



The Comnet Ethernet CNMC2+1SFP electrical-to-optical Ethernet media converters accept two 10/100 or 1000 Mbps electrical inputs and converts this to a single 100 or 1000 Mbps optical output (selected by a DIP switch) and the 100/1000 Mbps optical input back to the 10/100/1000 Mbps electrical output. “Auto-Negotiating” is supported on the copper interface side. These devices use either one or two optical fibers, depending upon the selection of sold-separately SFP\* optical module. The Comnet exclusive Demux feature allows for port isolation, replicating two media converters over one fiber. The Comnet exclusive Mux feature prevents network video flooding of multicast traffic with DIP switch selection of the fiber port as a dedicated uplink path. The CNMC2+1SFP series can be powered by wide range of AC or DC input power supplies.

## KEY FEATURES

- ▶ Optical port supports 100/1000 Mbps full duplex data
- ▶ Full-duplex transmission of 10/100/1000 Mbps Ethernet
  - 2 × 10/100/1000BASE-TX electrical ports
  - 1 × 1000BASE-FX or 100BASE-FX optical port when used with suitable Comnet SFPs
- ▶ 10/100/1000 BASE-TX port supports auto-negotiation and automatic MDI/MDI-X crossover for full and half-duplex operation
- ▶ Uses customer-installed Comnet SFPs for compatibility with a wide range of optical fibers, optical connector types, and optical transmission distances of up to 120 km
- ▶ Link Fault Pass-Through feature detects if either of the copper ports are down and triggers the optical port to switch states to indicate the failure to the head-end.
- ▶ Designed to meet full compliance with the environmental requirements (ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/ lowline voltage conditions and transient voltage protection) of NEMA TS-1/ TS-2 and the Caltrans Specification for Traffic Signal Control Equipment.
- ▶ Voltage transient protection on all power and signal input/ output lines provides protection from power surges and other voltage transient events.
- ▶ LED status indicators confirm operating status
- ▶ Plug-and-play design ensures ease of installation and no electrical or optical adjustments are ever required.
- ▶ Full size units feature a contact closure output for remote side link failure detection
- ▶ Standard size is hot-swappable rack module
- ▶ Standard size is interchangeable between stand-alone or rack mount use – ComFit
- ▶ IEEE 802.3 compliant | TAA & NDAA Compliant | Made in USA
- ▶ Limited Lifetime Warranty

## APPLICATIONS

- ▶ Optical transmission of Ethernet-compatible industrial security access control systems, intercom systems, VOIP (Voice over IP) telephony networks, and IP-compatible CCTV camera surveillance networks
- ▶ Optical Ethernet transmission to wireless LAN access points
- ▶ Optical transmission of any Ethernet-compatible equipment with a maximum data rate of 100/1000 Mbps

\* Small Form-Factor Pluggable Module. Sold separately.

## SPECIFICATIONS

### Ethernet

<b>DATA RATE</b>	10/100/1000 MBPS IEEE 802.3 COMPLIANT FULL DUPLEX OR HALF DUPLEX ELECTRICAL PORT/FULL DUPLEX OPTICAL PORT
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### Connectors

<b>OPTICAL</b>	SFP DEPENDENT <sup>1</sup> REQUIRES SELECTION OF SOLD-SEPARATELY SFP MODULES. SEE COMNET DATA SHEET FOR NUMBER AND DESCRIPTION OF SFP MODULES.
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<b>POWER</b>	TERMINAL BLOCK
<b>DATA</b>	RJ45
<b>FAULT RELAY</b>	TERMINAL BLOCK (FULL SIZE UNITS ONLY)

**Power**

<b>OPERATING VOLTAGE RANGE</b>	MINI: 8 TO 24 VDC OR 22 TO 27 VAC COMFIT: 8 TO 24 VDC
<b>POWER CONSUMPTION</b>	3W MAX
<b>CURRENT PROTECTION</b>	AUTOMATIC RESETTABLE SOLID-STATE CURRENT LIMITERS

**Fault Relay (Full Size Units Only)**

<b>RESPONSE TIME</b>	25 MSEC TYPICAL
<b>OUTPUT CHANNELS</b>	1
<b>RATING</b>	0-36V, 190MA (AC OR DC)

**Electrical & Mechanical**

<b>INDICATOR LEDS</b>	OPTICAL LINK/DATA ACTIVITY RJ45 LINK/DATA ACTIVITY POWER UNIT STATUS
<b>CIRCUIT BOARD</b>	MEETS IPC STANDARD
<b>SIZE (L×W×H)</b>	COMFIT: 6.1 × 5.3 × 1.1 IN (15.5 × 13.5 × 2.8 CM) MINI: 4.1 × 3.7 × 1.1 IN (10.4 × 9.4 × 2.8 CM)
<b>SHIPPING WEIGHT</b>	<2 LB / 0.9 KG

**Environmental**

<b>MTBF</b>	>100,000 HOURS
<b>OPERATING TEMP</b>	-40° C TO +75° C
<b>STORAGE TEMP</b>	-40° C TO +85° C
<b>RELATIVE HUMIDITY</b>	0% TO 95% (NON-CONDENSING) <sup>2</sup>

**Ethernet Standards**

	IEEE 802.3 FOR 10BASE-T
	IEEE 802.3u for 100BASE-TX and 100BASE-FX
	IEEE802.3z Gigabit fiber



## TYPICAL APPLICATION



## ORDERING INFORMATION

Part Number	Description	# Rack Slots
<b>CNMC2+1SFP</b>	2 CHANNEL 10/100/1000 MBPS ETHERNET SFP, COMFIT STANDARD UNIT	1
<b>CNMC2+1SFP/M</b>	2 CHANNEL 10/100/1000 MBPS ETHERNET SFP, MINI UNIT	NA
<b>OPTIONS</b>	<p>HARDENED POWER SUPPLY AVAILABLE, CONSULT FACTORY.            [2] ADD SUFFIX '/C' FOR CONFORMALLY COATED CIRCUIT BOARDS TO EXTEND TO CONDENSATION CONDITIONS (EXTRA CHARGE, CONSULT FACTORY)</p> <p>USER SELECTION OF COMNET SFP (SEE SFP MODULES DATA SHEET FOR PRODUCT NUMBERS AND COMPATIBILITY BEFORE ORDERING)</p> <p>DIN-RAIL MOUNTING ADAPTOR PLATE KIT - WITH MOUNTING HARDWARE (OPTIONAL, ORDER MODEL DINBKT1 OR DINBKT4)</p>	

[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  
 Note: 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.