



The ComNet CNGE8MS/DIN is an 8-port Managed Ethernet Switch designed to reliably operate in harsh, environmentally challenging applications. It features eight (8) 10/100/1000BASE-T(X) ports. Exclusive to ComNet is X-Ring+, a feature that protects the network from interruptions or temporary malfunctions with fast recovery technology. Legacy ring allows the switch to be used in an existing ring of ComNet X-Ring enabled switches. Redundant DC inputs are included for uninterrupted operation in the event of a power supply failure. The electrical ports support the 10/100/1000Mbps Ethernet IEEE802.3 protocol, and auto-negotiating and auto-MDI/MDiX features are provided. These network-managed layer 2 switches are electrically compatible with any IEEE802.3 compliant Ethernet device. The CNGE8MS/DIN is DIN-rail or wall-mountable.

## FEATURES

- › 8 10/100/1000T(X) Ports
- › IGMP v1/v2 (IGMP snooping support) for filtering multicast traffic & Port Trunking for ease of bandwidth management
- › STP/RSTP/MSTP supported
- › 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.
- › IEC 62439-2 MRP (Media Redundancy Protocol)
- › Operating Temperature: -40° C to +75° C.
- › Fastest Redundant Ethernet Ring: ComNet X-Ring+. Recovery time <30ms, with > 250 switches within the ring
- › Web-based and Telnet configuration with support for network monitoring through ComNet eConsole utility
- › Supports LLDP (Link Layer Discovery Protocol)
- › Event notification through Syslog, RMON, SNMP trap, and Relay Output
- › Port lock to prevent access from unauthorized MAC address
- › SNMP v1/v2c/v3 for secure network management
- › IPV6 internet protocol (latest version)
- › Provides SSH/SSL protocol for enhanced network security
- › 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
- › Industrial Security Access Control Systems

## SOFTWARE FEATURES

- › STP/RSTP/MSTP (IEEE 802.1D/w/s)
- › X-Ring+ Redundant Ring: Recovery time <30ms, with over 250 switches within the ring
- › 9k Jumbo frames supported
- › Quality of Service (802.1p) for Real-Time Traffic
- › VLAN (802.1Q) with VLAN Tagging and GVRP Supported
- › IGMP/MLP Snooping, Multicast Filtering
- › Port Configuration, Status, Statistics, Monitoring & Security
- › DHCP / Client support
- › Port Trunk Support
- › MRP (Media Redundancy Protocol) support
- › TCP Modbus
- › SMTP Client
- › Q-in-Q

## SPECIFICATIONS

### Connectors

10/100/1000BASE-T(X) Power Connector	8 × RJ-45 Ports with Auto MDI/MDIX Terminal Block
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### Switch Properties

Switching Latency	7 μs
Switching Bandwidth	16 Gbps
Max. VLANs Available	256
IGMP Multicast Groups	256
Port Rate Limiting	User Defined
MAC Table	8000 MAC addresses available
Packet Buffer Size	4.1 Mbit
Priority Queues	4
Processing	Store-and-Forward
Jumbo Frame	Up to 9,216 Bytes

### Security Features

Enable/Disable Ports, MAC based port security  
 Port-Based Network Access Control: 802.1x  
 VLAN (802.1Q): To segregate and secure network traffic  
 SSH/SSL  
 SNMPv3 Encrypted Authentication and Access Security  
 DHCP Option82

### Alarms & Monitoring Systems

Relay Output	For fault event alarming
Syslog Server / Client	To record and view events
RMON	For traffic monitoring
Event Selection Support	

### Network Redundancy

X-Ring+	Legacy Ring
MRP	STP
RSTP	MSTP

### Fault Alarm Relay

Relay Contact Rating	24 VDC @ 1 A
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### Power

Operating Voltage Range	Dual DC Inputs: 12 - 48 VDC
Power Consumption, Typical	6 W
Current Protection	Overload Current Protected
Polarity Protection	Reverse Polarity Protected

### Electrical & Mechanical

Indicating LEDs Size (L×W×H) Shipping Weight:	Power Fault Loop Detection RJ-45 Port 1.69 × 4.72 × 3.3 in (4.3 × 12 × 8.4 cm) <3 lb / 1.1 kg
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### Environmental

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

### Ethernet Standards Supported

IEEE 802.3 for 10BASE-T  
 IEEE 802.3u for 100BASE-TX  
 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)  
 IEEE 802.3az for Energy Efficient Ethernet (EEE)

### Regulatory Approvals

EMI	FCC Part 15 Subpart B Class A, EN 55011/55022 Class A
EMS	EN61000-4-2 (Level 3) EN61000-4-3 (Level 3) EN61000-4-4 (Level 3) EN61000-4-5 (Level 3) EN61000-4-6 (Level 3) EN61000-4-8 (Level 3)
Mechanical Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Safety	IEC/EN60950, UL60950, UL508, Class 1 Division 2, ATEX



## ORDERING INFORMATION

Part Number	Description
CNGE8MS/DIN	(8) 10/100/1000BASE-T(X) port managed switch
Accessories	DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included, for benign 0 to 50°C applications only. Hardened power supply available, consult factory)
Options	[2] Add suffix '/C' for Conformally Coated Circuit Boards to extend to condensation conditions (Extra charge, consult factory)

In a continuing effort to improve and advance technology, product specifications are subject to change without notice.