The ComNet CNGE28FX4TX24MSPOE2/48 Layer 2 Managed 28 Port Ethernet Switch supports twenty-four 10/100/1000 BASE-TX ports and four 10/100/1000 BASE-TX or 100/1000 BASE-FX SFP Combo ports of Ethernet data. PoE+ power is available for distribution across all 24 BASE-TX ports. The four combination ports are 10/100/1000TX or 100/1000FX SFP* configurable for fiber type (multimode or single-mode), connector type and distance. Dual 48 VDC input power design ensures vital network capabilities with minimum downtime. Utilizing RSTP/STP (802.1w/1D) MSTP, and X-Ring redundant ring topologies, a network recovery time of <20 ms is provided for protection from network faults or temporary interruptions. The CNGE28FX4TX24MSPOE2/48 is optically (100/1000BASE-FX) and electrically compatible with any IEEE 802.3 compliant Ethernet device and are hardened for use in harsh operating environments.

REFERENCES

IEEE 802.3at Compliant for PSE. Up to 30W of PoE+ power available per port. 720W total PoE power available.

56 Gbps Backplane for layer 2 traffic forwarding

IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic & Port Trunking for ease of bandwidth management

Supports 24 Gigabit Ports, and four combo ports with 100/1000BASE-FX optical ports with optional ComNet SFPs

Uses SFP modules for fiber and connector type, and distance

Dual redundant power supply inputs allow for external power supplies with no moving parts (fans) to be used.

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.

STP/RSTP/MSTP supported

Windows utility, eConsole, supports centralized management, and is web-based configurable, or by Telnet and console (CLI) ports

Port lock to prevent access from unauthorized MAC address

SNMP V1/V2c/V3 for secure network management

Low-profile 1-RU (1.75-inch) high-rack-mountable chassis mounts within any standard 19-inch equipment rack

Operating Temperature: -40˚ to +75˚ C

Event notification through Syslog, E-mail, SNMP trap

RMON for traffic monitoring

Lifetime Warranty

APPLICATIONS

ITS Traffic Signaling & Surveillance/ Incident Detection Networks

Industrial and Factory Automation

Integrated IP-Video and Data Transmission Networks

Industrial Security Access Control Systems

LIFETIME WARRANTY    WWW.COMNET.NET    TECH SUPPORT: 1.888.678.9427

* Small Form-Factor Pluggable Module. Sold separately.
Layer 2 Industrially Hardened Managed Ethernet Switch
All Gigabit 24 TX with PoE+ and 4 Combo Ports

SPECIFICATIONS

Connectors

<table>
<thead>
<tr>
<th>Electrical</th>
<th>28 × 10/100/1000Base-TX RJ-45 Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical¹</td>
<td>4 × SFP Ports, 100/1000Base-FX,</td>
</tr>
<tr>
<td></td>
<td>Requires selection of sold-separately SFP modules.</td>
</tr>
<tr>
<td>Power</td>
<td>4-pin terminal</td>
</tr>
<tr>
<td>Fault Relay</td>
<td>3-pin terminal</td>
</tr>
</tbody>
</table>

Ethernet Standards Supported

- IEEE 802.3 for 10Base-T
- IEEE 802.3u for 10Base-TX and 100Base-FX
- IEEE 802.3z for 100Base-X
- IEEE 802.3ab for 100Base-T
- IEEE 802.3at for Power Sourcing Equipment (PSE) and PoE (up to 30 watts per port)
- 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 802.10 for VLAN Tagging
- IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol)
- IEEE 802.1x for Authentication
- IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol)
- IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)

Switch Properties

- Switching Latency: 7 μs
- Switching Bandwidth: 56 Gbps
- Max. VLANS Available: 256
- IGMP Multicast Groups: 128 for each VLAN
- Port Rate Limiting: User Defined
- MAC Table: 8000 MAC addresses available
- Priority Queues: 4
- Port Speed/Duplex Configuration: 1-RU high, 19-inch rack-mountable
- Jumbo Frame: Up to 9216 Bytes

Network Management

- Configuration: Web browser, Telnet, Serial console, SNMP v1/v2/c/v3, TFTP, Port Speed/Duplex Configuration, IPv6
- VLAN: GVRP, Port-based VLAN
- Redundancy: X-Ring, STP/RSTP/MSTP
- Security: IP Access security, port security, DHCP client, Port and IP Binding, Port Access Control, SSH, HTTPS, 802.1x, DoS
- Traffic Control: IGMP Snooping/Query for multicast group management, Port Trunking, Static/802.3ad, LACP Rate limit and storm control, CoS/CoS/TOS/DSAP priority queuing, flow control
- Diagnostics: Port Mirroring, Real-time traffic statistic, MAC Address Table, SNMP, Syslog, E-Mail Alert, SNMP Trap, RMON, DDM

PoE pin assignment

- RJ45 port #1 - #24 support IEEE802.3at End-point, Alternative A mode.
- Positive (VCC+): RJ45 pin 1, 2
- Negative (VCC-): RJ45 pin 3, 6

Power

- Operating Voltage: 48 VDC (External PSU Required)
- Power Consumption, Max: 720 W
- Fault Output: 1 Relay Output

Electrical & Mechanical

- Indicator LEDs: 10/100T/(X)Link/Activity, Duplex/Collision
- Current Protection: Overload Current Protected
- Power Reverse: Present
- Size (L×W×H): 17.24 × 10.2 × 1.72 in (43.8 × 25.92 × 4.36 cm)
- Shipping Weight: <13 lb / 6 kg

Environmental

- MTBF: >100,000 hours
- Operating Temp: -40˚ to +75˚ C
- Storage Temp: -40˚ to +85˚ C
- Relative Humidity: 10% to 95% (non-condensing)²

Regulatory Approvals

- Safety: IEC EN60950, UL60950, UL508, UL 61010-1, 61010-12, 61010-2-201, and 61010-2-201:14
- EMI: EN55022 (Class A)
- EFT: EN61000-4-5
- RS: EN61000-4-4
- ESD: EN61000-4-3
- Electrical Surge: EN61000-4-6
- CS: EN61000-4-8
- Railway: EN50121-4
- Mechanical Shock: IEC60068-2-27
- Free Fall: IEC60068-2-32
- Vibration: IEC60068-2-6

PoE pin assignment

ORDERING INFORMATION

Part Number Description

CNGE28FX4TX24MSPOE2/48 24 × 10/100/1000 BASE-TX + 4 × 10/100/1000 BASE-TX or 100/1000 BASE-FX Managed Switch, 30 W Power over Ethernet (PoE+), 48V Input

Options/Accessories

- 48 V Power Supply (Extra charge, consult factory)
- User-selection of SFP modules (Extra charge, see SFP data sheets for product numbers and compatibility before ordering)
- [2] Requires a fiber installation with a minimum 30 dB connector return loss. The use of Super Polish Connectors is recommended.