![comnet Communication Networks]

75° −40° HARDENED	POWER SUPPLY INCLUDED	SFP FLEXIBILITY	1G GIGABIT ALL GIGABIT	ETHERNET 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

Network Redundancy — ComRing
C-Ring)
Legacy Ring
STP
RSTP
MSTP

MAC Table — 8K MAC Addresses

Jumbo Frame — Up to 9K Bytes

Switch Properties

Switching latency	7µs
Switching bandwidth	48Gbps
Max. Available VLANs	256
IGMP multicast groups	128 for each VLAN
Port rate limiting	User Defined

Processing — Store-and-Forward

Priority Queues — 4

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
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.z 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

FC PART 15 COMPLIANT   CE   cULus E322911   RoHS COMPLIANT   C N24621   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 85ºC (–40 to 185ºF)
Operating Temperature:–40 to 75ºC (–40 to 167ºF)
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.