



DS3-T3/E3 Coax to Fiber

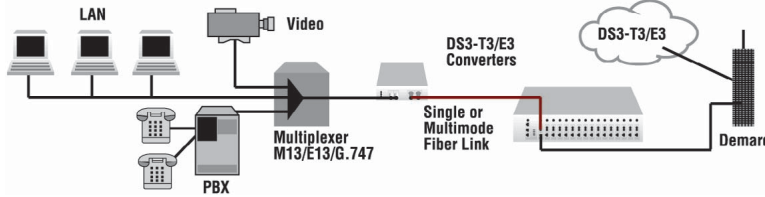
Point System™ Slide-In-Module Media Converters

CCSCF30xx-10x

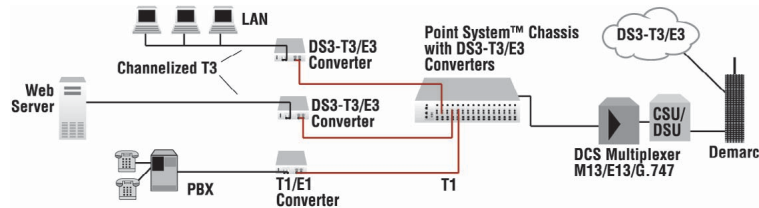


Convert Coax to Fiber

Integrate Voice & Data on Fiber Network



Upgrade from Multiple T1



The DS3-T3/E3 copper to fiber media converter will provide a solution for those users that desire to extend the point of presence of their DS3 or E3 Connection or use it to connect remote locations via T3/E3.

Features

- ▶ AIS (Alarm Indication Signal) All 1's or Blue detected on both ports. (unframed)
- ▶ AIS generated in both directions selectable Blue or 1's.
- ▶ Digital Loopback on fiber & copper ports
- ▶ Coax Line build out for operation less than 255 feet or 255 feet to 1000 feet.
- ▶ Switch selectable DS3/T3 or E3 rate
- ▶ Remote Firmware Upgrade *see next page*

- ▶ LED indications for all operation modes
- ▶ Supports fractional/channelized DS3/E3
- ▶ Reporting features:
 - Report converter status to chassis management software:
 - Coax & Fiber Link status
 - Line Build out
 - DS3/T3/E3 mode
 - Hardware/Software mode
 - Coax & Fiber AIS
 - Local Coax & Fiber Loopback
- ▶ Write operation includes:
 - Coax Loopback
 - Fiber Loopback

Specifications

Standards ANSI, ITU-TS, AT&T, ETSI, G.703, G.921 and G.956

Fiber Optic Connector Specs

CCSCF3011-100 & CCSCF3013-100 & CCSCF3018-100
 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

CCSCF3014-100
 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

CCSCF3015-100
 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

CCSCF3016-100 & CCSCF3017-100
 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

Single Fiber Products

CCSCF3029-100 & CCSCF3029-101
 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

CCSCF3029-102 & CCSCF3029-103
 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

Switches
SW1: DS3/E3 selector: On for E3
SW2: Coax Line build out: On for less than 255 feet of cable
SW3: AIS (unframed) transmit: On for transmit AIS if receive loss of carrier
SW4: AIS Blue/AIS All 1's: On for Blue alarm
Front Switch: Right/Left – loop-back fiber/copper, Center – Normal

Status LEDs
Power: On for normal operation
Copper: Green – Link is up; Green Flashing – Coax is in loop-back mode; Yellow – AIS (unframed) detected.
Fiber: Green – Link is up; Green Flashing – Fiber is in loop-back mode; Yellow – AIS (unframed) detected.

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

Power Consumption 6.0 watts

Environment See chassis specifications

Shipping Weight 1 lb. [0.45 kg]

Compliance CISPR/EN55022 Class A; FCC Class A; CE Mark

Warranty Lifetime

Ordering Info

Product Number	Port One	Port Two
CCSCF3011-100	(2) Coax (BNC)	1300nm multimode (ST) [2 km / 1.2 miles]
CCSCF3013-100	(2) Coax (BNC)	1300nm multimode (SC) [2 km / 1.2 miles]
CCSCF3018-100	(2) Coax (BNC)	1300nm multimode (MT-RJ) [2 km / 1.2 miles]
CCSCF3014-100	(2) Coax (BNC)	1310nm single mode (SC) [20 km/12.4 miles]
CCSCF3015-100	(2) Coax (BNC)	1310nm single mode (SC) [40 km/24.9 miles]
CCSCF3016-100	(2) Coax (BNC)	1310nm single mode (SC) [60 km/37.3 miles]
CCSCF3017-100	(2) Coax (BNC)	1550nm single mode (SC) [80 km/49.7 miles]

Product Number	Port One	Port Two
Single Fiber Products <i>Note: Recommended use in pairs (see next page)</i>		
CCSCF3029-100	(2) Coax (BNC)	1310nm TX / 1550nm RX single fiber single mode (SC) [20 km/12.4 miles]
CCSCF3029-101	(2) Coax (BNC)	1550nm TX / 1310nm RX single fiber single mode (SC) [20 km/12.4 miles]
CCSCF3029-102	(2) Coax (BNC)	1310nm TX / 1550nm RX single fiber single mode (SC) [40 km/24.9 miles]
CCSCF3029-103	(2) Coax (BNC)	1550nm TX / 1310nm RX single fiber single mode (SC) [40 km/24.9 miles]

Note: the CCSCF cards cannot be used with the CPSMC0100-200 1-Slot Point System™ Chassis



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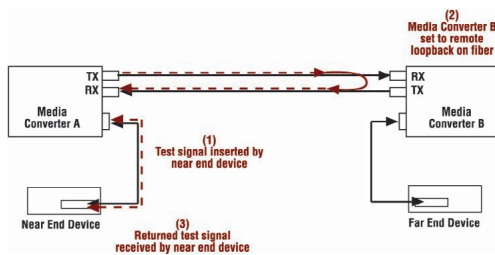
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ADVANCED PRODUCT FEATURES

▶ Loopback

Select Transition Networks products are equipped with Loopback. This feature puts a converter in a special mode that enables the device to loop back the signal from the RX port to the TX port on either media for testing and troubleshooting purposes. Test signals from a tester (Firebird, etc.) can then be inserted into the link and looped back as received by a device to test a particular segment of the link (i.e. copper or fiber). Loopback can be either local or remote depending on the location of the converter in the link.

- ▶ Allows network diagnostics from local or remote location
- ▶ Quickly pinpoints problem areas of end to end link by testing a particular segment



Some converters have separate copper and fiber loopback functions that can be enabled separately, while others will loopback both copper and fiber at the same time when enabled. Please refer to the specific product page for details.

▶ 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.

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.

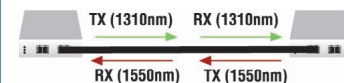
Generally, media converters are low-level OSI model devices with no IP or MAC addresses and therefore are transparent to the network. This "transparency" makes them very inexpensive and easy to use, but also can make troubleshooting the network very difficult. In an effort to overcome this difficulty 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.

▶ 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



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