comnet
Communication Networks

POWER SUPPLY INCLUDED · **75° −40° HARDENED** · **SFP FLEXIBILITY** · **1G GIGABIT ALL GIGABIT** · **ETHERNET 3 + 2**

The ComNet™ CNGE5MS is a hardened, industrial five port all gigabit managed Ethernet switch. It has three 10/100/1000Base-TX and two Gigabit combo ports that utilize ComNet SFP* modules for fiber and connector type and distance. The IEEE 802.3 compliant unit is a redundant switch offering multiple Ethernet redundancy protocols, C-Ring, ComRing, C-RSTP and MSTP/RSTP/STP. This redundancy feature protects your applications from network interruptions or temporary malfunctions by redirecting transmission within the network. The CNGE5MS offers centralized and convenient management through a windows-based utility called eConsole. Redundant DC power inputs provide non-stop operation in case of power supply disruption. The backup power input will take over immediately when the primary DC power input fails. The unit provides relay outputs that can be set up to indicate events and notify in case of potential problems.

FEATURES

› 5 Gbps Ports: 3 × 10/100/1000Base-TX
    2 × 10/100/1000Base-TX/
        1000Base-FX SFP Combo Ports

› Environmentally Hardened for use in unconditioned installations

› Certified for compliance with NEMA TS1/TS2 and CALTRANS environmental specifications

› Designed for and fully compliant with the EN50155 standard for railroad applications

› Fast Redundant Ethernet Ring: C-Ring (recovery time <20ms over 250 units of connection)

› Com-Ring supports proprietary ring technology in open architecture

› STP/RSTP/MSTP supported

› Supports PTP Client (Precision Time Protocol) clock synchronization

› IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic

› Port Trunking for easy of bandwidth management

› Supports LLDP Protocol

› SNMP v1/v2c/v3 support for secured network management

› RMON for traffic monitoring

› Event notification through Syslog, Email, SNMP trap, and Relay Output

› Windows utility (eConsole) supports centralized management and configurable by Web-based Telnet, and Console (CLI) configurations

› DIN-Rail and wall mounting

› Lifetime Warranty

* Small Form-Factor Pluggable Module. Sold separately.

CNGE5MS

Managed Ethernet Switch with (3) 10/100/1000Base-TX & (2) 10/100/1000Base-TX/1000Base-FX Combo Ports

SOFTWARE SPECIFICATIONS

Network Redundancy	ComRing C-Ring C-RSTP STP RSTP MSTP
MAC Table	8192 MAC Addresses
Switch Properties	Switching Latency: 7μs Switching Bandwidth: 10Gbps Max. Available VLANs: 4096 IGMP Multicast Groups: 1024 Port Rate Limitng: User-defined
Processing	Store-and-Forward
Priority Queues	4
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 Radius centralized password management SNMP v1/v2c/v3 encrypted authentication and access security
Software Features	STP/RSTP/MSTP (IEEE 802.1D/w/s) Redundant Ring (C-Ring) with a recovery time of <20ms over 250 units 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 v2/v3 (IGMP Snooping support) for multicast filtering Port configuration, status, statistics, monitoring, security PTP Client (Precision Time Protocol) clock synchronization DHCP Server / Client support Port Trunk support MVR (Multicast VLAN Registration) support
Ethernet Standards	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(X), 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)

HARDWARE SPECIFICATIONS

Physical Ports	3 × 10/100/1000 Base-T Ports in RJ45, Auto MDI/MDIX 2 × Gigabit Combo Port with 10/100/1000Base-T(X) and 1000Base-X SFP port
Serial Console Port	RS-232 in RJ45 connector with console cable. 9600bps, 8, N, 1
LED indicators	Power Indicator R.M. Indicator Ring Indicator Fault Indicator 10/100/1000Base-T(X) RJ45 Port Indicator
Size (W × D × H)	5.42 × 10.61 × 14.54 cm (2.13 × 4.18 × 5.72 in)
Weight	820g / 1.8lb

Power

Redundant Input Power:	Two +/–12~48VDC on 7-pin terminal block One 12 ~ 45VDC on power jack
Power Consumption (Typ.):	10 Watts
Overload Current Protection:	Present
Reverse Polarity Protection:	Present on terminal block

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:	DIN Rail and Wall Mount Design

AGENCY COMPLIANCE

FC PART 15 COMPLIANT   CE   c(UL)us E322911   RoHS COMPLIANT   C N24621   Low Power Consumption

Regulatory Compliance

EMI:	FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4)
EMS:	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-9, EN61000-4-11
Shock:	IEC60068-2-27, EN61373
Free Fall:	IEC60068-2-32
Vibration:	IEC60068-2-6, EN61373
Safety:	EN60950-1

ORDERING INFORMATION

Part Number	Description	10/100/1000TX Ports	Combo Ports
CNGE5MS	Environmentally Hardened Managed Ethernet Switch	3	2
Accessories	12~48VDC Plug in Power Supply, 90-264VAC, 50/60Hz (Included), PS24-1A – 24VDC DIN Rail Power supply (sold separately)		

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

08 May 2013