

# CNMCSFPbt

## IEEE 802.3bt Media Converter User Manual



### Description

The CNMCSFPbt is an industrial grade / environmentally hardened Ethernet to fiber optic transceiver (media converter) that complies with the PoE standard as defined by the IEEE 802.3bt Type 4 while maintaining backward compatibility with the previous standards as defined by IEEE802.3at-2009 and IEEE802.3af-2003.

The media converter consists of one DIP switch selectable 100/1000BASE-X SFP port, and one auto-negotiating 10/100/1000BASE-T(X) RJ-45 PSE port. When supplied with an operating power input of 52 VDC to 56 VDC, PoE that is compliant with the PoE standard as defined by IEEE 802.3bt Type 4 is produced, capable of delivering up to 90 W of PoE to a compliant powered device (PD). The CNMCSFPbt is designed to allow for optional redundant operating power inputs.

Link Fault Pass Through (LFPT) is DIP switch selectable. When enabled, LFPT disables the copper side signal on loss of optical link or disables the fiber signal on loss of electrical link.

### Item(s) Included:

- 1- CNMCSFPbt media converter
- 1- DIN-rail and wall-mount brackets
- 4- Screws to attach mounting brackets to media converter
- 1- 4-pin terminal block

### Not Included:

- Industrial grade power supply
- Appropriate SFP transceiver

## Specifications

### Inputs and Outputs

- Ethernet port: 10/100/1000BASE-T(X)
  - Auto-negotiating
  - Compliant with IEEE 802.3af/at/bt PoE
- PoE Pin Assignment:  
1(V-), 2(V-), 3(V+), 6(V+)  
4(V+), 5(V+), 7(V-), 8(V-)
- Optical port: 100/1000BASE-X SFP transceiver
  - Data rate via DIP switch setting
- Operating power: redundant 52 VDC to 56 VDC

### Physical Interface Information

- Ethernet port: 8P8C (RJ-45) modular jack (receptacle)
- Optical port: MSA-compliant SFP port
- Power Inputs: 4-pin screw clamp terminal strip, 14 AWG to 22 AWG

### Operating Power Parameters

- Voltage range: 52 VDC to 56 VDC
- Power consumption: 3 W
- Reverse polarity protection
- Redundant power inputs
- Environmentally hardened power supply, ComNet part PS-MORD48240 recommended

### Mounting

- DIN rail or wall mount (brackets included)
- Use appropriate pan-head screws to mount to wall (not supplied)
- Mountable to standard 35 mm DIN rail (DIN 3), either profile - TS-35x7.5 or TS-35x15

### Indicator LEDs

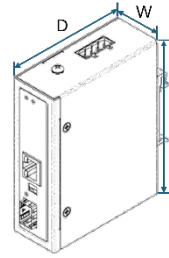
- Operating power status (x2)
- Ethernet link/activity status
- SFP link/activity status
- PSE PoE status

### Environmental

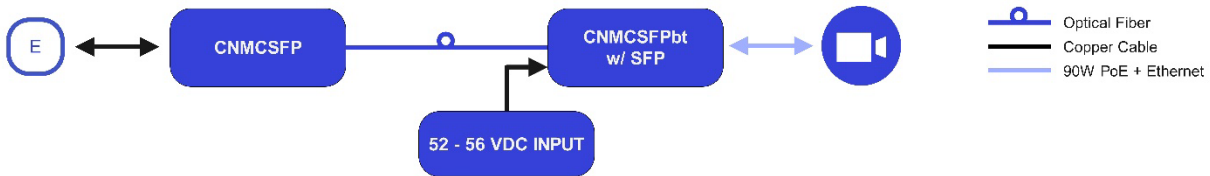
- Operating temperature: -40°C to +75°C [-40 °F to +167°F]
- Storage temperature: -40°C to +85°C [-40°F to +185°F]
- Operating relative humidity range: 5% to 95%, non-condensing
- Cooling: convection cooled - user should provide sufficient space around the device for a passive convective cooling air path

## Dimensions

	Length (L)	Width (W)	Depth (D)
Inches	4.1	1.3	3.2
Millimeter	103.5	32	81.5



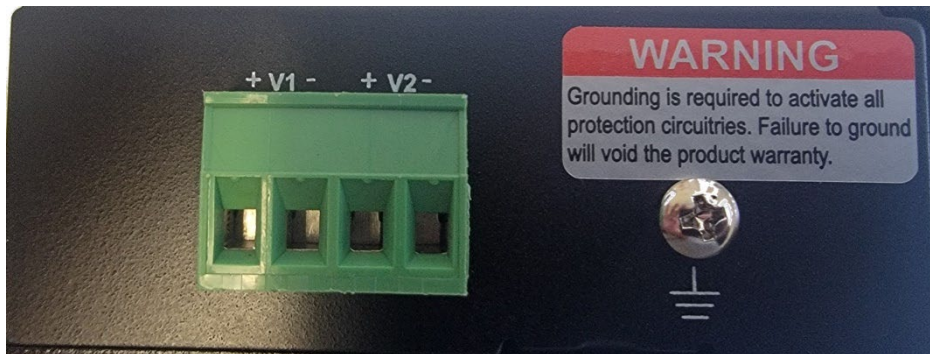
## Typical Application Diagram



## Front View



## Top View with Terminal Block Installed



## Operating Power Pinout

4-Pin Screw Clamp Terminal Strip	Description
V1(+)	Positive (52 DC to 56 VDC)
V1(-)	Negative
V2(+)	Positive (52 VDC to 56 VDC)
V2(-)	Negative

## DIP Switches

DIP Switch	Position	Description
Link Fault Pass Through (LFP)	UP	LFP disabled (switch tab pushed up towards OFF)
	DOWN	LFP enabled (switch tab pushed up towards LFP)
SFP 100/1000	UP	SFP port set for 1000BASE-X (switch tab pushed up towards 1000)
	DOWN	SFP port set for 100BASE-X (switch tab pushed down towards 100)

## Indicator LEDs

Indicator LED	Label	ED Status	Description
Operating Power	PW1	SOLID GREEN	DC 52 V to 56 V is detected at Pins V1(+) and V1(-)
		OFF	DC 52 V to 56 V is not detected at Pins V1(+) and V1(-)
	PW2	SOLID GREEN	DC 52 V to 56 V is detected at Pins V2(+) and V2(-)
		OFF	DC 52 V to 56 V is not detected at Pins V2(+) and V2(-)
Ethernet Link / Link Status (RJ-45 port)	LNK/ACT	SOLID GREEN	Ethernet link is detected but no activity is detected
		FLASHING GREEN	Ethernet link is detected and data activity is detected
PoE Status (RJ-45 port)	PoE	FLASHING AMBER	PSE is detecting the PD
		SOLID AMBER	PD was detected and PSE is producing PoE
SFP and Optical Link/Activity Status (SFP port)	SFP LNK ACT	SOLID GREEN	optical link is detected
		FLASHING GREEN	optical data activity is detected