

### **Environmentally Hardened Managed Layer 2+ Ethernet Switch** 3 SFP\* + 8 Electrical Ports with Optional 30 or 60 Watt PoE

#### CNGE3FE8MS[POE][HO]























**FLEXIBILITY** 

UPLINKS



The ComNet CNGE3FE8MS[POE][HO] has three 100/1000Base-FX SFP\* ports and eight 10/100Base-TX ports. Two of the SFP ports support 2.5 Gbps SFPs for high speed communication in bandwidth intensive applications. All SFP ports utilize ComNet SFP modules for fiber and connector type and distance. The IEEE802.3compliant unit offers multiple Ethernet redundancy protocols (MSTP/RSTP/STP/ ERPS (G.8032)) which protect your applications from network interruptions or temporary malfunctions by redirecting transmission within the network. The switch provides advanced IP-based management that can limit the maximum bandwidth for each connected IP device, allowing the user to adjust usage. Two models are available which supply Power over Ethernet (PoE). The CNGE3FE8MSPOE model provides eight electrical ports supporting up to thirty watts of power. On the CNGE3FE8MSPOEHO model, four of the eight PoE ports can support up to sixty watts of PoE power. All PoE ports are IEEE802.3at compliant.

#### **FEATURES**

- > 3 × 100/1000Base-FX SFP 8 × 10/100Base-TX RJ45
- $\rightarrow$  2  $\times$  SFP ports support 2.5 Gbps SFP modules for high speed communication
- > CNGE3FE8MSPOE provides 8 × IEEE802.3at compliant 30 W PoE+ ports
- > CNGE3FE8MSPOEHO provides 4 × IEEE802.3at compliant 30 W PoE+ ports and 4 × IEEE802.3at compliant 60 W PoE++ ports
- > Fast Redundancy/Recovery MSTP/RSTP/STP (IEEE802.1s/w/D) and ERPS G.8032
- > Layer 3 static routing
- > Supports IPV6 new internet protocol version
- > Provided HTTPS/SSH protocol enhances network security
- > Supports Device Binding security function
- > Supports SNMP v1/v2c/v3 & RMON & 802.1Q VLAN Network Management
- > Supports ACL, 802.1x User Authentication for security
- > Supports 9.6K Bytes Jumbo Frame
- > Multiple notifications warn of unexpected events
- > Web-based, Telnet and Console (CLI) configuration, and Windows-based (eVision) monitoring
- > Designed for wall or DIN rail mount installations
- > Lifetime Warranty

#### SOFTWARE FEATURES

- > STP/RSTP/MSTP (IEEE 802.1D/w/s)
- > Ethernet Ring Protection Switching (ERPS) (G.8032)
- > Quality of Service (802.1p) for real-time traffic
- > VLAN (802.1Q) with VLAN tagging and GVRP supported
- > IGMP v2/v3 (IGMP snooping support) and MLD v1/v2 for filtering multicast traffic
- > Supports IP-based bandwidth management
- > Supports application-based QoS management
- > Port configuration, status, statistics, monitoring, security
- > DHCP Client/Server, DHCP Snooping, DHCP Relay
- > Custom User Access Rights (15 Levels)
- > Static and LACP Link Aggregation
- > Supports Loop Protection function
- Multicast VLAN Registration (MVR)
- > Supports IP Multicast Profile (IPMC)
- > Link Layer Discovery Protocol (LLDP)
- > Voice VLAN support
- > UPNP (universal plug and play)

<sup>\*</sup> Small Form-Factor Pluggable Module. Sold separately.

## Environmentally Hardened Managed Layer 2+ Ethernet Switch 3 SFP + 8 Electrical Ports with Optional 30 or 60 Watt PoE

#### **SPECIFICATIONS**

#### **Connectors**

10/100Base-TX Ports 8 × RJ-45 100/1000Base-X Port 3 × SFP<sup>1</sup>

Serial Console Port USB Type B Connector (115200bps, 8, N, 1)

Power 2 × 2-Pin Terminal Block Fault Relay 3-Pin Terminal Block

#### **Switch Properties**

Switching latency 7 µs
Switching bandwidth 13.6 Gbps
DRAM 1GB
Flash 128Mb

VLANs Voice, Private, Multicast

Max. Available VLANs 256

IGMP multicast groups 128 for each VLAN
Port rate limiting User Defined
Processing Store-and-Forward

Priority Queues 8

Network Redundancy STP RSTP MSTP ERPS
MAC Table 8K MAC Addresses
Jumbo Frame Up to 9.6K Bytes
Static Routing 32 Routes

#### **Security Features**

**Device Binding security feature** 

Enable/disable ports, MAC based port security Port based network access control (802.1x)

VLAN (802.10) to segregate and secure network traffic

Radius centralized password management

SNMPv3 encrypted authentication and access security

https / SSH enhance network security

Switch/port based, NAS, ACL, ARP inspection and IP sourceguard

AAA radius server authentication

TACACS+ SNTP

**Power Consumption** 

#### **Power**

Input Power Redundant 12 to 57 VDC (non-PoE model)

Redundant 48 to 57 VDC (PoE models) 10 W Max. non-PoE

250 W Max w/ PoE+ (CNGE3FE8MSPOE) 370 W Max w/ PoE++ (CNGE3FE8MSPOEHO)

Overload Current Protection Present Reverse Polarity Protection Present

# FC PART 15 COMPLIANT ( C CU) US ROHS Mechanical

Indicating LEDs Power/Fault Indicators

Alarm Indicator RJ45 Port Indicator

MADE IN THE

SFP Port Indicator PoE Indicators

Size (H × W × D)  $6.0 \times 3.5 \times 4.5 \text{ in } (15.24 \times 8.89 \times 11.43 \text{ cm})$ 

Installation DIN-Rail or Wall Mount Weight 2.6 lb / 1.2 kg

Environmental

Storage Temperature -40 to 85° C
Operating Temperature -40 to +75° C

Operating Humidity 5% to 95% Non-condensing

MTBF >100,000 hours

#### **Ethernet Standards**

IEEE 802.3 for 10Base-T

IEEE 802.3u for 100Base-TX and 100Base-FX

IEEE 802.3ab for 1000Base-T IEEE 802.z for 1000Base-X IEEE 802.3x for Flow control

IEEE 802.3ad for LACP (Link Aggregation Control Protocol)

IEEE 802.3at for Power Sourcing Equipment (PSE) and PoE up to 30 watts per port

(CNGE3FE8MSPOE and CNGE3FE8MSPOEHO Only)

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 802.3az Energy Efficient Ethernet

ITU-T G.8032v1/v2 Ethernet Ring Protection Switching (ERPS)

#### **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

Rail EN50121-4

#### ORDERING INFORMATION

Part Number	Description	100/1000 SFP Ports <sup>1</sup>	10/100 RJ45 Ports	30W PoE+ Ports	60W PoE++ Ports
CNGE3FE8MS	Industrially Hardened 11 Port Managed Ethernet Switch	3	8	0	0
CNGE3FE8MSPOE	Industrially Hardened 11 Port Managed Ethernet Switch	3	8	8	0
CNGE3FE8MSPOEHO	Industrially Hardened 11 Port Managed Ethernet Switch	3	8	4	4
Included Accessories (North America Only)	DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included with CNGE3FE8MS only, for benign 0 to 50°C applications. Hardened power supply available, consult factory)				
Options	ComNet Recommended Power Supply for PoE Units (Not Included, consult factory)  User selection of ComNet SFP (see SFP Modules data sheet for product numbers and compatibility before ordering)				

[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 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.

