# comnet

**USA MADE** | **HARDENED** -40º TO +75º | **PoE 60W PoE++** IEEE802.3at | **SFP** FLEXIBILITY | **PORT GUARDIAN** | **1G GIGABIT** ALL GIGABIT | **2.5 GBPS ETHERNET** 2 | **GIGABIT ETHERNET** 3 + 8

The ComNet CNGE11FX3TX8MS has three 100/1000Base-FX SFP* ports and eight 10/100/1000Base-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 intrusion event is reported back to the operator using SNMP. The series offers multiple Ethernet redundancy protocols which protect your applications from network interruptions or temporary malfunctions by redirecting transmission within the network. The ComNet exclusive Port Guardian feature provides additional cyber security protection by enabling physical port lockout in the event that an existing cable is disconnected and prevents a potential network incursion using common spoofing techniques. The switch provides advanced IP-based management that can limit the maximum bandwidth for each connected IP device, allowing the user to adjust usage. The CNGE11FX3TX8MSPOE models provide eight electrical ports supporting up to thirty watts of power. On the CNGE11FX3TX8MSPOEHO 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 × 10/100/1000Base-TX RJ45

› 2 × SFP ports support 2.5 Gbps SFP modules for high speed communication

› CNGE11FX3TX8MSPOE provides 8 × IEEE802.3at compliant 30 W PoE+ ports

› CNGE11FX3TX8MSPOEHO provides 4 × IEEE802.3at compliant 30 W PoE+ ports and 4 × IEEE802.3at compliant 60 W PoE++ ports

› CNGE11FX3TX8MSPOE/24 provides low voltage 12-24 VDC PoE booster function

› 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

› Web-based, Telnet and Console (CLI) configuration, and Windows-based (eVision) monitoring

› Designed for wall or DIN rail mount installations

## SOFTWARE FEATURES

› Port Guardian prevents network intrusion through intelligent physical port lockout

› 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)

*\* 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

| | |
|---|---|
| 10/100/1000Base-TX Ports | 8 × RJ-45 |
| 100/1000Base-X Port | 3 × SFP[1] |
| 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 | 28 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 (802.1Q) 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+
NTP
Supports Secure Copy Protocol SCP for secure file transfer

### Power

| | |
|---|---|
| Input Power | Redundant 12 to 57 VDC (non-PoE model) |
| | Redundant 12 to 24 VDC (POE/24 model) |
| | Redundant 48 to 57 VDC (POE & POEHO models) |
| Power Consumption | <8 W Max, non-PoE |
| 255 W Max w/ PoE+ (POE model) | |
| 155 W Max w/PoE+ @ 24 VDC (POE/24 model) | |
| 125 W Max w/PoE+ @ 12 VDC (POE/24 model) | |
| 375 W Max w/ PoE++ (POEHO model) | |
| Overload Current Protection | Present |
| Reverse Polarity Protection | Present |

### Mechanical

| | | |
|---|---|---|
| Indicating LEDs | Power/Fault Indicators | |
| | Alarm Indicator | RJ45 Port Indicator |
| | SFP Port Indicator | PoE Indicators |
| Size (H × W × D) | 6.0 × 3.5 × 4.5 in (15.24 × 8.89 × 11.43 cm) | |
| Enclosure | IP30 | |
| 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, Functional to 85° 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 802.3z 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
    (CNGE11FX3TX8MSPOE and CNGE11FX3TX8MSPOEHO 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 |
| Traffic | NEMA TS2 |

CNGE11FX3TX8MS Series

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

## ORDERING INFORMATION

| Part Number | Description | SFP Ports[1] | RJ45 Ports | 30W PoE+ Ports | 60W PoE++ Ports |
|---|---|---|---|---|---|
| CNGE11FX3TX8MS | Industrially Hardened 11 Port Gigabit Managed Ethernet Switch | 3 | 8 | 0 | 0 |
| CNGE11FX3TX8MSPOE | Industrially Hardened 11 Port Gigabit Managed Ethernet Switch | 3 | 8 | 8 | 0 |
| CNGE11FX3TX8MSPOE/24 | Industrially Hardened 11 Port Gigabit Managed Ethernet Switch, 12-24 VDC Input | 3 | 8 | 8 | 0 |
| CNGE11FX3TX8MSPOEHO | Industrially Hardened 11 Port Gigabit 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 CNGE11FX3TX8MS 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.*

AGENCY COMPLIANCE

FCC PART 15 COMPLIANT   CE   cULus   RoHS

MADE IN THE USA

comnet

15 Feb 2022

**Low Power Consumption**

an ACRE brand