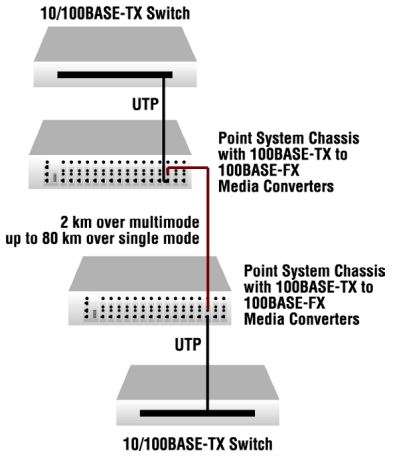
Fast Ethernet 100BASE-TX to 100BASE-FX
[Class B]

Point System Slide-In-Module Media Converters

CFETF10xx-205

Convert 100BASE-TX to 100BASE-FX

Extend Network Distance



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.
- AutoCross™ *see next pages*
- Auto-Negotiation *see next pages*
- Link Pass Through *see next pages*
- Far End Fault (FEF) Detection *see next pages*
- The converters will also automatically re-establish link when connected to two 10/100 auto-negotiating switches if link is lost. With other manufacturers' converters the user must intervene to re-establish link.
- Pause *see next pages*

The following converter management features are available in conjunction with the Point System:

Reporting features:

- Report converter status to chassis management software:
  - TP Link status
  - Fiber Link status
  - Hardware switch settings
  - Fault
  - TP cable length
- Write operation includes:
  - Power on/off device
  - Full or half-duplex
  - Pause enable/disable
  - LPT enable/disable
  - FEF enable/disable
  - AutoCross enable/disable

Ordering Info: Class B

Product Number	Port One	Port Two
CFETF1011-205	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1300nm multimode (ST) [2 km/ 1.2 miles]
CFETF1013-205	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1300nm multimode (SC) [2 km/ 1.2 miles]
CFETF1014-205	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1310nm single mode (SC) [20 km/ 12.4 miles]
CFETF1015-205	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1310nm single mode (SC) [40 km/ 24.9 miles]
CFETF1016-205	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1310nm single mode (SC) [60 km/ 37.3 miles]
CFETF1017-205	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1550nm single mode (SC) [80 km/ 49.7 miles]
CFETF1018-205	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1300nm multimode (MT-RJ) [2 km/ 1.2 miles]
CFETF1029-205	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1310nm TX / 1550nm RX single fiber single mode (SC) [20 km/ 12.4 miles]
CFETF1029-206	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1550nm TX / 1310nm RX single fiber single mode (SC) [20 km/ 12.4 miles]
CFETF1029-207	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1310nm TX / 1550nm RX single fiber single mode (SC) [40 km/ 24.9 miles]
CFETF1029-208	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1550nm TX / 1310nm RX single fiber single mode (SC) [40 km/ 24.9 miles]
CFETF1029-209	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1310nm TX / 1550nm RX single fiber single mode (SC) [60 km/ 37.3 miles]
CFETF1029-210	100BASE-TX (RJ-45) [100 m/328 ft.]	100BASE-FX 1550nm TX / 1310nm RX single fiber single mode (SC) [60 km/ 37.3 miles

Specifications

Standards	IEEE Std 802.3™
Fiber Optic Connector Specs	
CFETF1011-205 & CFETF1013-205 & CFETF1018-205	Min TX PWR: -19.0 dBm Max TX PWR: -14.0 dBm RX Sensitivity: -30.0 dBm Max In PWR: -14.0 dBm Link Budget: 11.0 dB
CFETF1014-205	Min TX PWR: -15.0 dBm Max TX PWR: -8.0 dBm RX Sensitivity: -31.0 dBm Max In PWR: -8.0 dBm Link Budget: 16.0 dB
CFETF1015-205	Min TX PWR: -8.0 dBm Max TX PWR: -2.0 dBm RX Sensitivity: -34.0 dBm Max In PWR: -7.0 dBm Link Budget: 26.0 dB
CFETF1016-205 & CFETF1017-205	Min TX PWR: -5.0 dBm Max TX PWR: 0.0 dBm RX Sensitivity: -34.0 dBm Max In PWR: -7.0 dBm Link Budget: 29.0 dB
CFETF1029-205 & CFETF1029-206	Min TX PWR: -13.0 dBm Max TX PWR: -6.0 dBm RX Sensitivity: -32.0 dBm Max In PWR: -3.0 dBm Link Budget: 19.0 dB
CFETF1029-207 & CFETF1029-208	Min TX PWR: -8.0 dBm Max TX PWR: -3.0 dBm RX Sensitivity: -33.0 dBm Max In PWR: -3.0 dBm Link Budget: 25.0 dB
CFETF1029-209	Min TX PWR: -5.0 dBm Max TX PWR: 0.0 dBm RX Sensitivity: -34.0 dBm Max In PWR: -3.0 dBm Link Budget: 29.0 dB
CFETF1029-210	Min TX PWR: -6.0 dBm Max TX PWR: 0.0 dBm RX Sensitivity: -34.0 dBm Max In PWR: -3.0 dBm Link Budget: 28.0 dB
Internal Jumpers	1: Enable/disable AutoCross; 2: Hardware or software configuration
Hardware: Converter mode is determined by 4-position switch settings Software: Converter mode is determined by most recently saved on-board microprocessor settings.	
4 dip switches	SW1: AutoNeg On/Off: (UP = Full) SW2: Pause: (UP = ON) SW3: Link Pass Through: (UP = ON) SW4: Far End Fault: (UP = enable)
Status LEDs	Power: Steady green LED indicates connection to external AC power LKF (Fiber Link): Steady LED indicates fiber link connection RXF (Fiber Receive): Flashing LED indicates data reception on fiber link RXC (Copper Receive): Flashing LED indicates data reception on copper link LKC (Copper Link): Steady LED indicates copper link connection
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)
Compliance	UL Listed; C-UL Listed (Canada); CISPR/EN55022 Class A & B; FCC Class A & B; CE Mark
Warranty	Lifetime

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Transition Networks's®

Advanced Features

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

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.

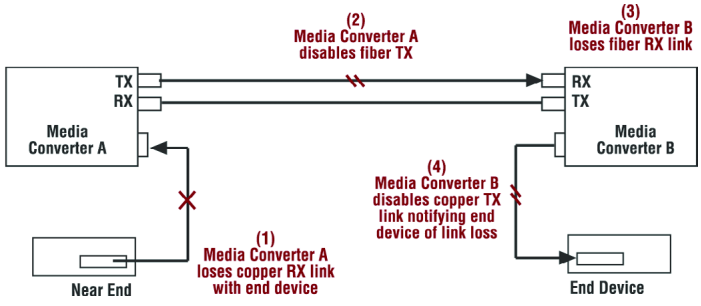
- No user intervention required to determine best mode of operation
- Optimal link established automatically
- Quick and easy installation

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.

Link Pass Through

Link Pass Through is a troubleshooting feature that allows the media converter to monitor both the fiber and copper RX ports for loss of signal. In the event of a loss of RX signal on one media port, the converter will automatically disable the TX signal of the other media port, thus "passing through" the link loss. (see diagram below)

- End device automatically notified of link loss
- Prevents loss of valuable data unknowingly transmitted over 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, including:

- AutoCross™
- Auto-Negotiation
- Link Pass Through
- Pause
- Far End Fault

Pause (IEEE 802.3xy)

PAUSE signaling is an IEEE feature that is used to temporarily suspend data transmission between two devices in the event that one of the devices becomes overwhelmed. In the event that a device needs some time to clear network congestion, it will send out a PAUSE signal to the other end device, which will then wait a pre-determined amount of time before re-transmitting the data. Transition's converters will pass PAUSE signaling unhindered; ensuring that the message is delivered to the end device.

- PAUSE enabled devices allowed to work properly
- Prevents loss of valuable data transmission
- Reduces bottlenecks and allows for efficient use of network devices

PAUSE signaling is not standardized over fiber media. Transition's media converters will communicate this signaling over fiber between the converters to pass this signaling on to the other end device.

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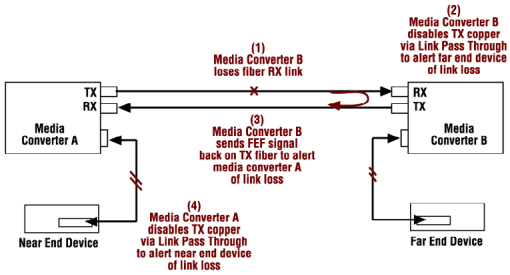
Far End Fault (802.3u)

Far End Fault (FEF) is a troubleshooting feature that is generally used in conjunction with Link Pass Through to notify both end devices of a loss of link. In the event of a loss of the fiber RX signal on the far end converter the converter will automatically generate a Far End Fault signal and send it on its TX fiber port to notify the near end converter of a fiber link loss. Link Pass Through will then disable the copper links on both ends; alerting both end devices of network trouble (see diagram below).

- Both end devices automatically notified of link loss
- Prevents loss of valuable data unknowingly transmitted over invalid link
- Allows for quick diagnosis and resolution of network problems



Transition Networks media converters that include the FEF feature do not need to be used as pictured above as they will work with other network devices that support Far End Fault per IEEE standards.

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