



DIN RAIL



INCLUDED



-40° to +75° C



FLEXIBILITY



3



7

The ComNet CNGE3FE7MS3 Managed Ethernet Switch provides robust transmission of seven (7) 10/100BASE-T(X) and three (3) 10/100/1000T(X) or 100/1000FX combo ports, of gigabit Ethernet data. It is available for use with either conventional CAT-5e copper or optical transmission media. The 7 electrical ports support the 10/100Mbps Ethernet IEEE 802.3 protocol, and auto-negotiating and auto-MDI/MDIX features are provided for simplicity and ease of installation. Three ports are 10/100/1000 configurable for copper or fiber media for use with multimode or single mode optical fiber, selected by optional SFP* modules. These network managed layer 2 switches are optically (100/1000BASE-FX) and electrically compatible with any IEEE 802.3 compliant Ethernet devices. The CNGE3FE7MS3 incorporates LED indicators for monitoring the operating status of the managed switch and network. These units are DIN-rail or wall mountable.

FEATURES

- › 7 10/100BASE-T(X) Ports
3 Gigabit combo ports
- › 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° C to +75° C. Functional to +85° C.
- › Compatible and fully functional when used in a Moxa® Turbo ring topology
- › SNMP v1/v2c/v3, RMON & IEEE 802.1Q VLAN for secure network management
- › Redundant DC inputs for uninterrupted operation in the event of a loss of power
- › HTTPS/SSH protocol for enhanced network security
- › DDM (Digital Diagnostic Monitoring) remotely ascertains the status of the operating voltage, current, and operating temperature of the SFP modules

- › RMON for traffic monitoring
- › Supports LLDP (Link Layer Discovery Protocol)
- › Multiple Notifications for warning of unexpected events, including relay fault alarm
- › Port lock to prevent access from unauthorized MAC address
- › Windows utility, eConsole, supports centralized management, and is web-based configurable, or by Telnet and console (CLI) ports
- › Rigid aluminum housing design provides for DIN-Rail or wall mounting
- › Lifetime Warranty

APPLICATIONS

- › ITS Traffic Signalization & Surveillance/ Incident Detection Networks
- › Industrial and Factory Automation
- › Integrated IP-Video and Data Transmission Networks

SOFTWARE FEATURES

- › STP/RSTP/MSTP (IEEE 802.1D/w/s)
- › C-Ring Redundant Ring: Recovery time <10ms, with over 250 switches within the ring
- › TOS/Diffserv Supported
- › Quality of Service (802.1p) for Real-Time Traffic
- › VLAN (802.1Q) with VLAN Tagging and GVRP Supported
- › IGMP v2/v3 Snooping for Multicast Filtering
- › IP-Based Bandwidth Management
- › SNTP for synchronizing of clocks over network
- › PTP Client (Precision Time Protocol) clock synchronization
- › Port Configuration, Status, Statistics, Monitoring & Security
- › DHCP Server / Client support
- › SFP DDM Monitoring support

* Small Form-Factor Pluggable Module. Sold separately.

SPECIFICATIONS

Ethernet Ports

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|----------------------|--|
| 10/100BASE-T(X) | 7 × RJ-45 Ports |
| 10/100/1000BASE-T(X) | 3 × Combo Ports, with Auto MDI/MDIX and (3) 100/1000BASE-FX SFP ¹ Ports |
| Power Connector | Terminal Block |

Switch Properties

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|-----------------------|------------------------------|
| Switching Latency | 7 μs |
| Switching Bandwidth | 7.4 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 |
| Flash Memory | 32 Mbits |
| DRAM Size | 256 Mbits |

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
- TACACS+
- HTTP / SSH enhance network security

Network Redundancy

| | |
|-------------|----------|
| C-Ring | Com-Ring |
| Legacy Ring | C-RSTP |
| STP | RSTP |
| MSTP | |

Alarms & Monitoring Systems

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|---------------------------|---|
| Relay Output | For fault event alarming. Relay contacts rated at 1 amp @ 24VDC |
| Serial Console RJ-45 Port | RS-232 @ 9,600 bps with console cable (included) |

Fault Alarm Relay

| | |
|----------------------|-------------|
| Relay Contact Rating | 24VDC @ 1 A |
|----------------------|-------------|

Power

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|----------------------------|---------------------------------------|
| Input | Redundant Input Power, Dual DC Inputs |
| Operating Voltage Range | 12 to 48 VDC |
| Power Consumption, Typical | 12 W |
| Current Protection | Overload Current Protected |
| Polarity Protection | Reverse Polarity Protected |

Electrical & Mechanical

| | |
|-----------------------|--|
| LED Status Indicators | Power R.M. Ring Fault RJ-45 Port SFP Port. |
| Size | 2.93 × 4.3 × 6.05 in (7.43 × 10.92 × 15.36 cm) |
| Installation | DIN Rail (35 mm Track) or Wall Mount |
| Shipping Weight | 2.29 lb / 1.04 kg |

Environmental

| | |
|-------------------|---|
| MTBF | >100,000 hours |
| Operating Temp | -40° C to +75° C (-40° F to +167° F) Functional to +85° C (185° F) |
| Storage Temp | -40° C to +85° C (-40 to 185°F) |
| Relative Humidity | 5% to 95% (non-condensing) |

Ethernet Standards Supported

- 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)

Regulatory Approvals

| | |
|------------------|---|
| EMI | FCC Part 15, EN55022, EN61000-3-2, EN61000-3-3, CISPR (EN55022) Class A |
| ESD | EN61000-4-2 |
| RS | EN61000-4-3 |
| EFT | EN61000-4-4 |
| Electrical Surge | EN61000-4-5 |
| CS | EN61000-4-6, EN61000-4-11, EN61000-4-8 |
| Immunity | EN55024 |
| Mechanical Shock | IEC60068-2-27 |
| Free Fall | IEC60068-2-32 |
| Vibration | IEC60068-2-6 |
| Safety | EN60950-1 |



ORDERING INFORMATION

| Part Number | Description |
|-------------|---|
| CNGE3FE7MS3 | (7) 10/100BASE-T(X) / (3) 10/100/1000BASE-T(X) or 100/1000BASE-FX SFP Ports |
| Accessories | DC Plug in Power Supply, 90-264VAC, 50/60Hz (Included, for benign 0 to 50°C applications only. Hardened power supply available, consult factory) DIN Rail Power supply (sold separately) |

[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.