



HARDENED



FLEXIBILITY



UPLINKS



15W POE



2



8



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
- › Fully compliant with IEEE 802.3at, up to 240 watts of PoE or PoE+ power is available for distribution across all 8 10/100BASE-TX ports
- › 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
- › Fully Compliant with the Environmental Requirements of NEMA TS-1/TS-2 & the Caltrans Specification for Traffic Signal Control Equipment
- › 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
	C-Ring
	Legacy Ring
	C-RSTP
	STP
	RSTP
	MSTP

Switch Properties	Switching Latency	7µs
	Switching Bandwidth	5.6Gbps
	Max. Available VLANs	4096
	IGMP Multicast Groups	1024
	Port Rate Limiting	User-defined
	MAC Table	8192 MAC Addresses
	Priority Queues	4
	Processing	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)

HARDWARE SPECIFICATIONS

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

Alarm & Monitoring Systems	Relay Output	For fault event alarming
	Syslog Server / Client	To record and view events
	SMTP	For event warning notifications via email
	Serial Console Port	RS-232 @ 9600bps in RJ45 connector with console cable.

Indicating LEDs	3 × Power Indicators
	Ring Master Indicator
	C-Ring Indicator
	Fault Indicator
	10/100BASE-TX RJ45 Port Indicator
	100/1000BASE-X SFP Port Indicator
PSE Power Output Indicator	

Power	Redundant Input Power	Dual 48 – 57VDC input terminal block
	Power Consumption (Typ.)	249W Max with PoE+ on all ports; 9W Max w/o PoE+
	Overload Current Protection	Present
	Polarity Protection	Not Present

Electrical & Mechanical	Size (W × D × H)	2.84 × 4.13 × 5.98 in (7.2 × 10.5 × 15.2 cm)
	Weight	820g / 1.8lb

Environmental	Storage Temperature	-40 to 85°C (-40 to 185°F)
	Operating Temperature	-40 to 75°C (-40 to 167°F)
	Operating Humidity	5% to 95% Non-condensing
	MTBF	>100,000 hours
	Installation	DIN Rail and Wall Mount Design

Regulatory Compliance	EMI	FCC Part 15, CISPR (EN55022) class A
	EMS	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
	Shock	IEC60068-2-27
	Free Fall	IEC60068-2-32
	Vibration	IEC60068-2-6
	Safety	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.

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

AGENCY COMPLIANCE

Order Part Number	Description	10/100BASE-TX Ports	Combo Ports
CNGE2FE8MSPOE+	Environmentally Hardened Managed Ethernet Switch	8	2
Options	ComNet PS48VDC-5A or PS48VDC-10A (depending on per-port load and operating temperature) Recommended Power Supply (Not Included) *Add suffix 'C' for Conformally Coated Circuit Boards to extended humidity with condensation conditions (Extra charge, consult factory)		