

## IEEE 802.3 10Mbps Ethernet TP-Fiber Converter — CEM1500 TP-BNC Converter — CEM0100 User's Manual

(620-0012-000)

### 1. Overview

IEEE 802.3 10Mbps Ethernet supports various type media for network connection such as 10Base-2, 10Base-T, and 10Base-FL. The media converter is used to convert one type media signal to other type equivalent that allows multiple type segments connect easily and inexpensively. The converter can be used as a standalone unit or as a slide-in module to the 19" converter rack (up to 10 units) for use at a central wiring closet.

### 2. Model Description

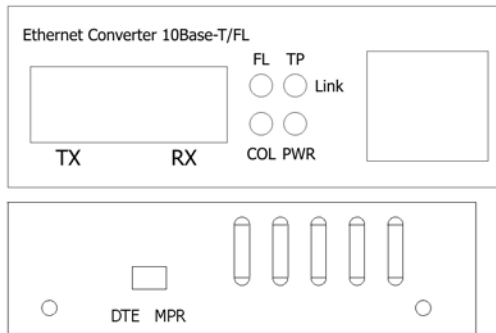
Model	Connector Type
CEM1500	RJ-45 ↔ 850nm ST Multi-mode
CEM0100	RJ-45 ↔ BNC

### 3. Checklist

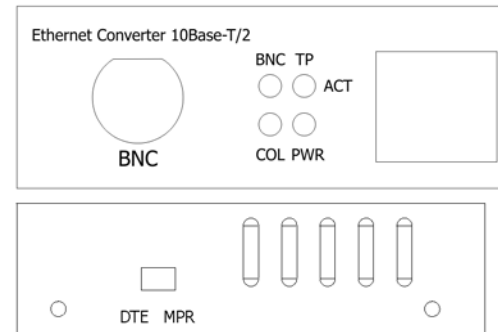
Before you start installing the Converter, verify that the package contains the following:

- The Converter
- AC-DC Power Adapter
- This User's Manual
- T-Connector (for TP-BNC Converter model only)

Please notify your sales representative immediately if any of the aforementioned items is missing or damaged.



10Mbps CEM1500 Fiber Converter Front and Side Panel



10Mbps CEM0100 Converter Front and Side Panel

### 4. Installing the Converter

For as a standalone unit:

- ⇒ Verify the AC-DC adapter conforms to your country AC power requirement and insert the power plug
- ⇒ Connect the media cable for network connection

For as a slide-in unit:

- ⇒ The slide-in Media Converter and Converter Rack should be supplied only from the same source, both Media Converter and Rack are built to match each other at dimensions, DC jack, DC receptacle and power safety
- ⇒ Turn off the 19" converter rack power
- ⇒ Ensure that there is no activity in the network
- ⇒ Locate +5V DC power jack on converter back, carefully slide in and plug to 19" rack +5V DC power receptacle
- ⇒ Connect the media cable for network connection
- ⇒ Turn on the converter rack power, the Power LED will light up

Fiber Port	Attach the fiber cable. The Tx, Rx fiber cable must be paired at both ends.
TP Port	Attach TP Cat. 3 or Cat. 5 cable to TP port MPR: To a Hub or Repeater DTE: To a workstation or NIC Slide switch "DTE"/"MPR" is on the side panel. Default: MPR
BNC Port	Attach T-Connector to BNC port and connect the RG-58A/U coaxial network. Ensure the coaxial cable/segment is terminated at both ends properly.

Note:

- a. Use the straight-through cable.  
Cable pin-outs for RJ-45 jack 1, 2, 3, 6 to 1, 2, 3, 6
- b. MPR (Default) : To a Hub or a Repeater  
DTE : To a workstation or Network Interface Card (NIC)  
(DTE pin-outs is crossover on board already)  
Configure the MPR-DTE slide switch on the side panel for cable connection to hub or Network Interface Card (NIC)

### 5. Connecting to 10/100Mbps N-Way Device

Converter Model	10/100 N-Way Inter-operating
TP-Fiber Converter	10/100Mbps is auto-sensing and comes to 10Mbps Half-duplex
TP-BNC Converter	10/100Mbps is auto-sensing and comes to 10Mbps Half-duplex

## 6. LED Description

TP-Fiber Converter:

LED	Color	Function
FL Link/Act	Green	Lit when Fiber connection is good Blink when any FL traffic is present
TP Link/Act	Green	Lit when TP cable connection is good Blink when any TP traffic is present
Collision	Amber	Blink when any collision is present
Power	Green	Lit when +5V power is coming up

TP-BNC Converter:

LED	Color	Function
BNC Act	Green	Blink when BNC traffic is present
TP Link/Act	Green	Lit when TP connection is good Blink when any TP traffic is present
Collision	Amber	Blink when any collision is present
Power	Green	Lit when +5V power is coming up

## 7. CEM1500 Technical Specifications

- **Standards:** IEEE 802.3 10Base-T/10Base-FL
- **TP Port:** RJ-45 jack with a slide switch for "MPR" or "DTE" selection
- **Fiber Port:**

The 10Mbps Fiber Transceivers:		
ST/SC multi-mode	850nm	Default

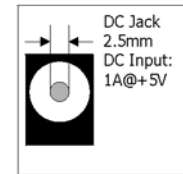
- **TP Cable:** Category 3 or 5 cable, up to 100m
- **Fiber Cable:** 50/125, 62.5/125, or 100/140µm multi-mode, up to 2km
- **Data Transfer Rate:** 10Mbps at half-duplex
- **LED Indicators:** POWER, FL LNK/ACT, TP LNK/ACT, COL
- **Power Requirement:** 2A@+5V DC
- **Ambient Temperature:** 0° to 50° C
- **Humidity:** 5% to 90%
- **Dimensions:** 26.2 x 70.3 x 94 mm (H x W x D)
- **Complies with FCC Part 15 Class A and CE Mark**

## 8. CEM0100 Technical Specifications

- **Standards:** IEEE 802.3 10Base-T/10Base-2
- **TP Port:** RJ-45 jack with a slide switch for "MPR" or "DTE" selection
- **BNC Port:** BNC connector
- **Cables and Distance:**
  - Cat. 3/5 unshielded or shielded twisted pair (UTP/STP) wire, maximum length 100 meters (328ft)
  - 0.2 inch diameter RG-58A/U, 50Ω(ohm) coaxial cable, maximum length 185 meters (607ft)
- **Data Transfer Rate:** 10Mbps at half-duplex
- **LED Indicators:** POWER, TP LNK/ACT, BNC ACT, COL
- **Power Requirement:** 1A@+5V DC
- **Ambient Temperature:** 0° to 50° C
- **Humidity:** 5% to 90%
- **Dimensions:** 26.2 x 70.3 x 94 mm (H x W x D)
- **Complies with FCC Part 15 Class A and CE Mark**

## 9. DC Jack and AC-DC Power Adapter

The DC jack's central post is 2.5mm wide; it conforms to the DC receptacle (2.5mm) on the 19-inch Converter Rack slot.



Keep the AC-DC adapter as spare parts when Media Converter is installed in a 19-inch Media Converter Rack.