



HARDENED



INCLUDED



FLEXIBILITY



ALL GIGABIT



8 + 16



The ComNet™ CNGE24MS has eight 100/1000Base-FX SFP ports and sixteen Gigabit combo ports that allow for TX or FX transmission. All SFP ports utilize ComNet SFP\* modules for fiber and connector type and distance. The IEEE802.3-compliant unit offers multiple Ethernet redundancy protocols (ComRing, C-Ring, and MSTP/RSTP/STP) which protect your applications from network interruptions or temporary malfunctions by redirecting transmission within the network. The switch provides advanced IP-based management that can limit the maximum bandwidth for each connected IP device, allowing the user to adjust usage. Application-based QoS can set a higher priority for data streaming. The Device-Binding function can prevent unauthorized network access, increasing security. The unit also provides advanced DOS/DDOS auto prevention. If IP flow becomes too large, too quickly, the switch will lock the source IP address for a set period preventing unauthorized access.

## FEATURES

- › 24 Gbps Ports: 8 × 100/1000Base-FX SFP Ports  
16 × Gigabit Combo Ports
- › Fast Redundancy/Recovery; C-Ring (recovery time <20ms over 250 units of connection) and MSTP/RSTP/STP (IEEE 802.1s/w/D)
- › Supports IPV6 new internet protocol version
- › Provided HTTPS/SSH protocol enhances network security
- › Supports SMTP client
- › Supports IP-based bandwidth management
- › Supports application-based QoS management
- › Supports Device Binding security function
- › Supports DOS/DDOS auto prevention
- › IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- › Internal Power Supply
- › Supports SNMP v1/v2c/v3 & RMON & 802.1Q VLAN Network Management
- › Supports ACL, 802.1x User Authentication for security
- › Supports 9K Bytes Jumbo Frame
- › Multiple notifications warn of unexpected events
- › Web-based, Telnet, Console (CLI), and Windows-based utility (eConsole) configuration
- › Supports LLDP Protocol
- › 19 inch rack mountable design
- › Lifetime Warranty

*\* Small Form-Factor Pluggable Module. Sold separately.*

## SOFTWARE SPECIFICATIONS

<b>Network Redundancy</b>	ComRing C-Ring) Legacy Ring STP RSTP MSTP
<b>MAC Table</b>	8K MAC Addresses
<b>Jumbo Frame</b>	Up to 9K Bytes
<b>Switch Properties</b>	
Switching latency	7µs
Switching bandwidth	48Gbps
Max. Available VLANs	256
IGMP multicast groups	128 for each VLAN
Port rate limiting	User Defined
<b>Processing</b>	Store-and-Forward
<b>Priority Queues</b>	4
<b>Security Features</b>	

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

### Software Features

STP/RSTP/MSTP (IEEE 802.1D/w/s)  
Redundant Ring (C-Ring) with recovery time less than 20ms over 250 units

## HARDWARE SPECIFICATIONS

### Physical Ports

16 × Gigabit Combo port with 100/1000Base-T(X) and 100/1000Base-X SFP ports  
8 × 100/1000Base-X with SFP port

**Serial Console Port** RS-232 in DB9 connector with console cable.  
115200bps, 8, N, 1

**LED indicators** Power Indicators, System Ready, Ring Master, Ring Indicator, Fault Indicator, System Running, Supervisor Login, Reset to Default, Ping Command, 100/1000Base-T(X) RJ45 Port Indicator, 100/1000Base-X SFP Port Indicator

### 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

## HARDWARE SPECIFICATIONS

Com-Ring supporting proprietary manufacturer redundancy features  
TOS/Diffserv supported  
Quality of Service (802.1p) for real-time traffic  
VLAN (802.1Q) with VLAN tagging and GVRP supported  
IGMP Snooping  
IP-based bandwidth management  
Application-based QoS management  
DOS/DDOS auto prevention  
Port configuration, status, statistics, monitoring, security  
DHCP Client/Server  
SMTP Client

### 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 802.1p 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)

AGENCY COMPLIANCE  
FCC PART 15 COMPLIANT  
CE  
UL US E322911  
RoHS COMPLIANT  
REACH  
RoHS

Low Power Consumption

### Power

Input Power Redundant 100~240VAC at AC Input with power cord  
or dual 36~72VDC on 6-Pin Terminal Block  
Fault Relay Output: 24V @ 3A  
Power Consumption (Typ.): 33 Watts  
Overload Current Protection: Present

### Mechanical

Size 43.1 × 34.2 × 4.4cm (17 × 13.5 × 1.7 in)  
Weight 4.3Kg / 9.5lb

### Environmental

Storage Temperature: -40 to 85°C (-40 to 185°F)  
Operating Temperature: -40 to 75°C (-40 to 167°F)  
Operating Humidity: 5% to 95% Non-condensing  
MTBF: >100,000 hours  
Installation: Desktop or 19-inch Rack Mount

[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

## ORDERING INFORMATION

Part Number	Description	100/1000FX Ports	Combo Ports
CNGE24MS	Environmentally Hardened Managed Ethernet Switch	8	16

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