

The ComNet CNGEMC4+2[POE][HO]/M is a four port intelligent Media Converter. It provides four 10/100/1000Base-T(X) copper ports and two 100/1000Base-FX SFP ports. The CNGEMC4+2[POE][HO]/M provides exclusive functionality for easy field deployment including DIP switch based operation of RSFP (redundant SFP) for creating redundant fiber connections and MUX feature for port isolation preventing network video flooding of multicast traffic. Copper ports 1 through 4 can optionally supply up to thirty (30) watts of power per port based on the IEEE 802.3at standard. An optional High Output (HO) version is also available that can supply up to sixty (60) watts of PoE from copper ports 1 through 4. This product is fully compatible with the ComNet exclusive CopperLine® SFP modules for operation over extended distance UTP or Coax cable. The ComNet exclusive Port Guardian feature provides additional cybersecurity protection by enabling physical port lockout in the event that an existing cable is disconnected and prevents a potential network incursion using common spoofing techniques.

FEATURES

- › Several features can be enabled with no programming required:
 - MUX - Port Multiplexing
 - RSFP - Redundant SFP Ports
- › 10/100/1000 Mbps Ethernet
 - 4 × 10/100/1000 BASE-T/TX electrical ports
 - 2 × 100/1000 BASE-FX SFP ports (individually DIP switch selectable)
- › Electrical ports support Auto-Negotiation for 10Mbps, 100Mbps or 1000Mbps, full duplex or half duplex data.
- › SFP Ports support 100 or 1000 Mbps full duplex data
- › SFP Ports compatible with CopperLine CL-SFP modules
- › IEEE802.3at Power over Ethernet (PoE+)[†]
- › 30W or 60W PoE+ on Ports 1-4[†]
- › 2 Duplex contact closures
- › Automatic MDI/MDI-X crossover
- › 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.
- › The 4-port count of the CNGEMC4+2[POE][HO]/M makes this unit ideal for those applications where rack density or shelf-space may be limited.

- › Voltage transient protection on all power and signal input/output lines provides protection from power surges and other voltage transient events.
- › Redundant AC/DC inputs for uninterrupted operation in the event of a loss of operating power or a power supply failure
- › Compact form-factor saves space in those installations where space may be at a premium.
- › May be DIN-rail mounted by the addition of ComNet model DINBKT2 or DINBKT4 adaptors.
- › Port Guardian prevents network intrusion through intelligent physical port lockout
- › Lifetime Warranty
- › Made in the USA

APPLICATIONS

- › 10/100/1000 Mbps Ethernet
- › Perimeter Protection Surveillance Systems
- › IP Video

[†] SFP = Small Form-Factor Pluggable Module

SPECIFICATIONS

Data

Data Interface	Ethernet
Data Rate	10/100/1000 Mbps IEEE 802.3 Compliant Full Duplex or Half Duplex Electrical Ports/Full Duplex Optical Port
Electrical	CNGEMC4+2POE/M Ports 1-4: 30 W Max CNGEMC4+2POEHO/M Ports 1-4: 60 W Max

Connectors

Optical ¹	Requires selection of sold-separately SFP modules. See ComNet data sheet for number and description of SFP modules.
Serial	Mini USB
I/O	Terminal Block
Power	Terminal Block
Data	RJ45

Management

HTTP	Web GUI Smart Interface
CLI	Serial Command Line Interface

Contacts (PoE Models Only)

Response Time	25ms typical (network dependent)
Input/Output Channels	2
Inputs	2 × Fault Relay
Outputs	2 × Form A contacts (Rated 1A @ 24 VDC, non-resistive loads)

Power

Operating Voltage	Dual 48 to 56 VDC PoE, 9 to 36 VDC or 24 VAC non PoE
Current Draw	246 W max with PoE, 6W max w/out PoE
Current Protection	Automatic Resettable Solid-State Current Limiters

PoE Pin Assignment

RJ45 port supports IEEE802.3at
End-point Positive (VCC+): RJ45 pin 1, 2 (RJ45 pin 1,2 and 4,5 on 60W ports)
Negative (VCC-): RJ45 pin 3, 6 (RJ45 pin 3,6 and 7,8 on 60W ports)

Electrical & Mechanical

Indicating LEDs	Optical Link/Data Activity Electrical Link/Data Activity Power PoE Status
Circuit Board	Meets IPC Standard
Size	4.1 × 3.7 × 2.2 in (10.4 × 9.4 × 5.6 cm)
Surface Mount	Wall or Flat Surface Screw Attachment
Shipping Weight	<2 lb / 0.9 kg

Environmental

MTBF	>100,000 hours
Operating Temp	-40° C to +75° C
Storage Temp	-40° C to +85° C
Relative Humidity	0% to 95% (non-condensing) ²



ORDERING INFORMATION

Part Number	Description
CNGEMC4+2/M	Small Surface Mount 6 Port Gigabit Ethernet Media Converter, 2 SFP FX, 4TX, 2 Contact Closure
CNGEMC4+2POE/M	Small Surface Mount 6 Port Gigabit Ethernet Media Converter, 2 SFP FX, 4TX with 30W of PoE+ power, 2 Contact Closure
CNGEMC4+2POEHO/M	Small Surface Mount 6 Port Gigabit Ethernet Media Converter, 2 SFP FX, 4TX with 60W of PoE+ power, 2 Contact Closure
Included Accessories	DC Plug-in Power Supply, 90-264 VAC, 50-60 Hz (included with CNGEMC4+2/M only, for benign 0 to 50°C applications only. Hardened power supply available, consult factory)
Options	Power Supply for PoE Models (Extra charge, consult factory) User-selection of SFP or CopperLine CL-SFP modules (Extra charge, see SFP data sheets for product numbers and compatibility before ordering) [2] Add suffix 'C' for Conformally Coated Circuit Boards to extend to condensation conditions (Extra charge, consult factory) DIN-Rail Mounting Adaptor Plate Kit - With mounting hardware (Optional, order model DINBKT2 or DINBKT4)

[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
This product requires a fiber installation with a minimum 30 dB connector return loss. The use of Super Polish Connectors is recommended.

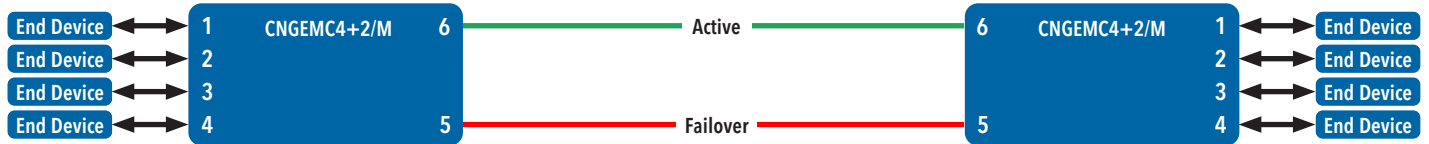
Complies with FDA Performance Standard for Laser Products, Title 21, Code of Federal Regulations, Subchapter J.

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

TYPICAL APPLICATIONS

RSFP

With RSFP Enabled, SFP ports 5 and 6 will create a trunk with port 6 being the active port and port 5 being the failover port.



MUX

With MUX Enabled, Ethernet traffic on a port is isolated to the same port on the remote device.

