High Speed Serial: V.35 / X.21 / RS449 / RS530 / RS232
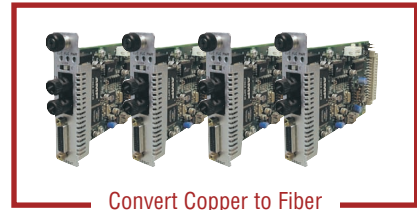## with Remote Management
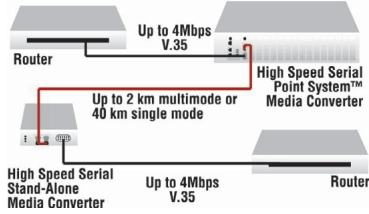
Point System™ Slide-In-Module Media Converters

CPSVT26xx-10x

Convert Copper to Fiber

▶ Extend Distance Between Routers

Router — Up to 4Mbps V.35
High Speed Serial Point System™ Media Converter
Up to 2 km multimode or 40 km single mode
High Speed Serial Stand-Alone Media Converter — Up to 4Mbps V.35 — Router

▶ Extend Network Distance

Extend the point of presence of a copper V.35 / X.21 / RS449 / RS530 / RS232 connection at data rates up to 10 Mbps.

Features

▶ Supports remote management of a stand-alone converter *see next page*

▶ Copper & Fiber Loopback *see next page*

▶ LED indications for Lock, Loopback & Data

▶ Ability to use a combination of any copper interface (RS449 to V.35, RS530 to X.21, DTE-DTE, DTE-DCE, DCE-DCE, etc.) All interfaces converted at the physical level.

▶ Synchronous or asynchronous capability

▶ Remote Firmware Upgrade *see next page*

Management Features

▶ Report converter status to chassis management software
 • Local Fiber Lock status
 • Local/Remote Hardware/Software mode
 • Local/Remote Speed select
 • Local/Remote Loopback
 • Local/Remote Cable type reporting, near end
 • Local/Remote Clock polarity setting

▶ Write operation includes:
 • Local or Remote Loopback
 • Local or Remote Speed Select

Ordering Info

Product Number	Port One	Port Two
CPSVT2611-100	26-pin	1300nm multimode (ST) **[2 km/1.2 miles]**
CPSVT2613-100	26-pin	1300nm multimode (SC) **[2 km/1.2 miles]**
CPSVT2614-100	26-pin	1310nm single mode (SC) **[20 km/12.4 miles]**
Single Fiber Products *Note: Recommended use in pairs (see next page)*		
CPSVT2629-100	26-pin	1310nm TX / 1550nm RX single fiber single mode (SC) **[20 km/12.4 miles]**
CPSVT2629-101	26-pin	1550nm TX / 1310nm RX single fiber single mode (SC) **[20 km/12.4 miles]**
CPSVT2629-102	26-pin	1310nm TX / 1550nm RX single fiber single mode (SC) **[40 km/24.9 miles]**
CPSVT2629-103	26-pin	1550nm TX / 1310nm RX single fiber single mode (SC) **[40 km/24.9 miles]**

Cable Assemblies [cable length: 3 meters / 10 feet]

Product Number	Port One	Port Two
21DCE-3	DB-15 (FT) (26-pin)	(DCE) [3 m/10 ft.]
21DTE-3	DB-15 (MT) (26-pin)	(DTE) [3 m/10 ft.]
232DCE-3	DB-25 (FT) (26-pin)	(DCE) [3 m/10 ft.]
232DTE-3	DB-25 (MT) (26-pin)	(DTE) [3 m/10 ft.]
35DCE-3	V.35 (FT) (26-pin)	(DCE) [3 m/10 ft.]
35DTE-3	V.35 (MT) (26-pin)	(DTE) [3 m/10 ft.]
449DCE-3	DB-37 (FT) (26-pin)	(DCE) [3 m/10 ft.]
449DTE-3	DB-37 (MT) (26-pin)	(DTE) [3 m/10 ft.]
530DCE-3	DB-25 (FT) (26-pin)	(DCE) [3 m/10 ft.]
530DTE-3	DB-25 (MT) (26-pin)	(DTE) [3 m/10 ft.]

Copper Distances

Standard	Range*
RS232/V.24	15 meters
RS449/V.36	1.2 km
V.35	600 meters
X.21	1.2 km
RS530	1.2 km

*For reference only. Contact Transition Networks for detailed range information.

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

Specifications

Standards	ITU-T; ISO-2593
Fiber Optic Connector Specs	
CPSVT2611-100 & CPSVT2613-100	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
CPSVT2614-100	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
Single Fiber Products	
CPSVT2629-100 & CPSVT2629-101	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
CPSVT2629-102 & CPSVT2629-103	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	Side panel, external DCE speed switch, sixteen position: • 0 – TT = Receive CLK • 1 – 56 Kbps • 2 – 64 Kbps • 3 – 112 Kbps • 4 – 128 Kbps • 5 – 256 Kbps • 6 – 384 Kbps • 7 – 512 Kbps • 8 – 768 Kbps • 9 – 1.024 Mbps • A – 1.544 Mbps • B – 2.048 Mbps • C – 3.072 Mbps • D – 4.096 Mbps • E – 6.144 Mbps • F – Asynchronous Mode Speeds can also be set on DCE converters locally or remotely via software. Front Panel, Loop-back Selector Switch: Right Position: Loop Fiber Back & Loop Copper Back Left Position: Normal Operation
Internal Jumpers	JP1: 2-position TX clock invert: S Position = No invert. (Pins 1-2 normal operation) JP2: 2-position RX clock invert: S Position = No invert. (Pins 1-2 normal operation)
Status LEDs	The Copper LED uses a green LED Smart Serial Link: Green - Link is up; Green Flashing - In loop-back mode; Fiber: Green - Link is up; Green Flashing - In loop-back mode; Power: Green - ON power applied to board
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, EN55024, EN60950 Class A; FCC Class A; CE Mark
Warranty	Lifetime

TRANSITION networks®
The Conversion Technology Experts

ADVANCED PRODUCT FEATURES

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.

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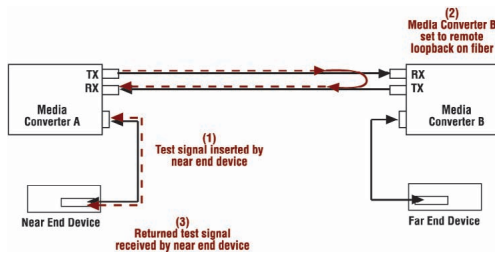
Some converters have separate copper and fiber loopback functions that can be enabled separately, while others will loopback both copper and fiber at the same time when enabled. Please refer to the specific product page for details.

▸ 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.

▸ Remote Management

All chassis-based converters from Transition Networks® can be managed through SNMP. Now, select stand-alone products can also be managed through SNMP when used in conjunction with a chassis based converter. While chassis based products are generally placed in the telecommunications room, stand-alone converters are generally placed in remote locations away from network administrators. Remote in-band management over fiber allows administrators access to the remote device to check status and enable/disable features or the device itself.

▸ Visibility of remote converters for network administrators

▸ Allows for centralized management of media 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
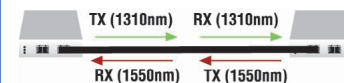
Single fiber technology is available on all Transition Networks Media Converters in maximum distance ranges from 20 to 80km.

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