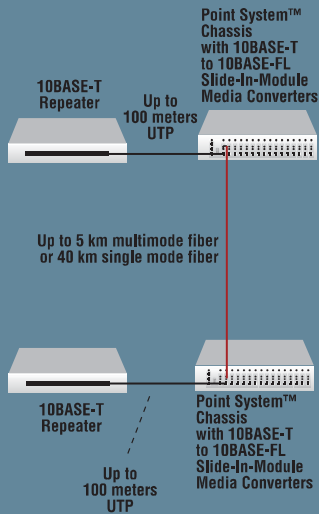


Ethernet Copper to Fiber Media Converter



- ▶ Integrate mixed cabling environments in either switched or shared Ethernet networks.
- ▶ Connect legacy 10BASE-T devices to a fiber based cabling infrastructure.

Extend Network Distance & Connect Unlike Devices



▶ Extend Network Distance

Two 10BASE-T to 10BASE-FL Media Converters used back-to-back extend the distance between two 10BASE-T devices up to 5 km (3.1 mi.) using multimode fiber or up to 40 km (24.9 mi.) using single mode fiber without a repeater.

▶ Connect Unlike Devices

Connect your workgroup to a distant server or a central switch; or extend distances between like and unlike devices in either full or half-duplex modes.

Specifications

See next pages for complete fiber optic connector specs.

Standards	IEEE Std. 802.3™ 10BASE-T; 10BASE-FL
4-position Switch	Fiber Port: Enables / disables network traffic on the fiber port; (Up = enabled) Copper Port: Enables / disables network traffic on the copper port; (Up = enabled) AutoCross™: Enables / disables AutoCross™ function; (Up = enabled) Link Pass Through: Enables / disables Link Pass Through function; (Up = enabled)
3-position Jumper	Hardware: Converter mode is determined by 4-position switch settings Software: Converter mode is determined by most recently saved on-board microprocessor settings.
Status LEDs	PWR (Power): On for normal operation; LKF (Link Fiber): Steady LED indicates good fiber link and normal operation; RXF (Receive Fiber): Flashing LED indicates data reception on fiber link; LKC (Link Copper): Steady LED indicates good copper link and normal operation; RXC (Receive Copper): Flashing LED indicates data reception on copper link
Dimensions	Width: 0.86" [22 mm] Depth: 5.0" [127 mm] Height: 3.4" [86 mm]
Power Consumption	2.3 watts
Environment	See chassis specifications
Shipping Weight	1 lb. [0.45 kg]
Regulatory Compliance	EN55022; EN55024; EN61000; CE Mark
Warranty	Lifetime

CETTF10xx-x0x



Features (both Class A & B)

- ▶ Can be used with any Point System™ Chassis
- ▶ AutoCross™ (see next pages)
- ▶ Link Pass Through (see next pages)
- ▶ Automatic Link Restoration (see next pages)
- ▶ Remote Firmware Upgrade (see next pages)

See next pages for complete fiber optic connector specs.

Ordering Info: Class A

CETTF1011-105
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 850nm MM (ST)
[2 km/1.2 mi.] Link Budget: 13.5 dB

CETTF1013-105
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 850nm MM (SC)
[2 km/1.2 mi.] Link Budget: 13.5 dB

CETTF1018-105
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 850nm MM (MT-RJ)
[2 km/1.2 mi.] Link Budget: 13.5 dB

CETTF1027-105
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 1300nm MM (ST)
[5 km/3.1 mi.] Link Budget: 13.5 dB

CETTF1012-105
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 1310nm SM (ST)
[20 km/12.4 mi.] Link Budget: 7.0 dB

CETTF1014-105
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 1310nm SM (SC)
[20 km/12.4 mi.] Link Budget: 15.0 dB

CETTF1022-105
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 1310nm SM (ST)
[40 km/24.9 mi.] Link Budget: 19.0 dB

CETTF1015-105
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 1310nm SM (SC)
[40 km/24.9 mi.] Link Budget: 14.0 dB

Single Fiber Products Recommended use in pairs

CETTF1029-105
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 1310nm TX / 1550nm RX
single fiber SM (SC)
[20 km/12.4 mi.] Link Budget: 19.0 dB

CETTF1029-106
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 1550nm TX / 1310nm RX
single fiber SM (SC)
[20 km/12.4 mi.] Link Budget: 19.0 dB

Ordering Info: Class B

CETTF1011-200
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 850nm MM (ST)
[2 km/1.2 mi.] Link Budget: 13.5 dB

CETTF1013-200
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 850nm MM (SC)
[2 km/1.2 mi.] Link Budget: 13.5 dB

CETTF1027-200
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 1300nm MM (ST)
[5 km/3.1 mi.] Link Budget: 13.5 dB

CETTF1012-200
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 1310nm SM (ST)
[20 km/12.4 mi.] Link Budget: 7.0 dB

CETTF1014-200
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 1310nm SM (SC)
[20 km/12.4 mi.] Link Budget: 7.0 dB

CETTF1022-200
10BASE-T (RJ-45) [100 m/328 ft.]
to 10BASE-FL 1310nm SM (ST)
[40 km/24.9 mi.] Link Budget: 19.0 dB

FCC & CISPR Class A devices comply with radiated emissions standards for commercial applications in the United States (FCC Class A) and Europe (CISPR Class A).

FCC & CISPR Class B devices comply with radiated emissions standards for residential applications in the United States (FCC Class B) and Europe (CISPR Class B).



CETTF Fiber Optic Connector Specs

Product SKU	Min TX PWR	Max TX PWR	RX Sensitivity	Max In PWR	Link Budget
CETTF1011-105	-19.0 dBm	-14.0 dBm	-32.5 dBm	-14.0 dBm	13.5 dB
CETTF1011-200	-19.0 dBm	-14.0 dBm	-32.5 dBm	-14.0 dBm	13.5 dB
CETTF1012-105	-27.0 dBm	-10.0 dBm	-34.0 dBm	-14.0 dBm	7.0 dB
CETTF1012-200	-27.0 dBm	-10.0 dBm	-34.0 dBm	-14.0 dBm	7.0 dB
CETTF1013-105	-19.0 dBm	-14.0 dBm	-32.5 dBm	-14.0 dBm	13.5 dB
CETTF1013-200	-19.0 dBm	-14.0 dBm	-32.5 dBm	-14.0 dBm	13.5 dB
CETTF1014-105	-19.0 dBm	-14.0 dBm	-34.0 dBm	-3.0 dBm	15.0 dB
CETTF1014-200	-27.0 dBm	-10.0 dBm	-34.0 dBm	-14.0 dBm	7.0 dB
CETTF1015-105	-18.0 dBm	-7.0 dBm	-32.0 dBm	-7.0 dBm	14.0 dB
CETTF1018-105	-16.0 dBm	-10.0 dBm	-29.5 dBm	-7.2 dBm	13.5 dB
CETTF1022-105	-15.0 dBm	-5.0 dBm	-34.0 dBm	-14.0 dBm	19.0 dB
CETTF1022-200	-15.0 dBm	-5.0 dBm	-34.0 dBm	-14.0 dBm	19.0 dB
CETTF1027-105	-19.0 dBm	-15.0 dBm	-32.5 dBm	-14.0 dBm	13.5 dB
CETTF1027-200	-19.0 dBm	-15.0 dBm	-32.5 dBm	-14.0 dBm	13.5 dB
CETTF1029-105	-14.0 dBm	-8.0 dBm	-33.0 dBm	-3.0 dBm	19.0 dB4
CETTF1029-106	-14.0 dBm	-8.0 dBm	-33.0 dBm	-3.0 dBm	19.0 dB

▶ AutoCross™

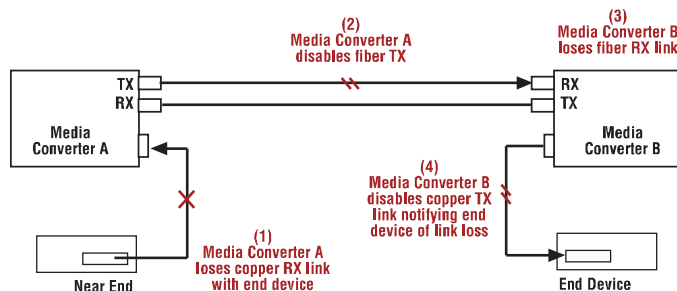
Automatically detects and configures the twisted pair port on the converter to the correct MDI or MDI-X configuration.

- ▶ Eliminates an entire category of troubleshooting
- ▶ No need to identify cable type—straight-through or crossover
- ▶ No user intervention required to determine correct button / switch settings

▶ Link Pass Through

Link Pass Through is a troubleshooting feature that prevents media converters from isolating link failures and it allows end devices to be notified in the event of a loss of link. Link Pass Through provides the media converter with the ability to monitor both the fiber and the copper RX ports for a loss of signal. If a loss of RX signal occurs on one media port, the converter will automatically disable the TX signal on the other port. By shutting down the fiber TX port, the link failure is “passed through” to the remote converter and device (see diagram below).

- ▶ End device automatically notified of link loss
- ▶ Prevents loss of valuable data unknowingly transmitted over an invalid link



If someone tells you media conversion is a commodity product that anyone can bring to market, they probably haven't looked at the extensive product suite offered by Transition Networks. With the industry's most comprehensive offering of full-featured products, Transition's media converters stand out as "the choice" among industry IT professionals.

Generally, media converters are low-level OSI model devices with no IP or MAC addresses and therefore are transparent to the network. This "transparency" makes them very inexpensive and easy to use, but also can make troubleshooting the network very difficult. In an effort to overcome this difficulty and to make media converters "visible" to network managers, Transition has designed their full-featured products to include the most advanced features on the market today.

Advanced Product Features



► Automatic Link Restoration

Transition Networks's converters will automatically re-establish link in all network conditions.

► No need to reset devices

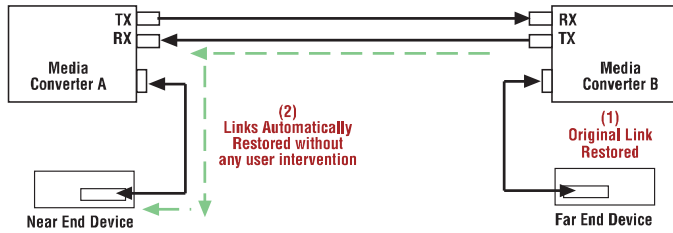
Transition Networks's converters will automatically re-establish link when connected to switches if link was lost. With other manufacturers' converters the user must reset the converter to re-establish the link.

► Auto-Negotiation Enabled

Automatic Link Restoration allows the users to continue using Auto-Negotiation with Link Loss Notification features. With other manufacturers' converters the user must disable Auto-Negotiation and hard set the link.

► Link Pass Through Activated in both directions

Automatic Link Restoration on Transition Networks's products allows users to continue using Link Loss Notification feature activated in both directions. Many competitive solutions allow for Link Loss Notification activation only in one direction. If Link Loss feature is activated in both directions, competitive products are put in a "deadly embrace" and they cannot restore the link without resetting the converters.

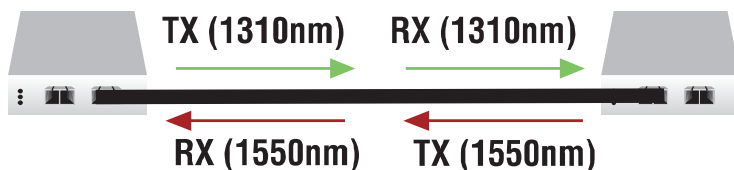


► Single Fiber

Single fiber technology offers a 50% savings in fiber utilization. It is an attractive solution to maximize the usage of a limited number of fiber runs.

In a traditional optical link, a fiber pair consists of two uni-directional strands. The single fiber technology multiplexes two optical wavelengths of 1310nm and 1550nm into a single strand fiber. In a single fiber media converter each wavelength is responsible for either the transmit or receive function. Consequently, the bi-directional transmission is achieved by using a single strand. The converters in a single fiber scenario "match" each other's wavelengths. Converter A transmits at the wavelength of 1310nm and receives at 1550nm while the other converter transmits at 1550nm and receives at 1310nm. Therefore, converters are usually used in pairs.

Single fiber technology is available on all Transition Networks Media Converters in maximum distance ranges from 20 to 80km.



► Remote Firmware Upgrade

New product features are continuously being added to Transition Networks's products. These improvements are also available for many products already installed in the field. Management modules and many media converters can be updated remotely via firmware upgrade. The remote upgrade feature eliminates the need to ship the products back to the manufacturer. The firmware upgrades can be performed by a user either locally via a Console port or remotely via TFTP.

The upgrades do not require the reconfiguration of the SNMP management or converter feature settings.



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