

## 10/100 Mbps Ethernet Electrical to Optical media converter



### Features

- 10/100 Mbps Ethernet
  - 10/100 BASE-T/TX electrical port
  - 100 BASE-FX optical port
- Electrical port supports Auto-Negotiation for 10 Mbps or 100 Mbps, full duplex or half duplex data.
- Optical port supports 100 Mbps full duplex data
- Automatic MDI/MDI-X crossover
- Distances up to: 3 km (2 miles) Multimode  
20 km (12 miles) Single Mode
- Transparent to data encoding/compatible with major data protocols
- 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.
- ST or SC optical connectors
- 1 or 2 fiber design
- AC/DC powered
- Voltage transient protection on all power and signal input/output lines provides unconditional protection from power surges and other voltage transient events.
- No in-field optical adjustments required
- LED Indicators
- Standard size is hot-swappable rack module
- Standard size is interchangeable between stand-alone or rack mount use – ComFit
- IEEE 802.3 compliant
- Lifetime Warranty

### Description

The ComNet™ Ethernet media converters are designed to transmit and receive 10/100 Mbps data over multimode or single mode optical fiber. The electrical interface will Auto-Negotiate to a 10 Mbps, or 100 Mbps Ethernet rate without any adjustments. The optical interface operates at a 100 Mbps Ethernet rate. These media converters are environmentally hardened to operate in extreme temperatures. LED indicators are provided for rapidly ascertaining equipment operating status. Packaged in the exclusive ComNet ComFit housing, the standard size units may be either wall or rack-mounted, or may be DIN-rail mounted by the addition of ComNet model DINBKT1 adaptor plate.

### Applications

- 10/100 Mbps Ethernet Media Converter
- High Speed Computer Links



## specifications

## DATA

|                 |                                                                         |
|-----------------|-------------------------------------------------------------------------|
| Data Interface: | Ethernet                                                                |
| Data Rate:      | 10/100 Mbps                                                             |
|                 | IEEE 802.3 Compliant                                                    |
|                 | Full Duplex or Half Duplex Electrical Port/<br>Full Duplex Optical Port |

## CONNECTORS

|             |                         |
|-------------|-------------------------|
| Optical:    | ST or SC, 1 or 2 Fibers |
| Power:      | Terminal Block          |
| Electrical: | RJ45                    |

## LED INDICATORS

- Optical Link/Data Activity
- Electrical Link/Data Activity
- Power

## ELECTRICAL &amp; MECHANICAL

|                                       |                                                                            |
|---------------------------------------|----------------------------------------------------------------------------|
| Power:                                | 8-24 VDC @ 220 mA                                                          |
| Standard Size:                        | From Rack                                                                  |
| Mini AC/DC:                           | 22-27 VAC @ 100mA or<br>8-24 VDC @ 220 mA                                  |
| Number of Rack Slots (Standard Size): | 1                                                                          |
| Current Protection:                   | Automatic Resettable<br>Solid-State Current Limiters<br>Meets IPC Standard |
| Circuit Board:                        |                                                                            |
| Size (in./cm) (L×W×H) :               |                                                                            |
| CNFE100(X)MC:                         | 6.1 × 5.3 × 1.1 in.,<br>(15.5 × 13.5 × 2.8 cm)                             |
| CNFE100(X)MC-M & CNFE100(X)MAC-M:     | 3.3 × 2.5 × 1.1 in.,<br>(8.4 × 6.4 × 2.8 cm)                               |
| Shipping Weight:                      | <2 lbs./0.9 kg                                                             |



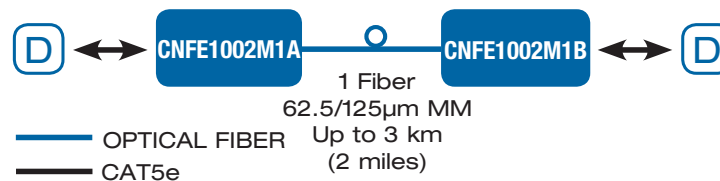
## ENVIRONMENTAL

|                    |                                         |
|--------------------|-----------------------------------------|
| 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) <sup>†</sup> |

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.

<sup>†</sup> May be extended to condensation conditions

## application diagram



## specifications

## ordering information

## Standard Mount DC-only Media Converter

| PART NUMBER | WAVELENGTH                                                                                                                                                                    | CONNECTOR | FIBERS REQUIRED | FIBER      | OPTICAL PWR BUDGET | MAX. DISTANCE    | # RACK SLOTS |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------|------------|--------------------|------------------|--------------|
| CNFE1002M1A | 10/100 Mbps Ethernet 1310/1550nm                                                                                                                                              | ST        | 1               | Multimode  | 10 dB              | 3 km (2 miles)   | 1            |
| CNFE1002M1B | 10/100 Mbps Ethernet 1550/1310nm                                                                                                                                              | ST        | 1               | Multimode  | 10 dB              | 3 km (2 miles)   | 1            |
| CNFE1002S1A | 10/100 Mbps Ethernet 1310/1550nm                                                                                                                                              | ST        | 1               | Singlemode | 15 dB              | 20 km (12 miles) | 1            |
| CNFE1002S1B | 10/100 Mbps Ethernet 1550/1310nm                                                                                                                                              | ST        | 1               | Singlemode | 15 dB              | 20 km (12 miles) | 1            |
| CNFE1003M2  | 10/100 Mbps Ethernet 1310nm                                                                                                                                                   | SC        | 2               | Multimode  | 10 dB              | 3 km (2 miles)   | 1            |
| CNFE1003S2  | 10/100 Mbps Ethernet 1310nm                                                                                                                                                   | SC        | 2               | Singlemode | 15 dB              | 20 km (12 miles) | 1            |
| CNFE1004M1A | 10/100 Mbps Ethernet 1310/1550nm                                                                                                                                              | SC        | 1               | Multimode  | 10 dB              | 3 km (2 miles)   | 1            |
| CNFE1004M1B | 10/100 Mbps Ethernet 1550/1310nm                                                                                                                                              | SC        | 1               | Multimode  | 10 dB              | 3 km (2 miles)   | 1            |
| CNFE1004S1A | 10/100 Mbps Ethernet 1310/1550nm                                                                                                                                              | SC        | 1               | Singlemode | 15 dB              | 20 km (12 miles) | 1            |
| CNFE1004S1B | 10/100 Mbps Ethernet 1550/1310nm                                                                                                                                              | SC        | 1               | Singlemode | 15 dB              | 20 km (12 miles) | 1            |
| CNFE1005M2  | 10/100 Mbps Ethernet 1310nm                                                                                                                                                   | ST        | 2               | Multimode  | 10 dB              | 3 km (2 miles)   | 1            |
| CNFE1005S2  | 10/100 Mbps Ethernet 1310nm                                                                                                                                                   | ST        | 2               | Singlemode | 15 dB              | 20 km (12 miles) | 1            |
| Accessories | 9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)                                                                                                               |           |                 |            |                    |                  |              |
| Options     | Add 'C' for Conformally Coated Circuit Boards (Extra charge, consult factory)<br>DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1) |           |                 |            |                    |                  |              |

## Mini AC/DC Power Media Converter

| PART NUMBER     | WAVELENGTH                                                                                                                                                                           | CONNECTOR | FIBERS REQUIRED | FIBER      | OPTICAL PWR BUDGET | MAX. DISTANCE    | # RACK SLOTS |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------|------------|--------------------|------------------|--------------|
| CNFE1002MAC1A-M | 10/100 Mbps Ethernet 1310/1550nm                                                                                                                                                     | ST        | 1               | Multimode  | 10 dB              | 3 km (2 miles)   | N/A          |
| CNFE1002MAC1B-M | 10/100 Mbps Ethernet 1550/1310nm                                                                                                                                                     | ST        | 1               | Multimode  | 10 dB              | 3 km (2 miles)   | N/A          |
| CNFE1002SAC1A-M | 10/100 Mbps Ethernet 1310/1550nm                                                                                                                                                     | ST        | 1               | Singlemode | 15 dB              | 20 km (12 miles) | N/A          |
| CNFE1002SAC1B-M | 10/100 Mbps Ethernet 1550/1310nm                                                                                                                                                     | ST        | 1               | Singlemode | 15 dB              | 20 km (12 miles) | N/A          |
| CNFE1003MAC2-M  | 10/100 Mbps Ethernet 1310nm                                                                                                                                                          | SC        | 2               | Multimode  | 10 dB              | 3 km (2 miles)   | N/A          |
| CNFE1003SAC2-M  | 10/100 Mbps Ethernet 1310nm                                                                                                                                                          | SC        | 2               | Singlemode | 15 dB              | 20 km (12 miles) | N/A          |
| CNFE1004MAC1A-M | 10/100 Mbps Ethernet 1310/1550nm                                                                                                                                                     | SC        | 1               | Multimode  | 10 dB              | 3 km (2 miles)   | N/A          |
| CNFE1004MAC1B-M | 10/100 Mbps Ethernet 1550/1310nm                                                                                                                                                     | SC        | 1               | Multimode  | 10 dB              | 3 km (2 miles)   | N/A          |
| CNFE1004SAC1A-M | 10/100 Mbps Ethernet 1310/1550nm                                                                                                                                                     | SC        | 1               | Singlemode | 15 dB              | 20 km (12 miles) | N/A          |
| CNFE1004SAC1B-M | 10/100 Mbps Ethernet 1550/1310nm                                                                                                                                                     | SC        | 1               | Singlemode | 15 dB              | 20 km (12 miles) | N/A          |
| CNFE1005MAC2-M  | 10/100 Mbps Ethernet 1310nm                                                                                                                                                          | ST        | 2               | Multimode  | 10 dB              | 3 km (2 miles)   | N/A          |
| CNFE1005SAC2-M  | 10/100 Mbps Ethernet 1310nm                                                                                                                                                          | ST        | 2               | Singlemode | 15 dB              | 20 km (12 miles) | N/A          |
| Accessories     | 9 Volt DC Plug-in Power Supply, 90-264 VAC, 50/60 Hz (Included)                                                                                                                      |           |                 |            |                    |                  |              |
| Options         | Add suffix 'C' for Conformally Coated Circuit Boards (Extra charge, consult factory)<br>DIN-Rail Mounting Adaptor Plate Kit – With mounting hardware (Optional, order model DINBKT1) |           |                 |            |                    |                  |              |