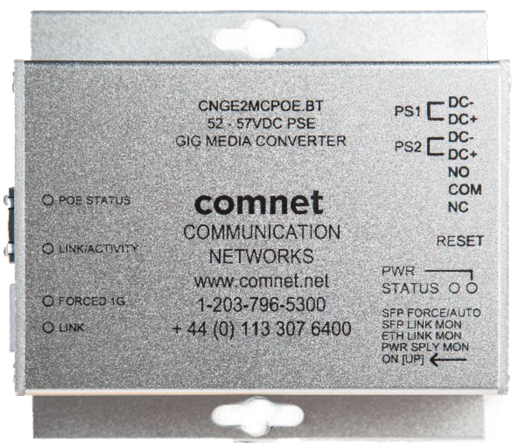
INSTALLATION AND OPERATION MANUAL

CNGE2MCPOE.BT

10/100/1000 MBPS 2 PORT MEDIA CONVERTER WITH POWER OVER ETHERNET



The comnet by acre CNGE2MCPOE.BT Ethernet 2 port media converter is designed to transmit and receive 1000 Mbps data over optical fiber through user selectable SFP modules. This product requires the ordering of sold-separately interchangeable SFP modules for fiber type, distance and connectors.

The CNGE2MCPOE.BT transmits and receives a single channel of Ethernet data. It also supports IEEE 802.3bt as Power Sourcing Equipment (PSE) with up to 90 Watts output, Type 4 PoE is supported. The electrical interface will Auto-Negotiate to a 10 Mbps, 100 Mbps, or 1000 Mbps Ethernet rate without any adjustments.

The optical interface operates at a 1000 Mbps Ethernet rate, forced/auto negotiation user selectable. It is environmentally hardened to operate in extreme conditions.

LED indicators are provided for confirming equipment operating status.

The CNGE2MCPOE.BT operates as a standalone module. See mounting instructions on the following pages.

FIGURE 1 – CNGE2MCPOE.BT

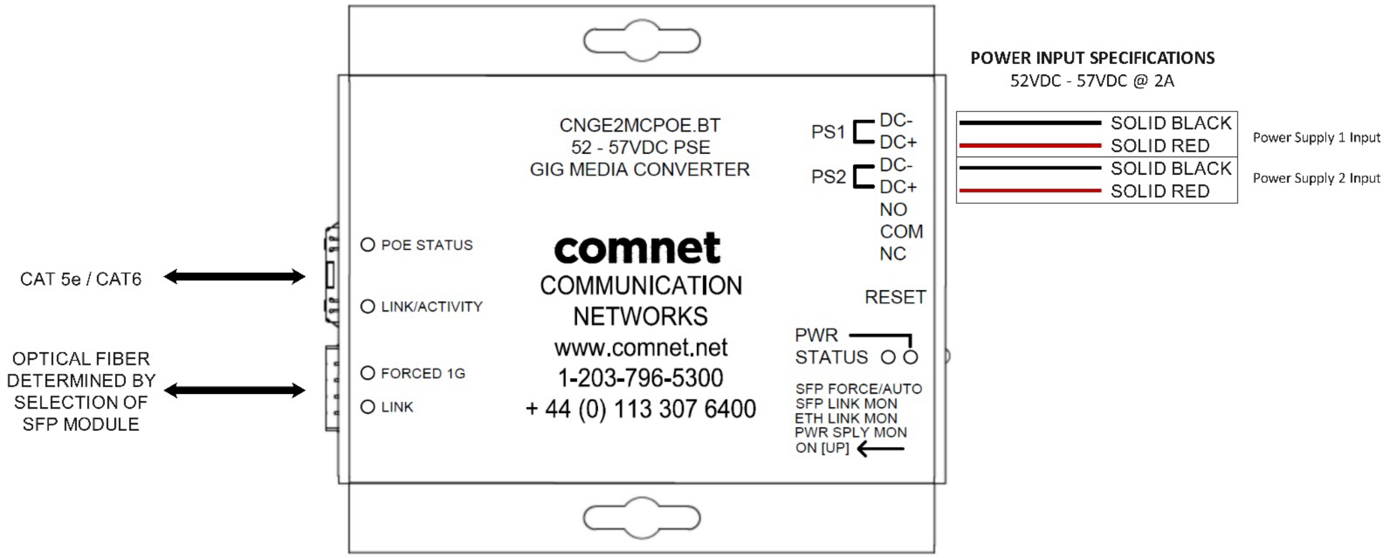


FIGURE 2 – CNGE2MCPOE.BT

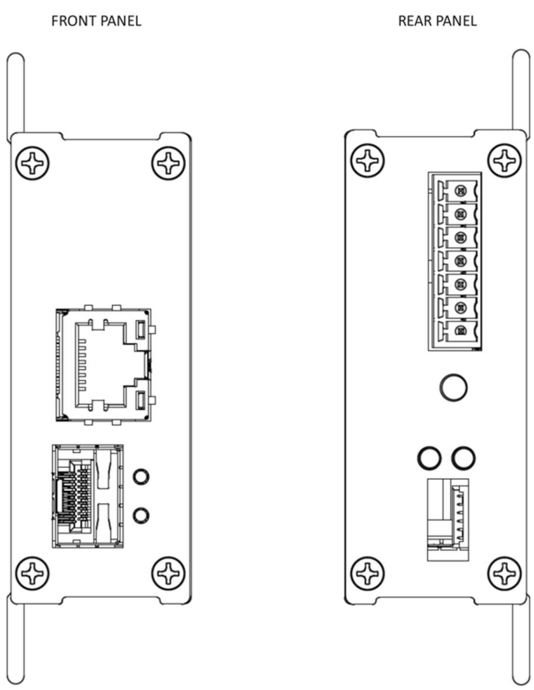


FIGURE 3 – SWITCH POSITIONS & OPERATION

Switch #	Function	Switch Operation & Function Definition	
1	POWER SUPPLY FAULT MONITOR	Monitors system's external, redundant power supply connections. If a redundant power supply goes down or is removed when the monitoring function is enabled, the relay opens, and the bottom tower LED will turn solid RED.	
		Down [DEFAULT]	MONITORING OFF
		Up	MONITORING ON
2	SFP LINK FAULT MONITOR	Monitors SFP port's LINK status. If a fault occurs the relay is opened, and the top tower LED will turn solid red.	
		Down [DEFAULT]	MONITORING OFF
		Up	MONITORING ON
3	ETHERNET LINK FAULT MONITOR	Monitors UTP port's LINK status. If monitoring is enabled and the LINK goes down, the system engages in SFP link-state toggling at a 5 second cycle. This allows for fail-safe pass-through sequencing to the remote. The local alarm is tripped and the ethernet local fault LED is red.	
		Down [DEFAULT]	MONITORING OFF
		Up	MONITORING ON
4	SFP AUTO NEGOTIATE 1G/FORCE 1G	Switch determines whether the unit attempts to force a 1G link or auto-negotiate to a 1G link. ***Note: This switch must be set to the desired position before the unit is powered on. If the switch is toggled while the unit is powered, the unit must be reset or power-cycled before the new settings take effect.***	
		Down [DEFAULT]	AUTO NEGOTIATE 1G LINK
		Up	FORCE NEGOTIATE 1G LINK

FIGURE 4 – RJ45 LED INDICATORS

STATUS LED	COLOR	OPERATION	DEFINITION
POE STATUS	GREEN	OFF	PoE **not** applied to port.
		SOLID	PoE applied to port.
	ORANGE	OFF	No fault detected
		SOLID	PoE fault observed.
LINK/ACTIVITY	YELLOW	OFF	Ethernet link **not** detected.
		SOLID	Ethernet link detected.
		FLASHING	Ethernet activity detected.

FIGURE 5 – SFP LED INDICATORS

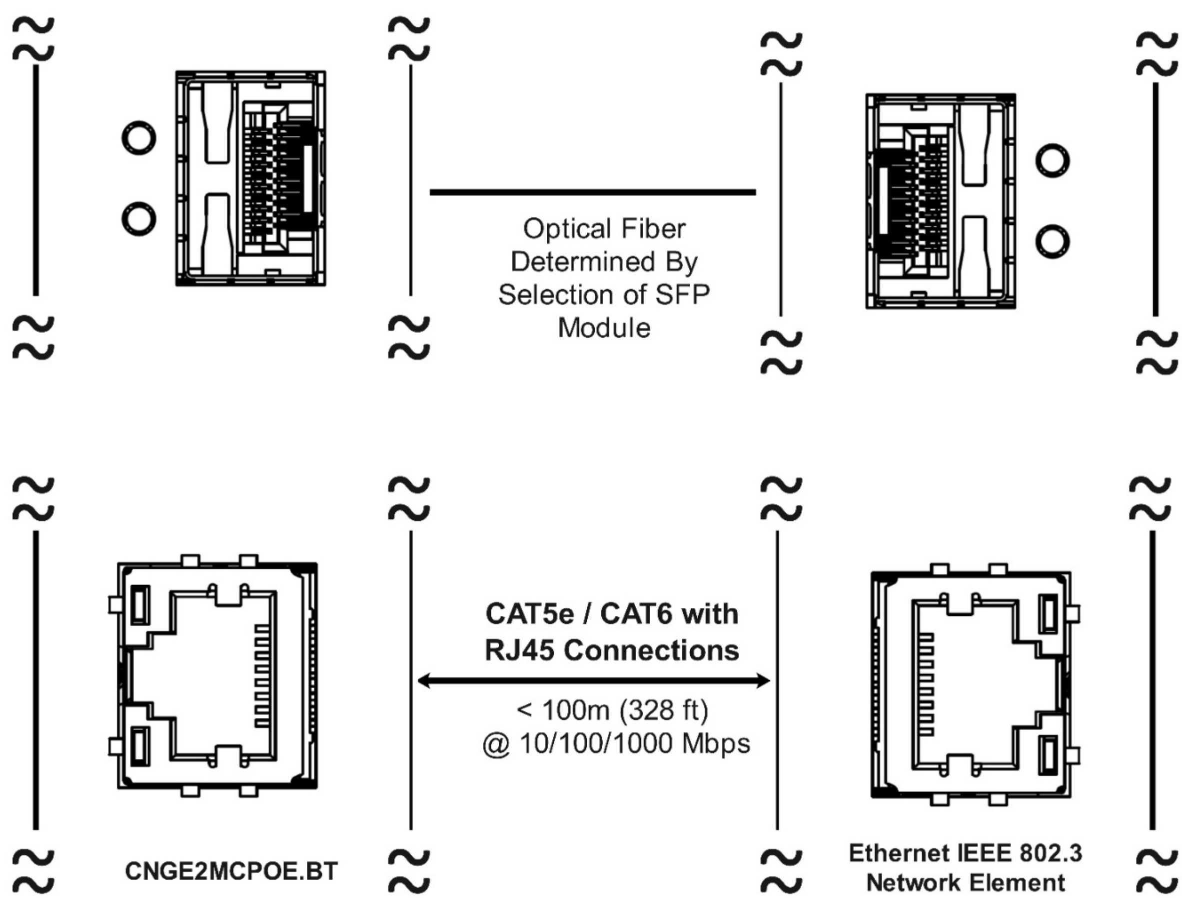
STATUS LED	COLOR	OPERATION	DEFINITION
FORCED 1G	GREEN	OFF	No link established.
		SOLID	SFP Forced Negotation enagaged.
LINK	YELLOW	OFF	No link established.
		SOLID	SFP link established.
		FLASHING	ETH LINK MON is enabled and Cu. link goes down, unit initiates fail-safe-pass-through sequence.

FIGURE 6 – TOWER LED INDICATORS

LED TOWER STATUS	COLOR	OPERATION	DEFINITION
FAULT STATUS	GREEN	OFF	Both LINK monitoring functions are disabled.
		SOLID	Either the SFP LINK Monitor or ETH LINK Monitor function is enabled and the LINK is active.
	RED	OFF	No LINK fault has occurred.
		SOLID	If the SFP LINK breaks, the LED will remain red until the LINK condition is restored.
		FLASHING	If the ETH LINK breaks, the summary LED and the SFP link LED will flap. The LEDs will repeat with a 5 seconds on, 5 seconds off fault pattern. LED will remain red until the LINK condition is restored.
PWR STATUS	GREEN	OFF	Device is not powered properly.
		SOLID	Device is powered properly.
	RED	OFF	No fault observed or, no device monitoring is enabled
		SOLID	Power supply monitoring is enabled and one of the two power supplies goes down.
		Flashing LED Fault Codes	
		1 BLINK	Low voltage detected.
		2 BLINKS	PSE Controller failure, bad idcode.
		3 BLINKS	GSW125 failure, bad idcode.
		4 BLINKS	PoE Failure (PSE Power *Not Good* , failed detection). This fault code is self clearing, it will blink and then try to re-negotiate PoE.

FIGURE 7 – POSSIBLE ETHERNET CONFIGURATION

Ethernet IEEE 802.3 Network Element determined by user.



Key Specifications

Data Interfaces	Data Rate	Additional Notes
Ethernet	10/100/1000 Mbps	IEEE802.3.bt Compliant, Full Duplex or Half Duplex Operation
Fibers	1000 Mbps	Fibers and Fiber connectors are SFP dependent

Power	Min	Max	Units
DC Input Voltage Supply	52	57	VDC
DC Input Current Supply	0.05	2	A
Power Consumption	0.05	90	W

Environmental	Min	Max	Units
Mean Time Between Failures (MTBF)	100,000		Hours
Operating Temperature	-40	75	ºC
Storage Temperature	-40	85	ºC
Relative Humidity	0	95	%

Technical Support

Americas	+1 203 796 5300 techsupport@comnet.net	A representative will be available from 8am to 4:30pm ET. Automated phone directory available after 4:30pm ET.
United Kingdom	+44 113 307 6409 support.uk@acre-int.com	A representative will be available from 8am to 4:30 pm GMT.
France	+33 1 86 65 82 51 support.it@acre-int.com	A representative will be available from 8am to 4:30 pm GMT+1.

When contacting support, please include the following information:

- First and Last Name
- Company
- Contact Telephone
- Contact Email
- Part number and/or Serial number (For post-sales support)
- Description of issue or solution needed
- Severity levels (choose from below)
    1. **High (Urgent)** Technician on site and/or a high-impact failure.
    2. **Medium (Important)** Low-impact failure or failures that have a temporary fix.
    3. **Low (Informational)** Configuration assistance or documentation request.

    (Calls will be taken in order of priority at Comnet's discretion)

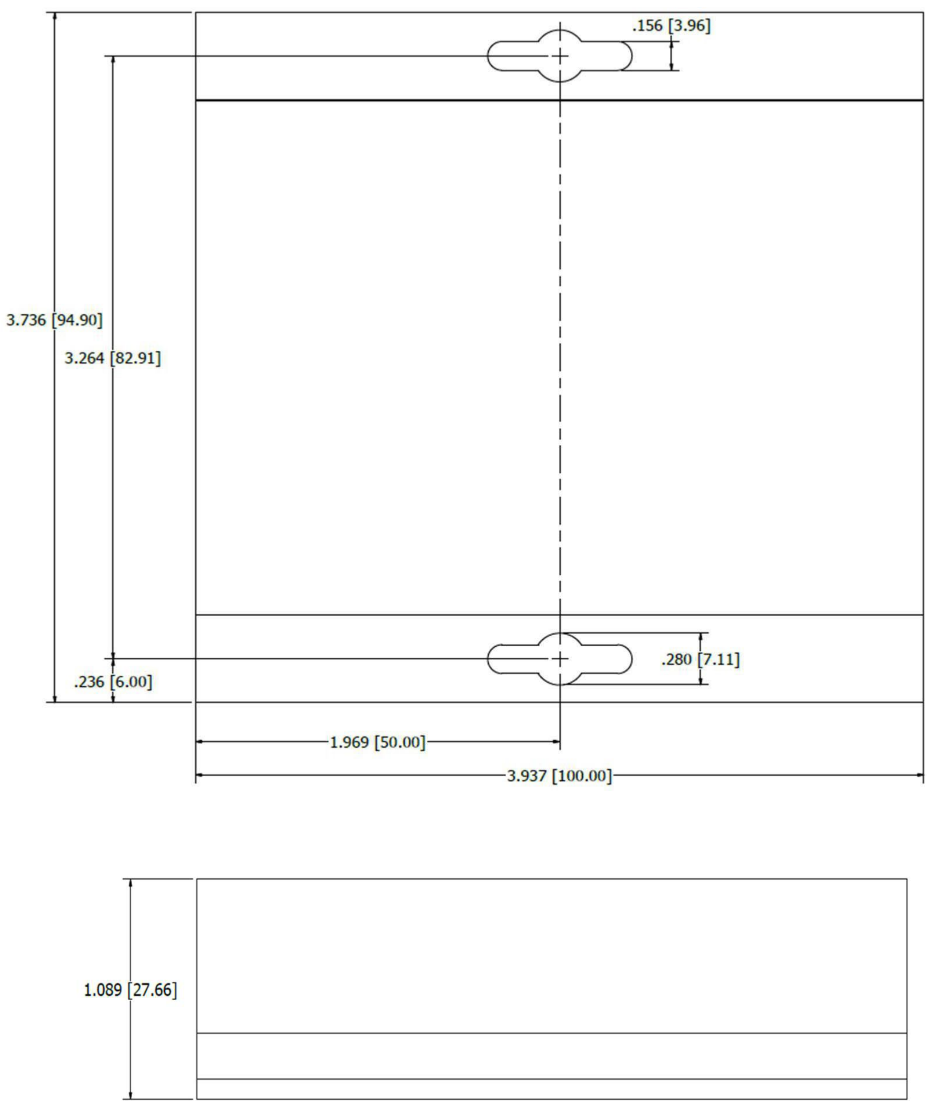
MECHANICAL INSTALLATION INSTRUCTIONS

INSTALLATION CONSIDERATIONS

This unit is supplied as a Standalone module.

Units should be installed in dry locations protected from extremes of temperature and humidity.

WARNING: Unit is to be used with a Listed Class 2 or LPS power supply rated for 54 VDC @ 2A.



Important Safeguards

A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.