**FEATURES**

- 3 x 100/1000Base-FX SFP
- 8 x 10/100/1000Base-TX RJ45
- 2 x SFP ports support 2.5 Gbps SFP modules for high speed communication
- CNGE11FX3TX8MSPOE provides 8 x IEEE802.3at compliant 30 W PoE+ ports
- CNGE11FX3TX8MSPOEHO provides 4 x IEEE802.3at compliant 30 W PoE+ ports and 4 x 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.
## CNGE11FX3TX8MS Series

### SPECIFICATIONS

#### Connectors

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/100/1000Base-TX Ports</td>
<td>8 x RJ-45</td>
</tr>
<tr>
<td>100/1000Base-X Port</td>
<td>3 x SFP¹</td>
</tr>
<tr>
<td>Serial Console Port</td>
<td>USB Type B Connector (115200bps, 8, N, 1)</td>
</tr>
<tr>
<td>Power</td>
<td>2 x 2-Pin Terminal Block</td>
</tr>
<tr>
<td>Fault Relay</td>
<td>3-Pin Terminal Block</td>
</tr>
</tbody>
</table>

#### Switch Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switching latency</td>
<td>7 μs</td>
</tr>
<tr>
<td>Switching bandwidth</td>
<td>28 Gbps</td>
</tr>
<tr>
<td>DRAM</td>
<td>1GB</td>
</tr>
<tr>
<td>Flash</td>
<td>128Mb</td>
</tr>
<tr>
<td>VLANs</td>
<td>Voice, Private, Multicast</td>
</tr>
<tr>
<td>Max. Available VLANs</td>
<td>256</td>
</tr>
<tr>
<td>IGMP multicast groups</td>
<td>128 for each VLAN</td>
</tr>
<tr>
<td>Port rate limiting</td>
<td>User Defined</td>
</tr>
<tr>
<td>Processing</td>
<td>Store-and-Forward</td>
</tr>
<tr>
<td>Priority Queues</td>
<td>8</td>
</tr>
<tr>
<td>Network Redundancy</td>
<td>STP, RSTP, MSTP, ERPS</td>
</tr>
<tr>
<td>MAC Table</td>
<td>8K MAC Addresses</td>
</tr>
<tr>
<td>Jumbo Frame</td>
<td>Up to 9.6K Bytes</td>
</tr>
<tr>
<td>Static Routing</td>
<td>32 Routes</td>
</tr>
</tbody>
</table>

#### Security Features

- Device Binding security feature: SNMPv3 encrypted authentication
- Enable/disable ports, MAC based: and access security
- Port security: https / SSH enhance network security
- Port based network access control: Switch/port based, NAS, ACL, ARP inspection and IP sourceguard
- VLAN (802.1Q) to segregate and secure network traffic: AAA router server authentication
- Radius centralization and management: TACACS+ and SNTP

#### 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

### Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>SFP Ports¹</th>
<th>RJ45 Ports</th>
<th>30W PoE+ Ports</th>
<th>60W PoE++ Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNGE11FX3TX8MS</td>
<td>Industrially Hardened 11 Port Gigabit Managed Ethernet Switch</td>
<td>3</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CNGE11FX3TX8MSPOE</td>
<td>Industrially Hardened 11 Port Gigabit Managed Ethernet Switch</td>
<td>3</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CNGE11FX3TX8MSPOE/24</td>
<td>Industrially Hardened 11 Port Gigabit Managed Ethernet Switch, 12-24 VDC Input</td>
<td>3</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CNGE11FX3TX8MSPOEHO</td>
<td>Industrially Hardened 11 Port Gigabit Managed Ethernet Switch</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

### Included Accessories

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz</td>
<td>Included with CNGE11FX3TX8MS only, for benign 0 to 50°C applications. Hardened power supply available, consult factory</td>
</tr>
</tbody>
</table>

### 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)

#### Specifications

- Environmentally Hardened Managed Layer 2+ Ethernet Switch
- Industrially Hardened 11 Port Gigabit Managed Ethernet Switch
- ComNet Recommended Power Supply for PoE Units (Not Included, consult factory)

### 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: IEC60668-2-27
- Free Fall: IEC60668-2-32
- Vibration: IEC60668-2-6
- Safety: EN60950-1
- Rail: ENS0121-4
- Traffic: NEMA TS2

### 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 802.3at 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

### Environment

- Operating Temperature: -40 to +75º C
- Operating Humidity: 5% to 95% Non-condensing
- MTBF: >100,000 hours
- Storage Temperature: Redundant 48 to 57 VDC (POE & POEHO models)
- Redundant 12 to 24 VDC (POE/24 model)
- Redundant 12 to 57 VDC (non-PoE model)
- Weight: 2.6 lb / 1.2 kg

### Mechanical

- Indicating LEDs
- Power/Fault Indicators
- Alarm Indicator
- RJ45 Port Indicator
- SFP Port Indicator
- PoE Indicators

### System Integration

- Size (H x W x D): 6.0 x 3.5 x 4.5 in (15.24 x 8.89 x 11.43 cm)

### Environmentally Hardened Managed Layer 2+ Ethernet Switch

- 3 SFP + 8 Electrical Ports with Optional 30 or 60 Watt PoE

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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.