

Fast Ethernet Class A Media Converter



- ▶ Integrate fiber into a copper environment
- ▶ Provides a fiber interface when connected to devices with RJ-45 ports.

▶ **Extend Network Distance:**
Deploy fiber in a strategic and economical manner by using Fast Ethernet converters. Fast Ethernet converters can extend distances that copper cannot reach.

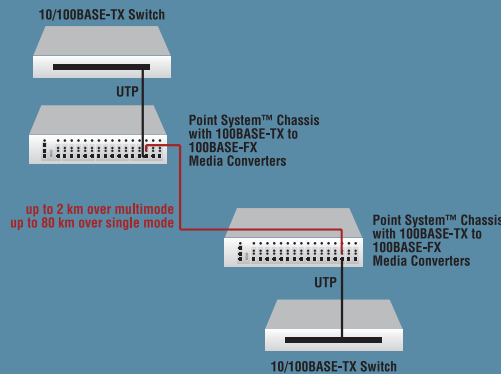
Features

- ▶ Round trip delay of only 40 bit times — far below the Class II rating of 92 bit times.
- ▶ Auto-Negotiation *next pages*
- ▶ AutoCross™ *see next pages*
- ▶ Link Pass Through *next page*
- ▶ Automatic Link Restoration *see next pages*
- ▶ Remote Firmware Upgrade *see next pages*
- ▶ Can be used with any Point System™ Chassis

CFETF10xx-105



Extend Network Distance



Specifications

Standards IEEE Std. 802.3™

Fiber Optic Connector Specs

SKU	Min TX PWR (dBm)	Max TX PWR (dBm)	RX Sens (dBm)	Max In PWR (dBm)	Link Budget (dB)
CFETF1011-105	-19.0	-14.0	-30.0	-14.0	11.0
CFETF1013-105	-19.0	-14.0	-30.0	-14.0	11.0
CFETF1014-105	-15.0	-8.0	-31.0	-8.0	16.0
CFETF1015-105	-8.0	-2.0	-34.0	-7.0	26.0
CFETF1016-105	-5.0	0.0	-34.0	-7.0	29.0
CFETF1017-105	-5.0	0.0	-34.0	-7.0	29.0
CFETF1018-105	-19.0	-14.0	-33.5	-14.0	14.5
CFETF1019-105	-15.2	-8.0	-32.5	-3.0	17.3
CFETF1039-105	-19.0	-14.0	-30.0	-14.0	11.0

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.

4-position Switch

Auto-Negotiation (UP = enabled): Allows detection of, and adaptation to, full-duplex or half-duplex mode in device attached to copper link.
Link Pass Through (UP = enabled): Allows a fault EITHER on the copper OR on the fiber side of the media converter to stop signal and data transmission on the other side.
AutoCross™ (UP = enabled): Allows straight-through twisted pair cable to be used for crossover connections.

Status LEDs

Power: Indicates that DC power is connected
TX (Link Copper): ON indicates TP link; Blinking indicates TP receive;
FX (Link Fiber): ON indicates fiber link; Blinking indicates Fiber receive

Dimensions

Width: 0.86" [22 mm]
Depth: 5.0" [127 mm]
Height: 3.4" [86 mm]

Power Consumption 3.4 watts

Environment See chassis specifications

Shipping Weight 1 lb. [0.45 kg]

Regulatory Compliance CE Mark, FCC Class A; CISPR Class A; VCCI Class 1

Warranty Lifetime

Ordering Info [Class A]

CFETF1011-105

100BASE-TX (RJ-45) [100 m/328 ft.] to 100BASE-FX 1300nm multimode (ST) [2 km/1.2 mi.] Link Budget: 11.0 dB

CFETF1013-105

100BASE-TX (RJ-45) [100 m/328 ft.] to 100BASE-FX 1300nm multimode (SC) [2 km/1.2 mi.] Link Budget: 11.0 dB

CFETF1039-105

100BASE-TX (RJ-45) [100 m/328 ft.] to 100BASE-FX 1300nm multimode (LC) [2 km/1.2 mi.] Link Budget: 11.0 dB

CFETF1018-105

100BASE-TX (RJ-45) [100 m/328 ft.] to 100BASE-FX 1300nm MM (MT-RJ) [2 km/1.2 mi.] Link Budget: 14.5 dB

CFETF1014-105

100BASE-TX (RJ-45) [100 m/328 ft.] to 100BASE-FX 1310nm MM (SC) [20 km/12.4 mi.] Link Budget: 16.0 dB

CFETF1019-105

100BASE-TX (RJ-45) [100 m/328 ft.] to 100BASE-FX 1310nm SM (LC) [20 km/12.4 mi.] Link Budget: 17.3 dB

CFETF1015-105

100BASE-TX (RJ-45) [100 m/328 ft.] to 100BASE-FX 1310nm SM (SC) [40 km/24.9 mi.] Link Budget: 26.0 dB

CFETF1016-105

100BASE-TX (RJ-45) [100 m/328 ft.] to 100BASE-FX 1310nm SM (SC) [60 km/37.3 mi.] Link Budget: 29.0 dB

CFETF1017-105

100BASE-TX (RJ-45) [100 m/328 ft.] to 100BASE-FX 1550nm SM (SC) [80 km/49.7 mi.] Link Budget: 29.0 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).

[See CFETF10xx-205 for Class B product.]



▶ Auto-Negotiation (802.3u)

Auto-Negotiation allows devices to perform automatic configuration to achieve the best possible mode of operation over a link. Devices with this feature will broadcast their speed (10Mbps, 100Mbps, etc.) and duplex (half/full) capabilities to other devices and negotiate the best mode of operation between the two devices.

- ▶ No user intervention required to determine best mode of operation
- ▶ Optimal link established automatically
- ▶ Quick and easy installation

While the inclusion of this feature is beneficial, the ability to disable it is equally beneficial. In the event of a non-negotiating end device trying to connect to a negotiating device, the mode of operation will drop to the least common denominator between the two devices (i.e. 100Mbps, half-duplex). Disabling this feature gives the user the ability to force the connection to the best mode of operation when trying to link with a non-negotiating device. Most Transition converters with Auto-Negotiation will allow you to disable this feature.

▶ AutoCross™

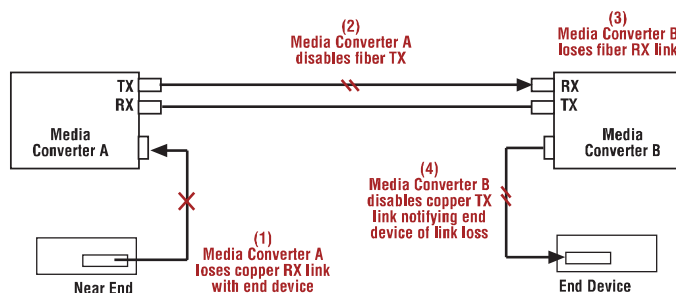
Automatically detects and configures the twisted pair port on the converter to the correct MDI or MDI-X configuration.

- ▶ 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.



► Automatic Link Restoration

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

- No need to reset devices

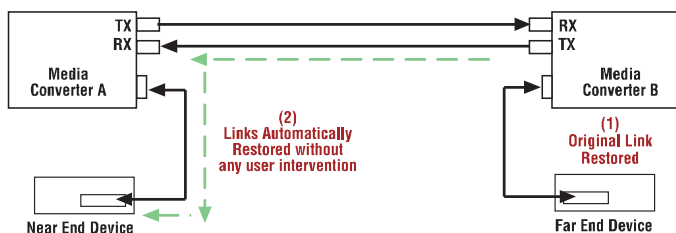
Transition Networks's converters will automatically re-establish link when connected to switches if link was lost. With other manufacturers' converters the user must reset the converter to re-establish the link.

- 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.



► 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.