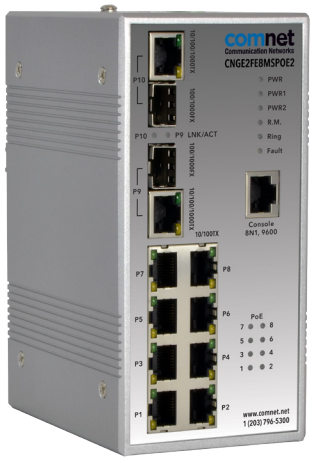
Managed Ethernet Switch with (8) 10/100 BASE-TX + (2) 10/100/1000 BASE-TX/FX Combo Ports and Power over Ethernet (PoE)

CNGE2FE8MSPOE2

HARDENED | FLEXIBILITY | UPLINKS | 15W POE | 8 | 2



The ComNet™ CNGE2FE8MSPOE2 is a hardened Managed Ethernet Switch. It provides IEEE 802.3af (15W) PoE to eight 10/100BASE-T(X) ports and has two-gigabit combination SFP or RJ-45 ports. Up to 120 watts of 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 CNGE2FE8MSPOE2 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 802.3af, up to 120 watts of 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

› 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.

› 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 <10 ms, 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

› 10/100/1000 Mbps Ethernet

› ITS Networks with Streaming Video

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

CNGE2FE8MSPOE2

Managed Ethernet Switch with (8) 10/100 BASE-TX + (2) 10/100/1000 BASE-TX/FX Combo Ports and Power over Ethernet (PoE)

SOFTWARE SPECIFICATIONS

Network Redundancy

ComRing	C-Ring
Legacy Ring	C-RSTP
STP	RSTP
MSTP	

Switch Properties

Switching Latency	7 µs
Switching Bandwidth	5.6 Gbps
Max. VLANs Available	4096
IGMP Multicast Groups	1024
Port Rate Limiting	User Defined
MAC Table	8192 MAC addresses available
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

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 802.3af for Power Sourcing Equipment (PSE) and PoE (up to 15.4 watts per port)

Physical Ports

8 × 10/100BASE-TX Ports in RJ45 with Auto MDI/MDIX
Gigabit Combo Ports with 2 × 10/100/1000BASE-T(X)
2 × 100/1000BASE-FX SFP[1]

HARDWARE SPECIFICATIONS

Alarms & 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-FX SFP Port Indicator
PSE Power Output Indicator

PoE pin assignment

RJ45 port #1 - #8 support IEEE802.3af End-point Alternative A mode.
Positive (VCC+): RJ45 pin 1, 2
Negative (VCC-): RJ45 pin 3, 6

Power

Redundant Input Power	Dual 48 to 57 VDC input terminal block
Power Consumption (Typ)	132 W max with PoE on all ports, 9 W without PoE
Overload Current Protection	Present
Polarity Protection	Not Present

Mechanical

Size (W × D × H)	2.93 × 4.3× 6.05 in (7.4 × 10.9 × 15.3 cm)
Weight	2.4 lb / 1.1 kg

Installation

DIN Rail (35mm track) or Wall Mount

Environmental

MTBF	>100,000 hours
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

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.

[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

AGENCY COMPLIANCE
PART 15 COMPLIANT E322911 N24621

Low Power Consumption

Order Part Number	Description
CNGE2FE8MSPOE2	(8) 10/100 BASE-TX + (2) 10/100/1000 BASE-TX/FX Combo Ports and Power over Ethernet (PoE)
Options	ComNet 48V Recommended Power Supply (Not Included)

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

comnet Communication Networks
3 CORPORATE DRIVE | DANBURY, CONNECTICUT 06810 | USA | T: 203.796.5300 | F: 203.796.5303 | TECH SUPPORT: 1.888.678.9427 | INFO@COMNET.NET
8 TURNBERRY PARK ROAD | GILDERSOME | MORLEY | LEEDS, UK LS27 7LE | T: +44 (0)113 307 6400 | F: +44 (0)113 253 7462 | INFO-EUROPE@COMNET.NET

09 Jan 2015