number	Description	10/100BASE-TX Ports	Combo Ports
CNGE2FE8MSPOE+	Environmentally Hardened Managed Ethernet Switch with Power over Ethernet (PoE+)	8	2
Options	ComNet 48V Recommended Power Supply (Not Included, consult factory) *Add suffix '/C' for Conformally Coated Circuit Boards to extended humidity with condensation conditions (Extra charge, consult factory)		