iConverter® T1/E1

T1/E1 Managed Media Converter

The iConverter T1/E1 is a T1 (1.544Mbps) or E1 (2.048Mbps) copper to fiber media converter, and is available as a compact unmanaged standalone unit or a managed chassis plug-in module. The iConverter T1/E1 can be used to extend the demarcation point between service provider and customer location. The iConverter T1/E1 media converters operate in pairs, extending distances over fiber

Designed as a transparent repeater, the iConverter T1/E1 supports standard T1, E1 and Primary Rate Interface (PRI), voice or data. The converter supports AMI, B8ZS and HDB3 line codes. DIP-switches provide easy configuration of T1/E1 line codes and line build-out.

The T1/E1 supports both standard,CWDM and DWDM Small Form Pluggable (SFP) transceivers, enabling adaptability to different fiber types, distances and wavelengths, providing maximum flexibility across a variety of network architectures and topologies.

The T1/E1 also supports multimode and single-mode dual fiber with ST, SC and LC connectors; and single-mode single-fiber with SC connectors.

The iConverter T1/E1 features user-selectable Local Loopback, Force 1s to Copper, Force 1s to Fiber, and Fiber Optic Test modes to facilitate diagnosis of the remote unit, eliminating the cost of external hardware or support personnel at each end of a link.

The copper interface features an RJ-48 connector for balanced T1/E1 applications. For connection to 75 ohm BNC equipment, a RJ-48 to BNC cable (9140-3) is available.

iConverter T1/E1 media converters are available as compact, unmanaged standalone units, or chassis plug-in modules that can be managed with a Management Module (NMM2) or Network Interface Device (NID) installed in the chassis. The management module provides access to all the advanced features on the module.

The T1/E1 standalone models are available with an external AC to DC power adapter or with a 2-pin terminal connector for direct connection to DC power. The standalone module can be wall/rack mounted with the integrated mounting brackets or DIN rail mounted with an optional DIN rail mounting clip (8251-0).

The hot-swappable plug-in module can be mounted in a high-density 19 or 5-Module chassis with redundant AC and DC power supplies. It can also be mounted in a 2-Module or in a 1-Module chassis with AC or DC power input.

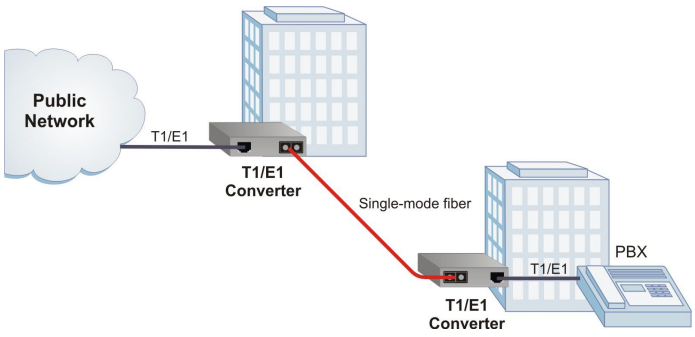
SFP not included

KEY FEATURES

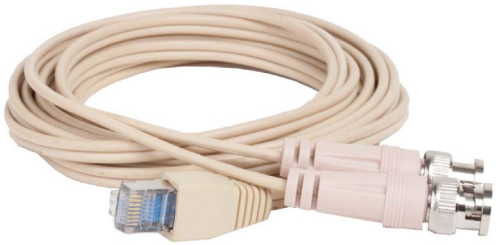
- RJ-48 to fiber media converter that supports ANSI, AT&T, ETSI and ITU standards
- Supports T1, E1 and Primary Rate Interface voice and data
- Supports AMI, B8ZS and HDB3 line codes
- Easy configuration of T1/E1 line codes and line build-out
- User-selectable Local Loopback, Force 1s on Copper or Fiber and Fiber Test modes
- Supports multimode and single-mode dual fiber with ST, SC and LC connectors; and single-mode single-fiber with SC connectors
- Small Form Pluggable (SFP) transceivers with standard, CWDM and DWDM wavelengths
- LED displays status of each port
- Plug-in modules are hot-swappable in 19-Module, 5-Module, 2-Module or 1-Module chassis
- Management is available with the addition of a management module to the chassis
- SNMP management via NetOutlook® provides real-time port and module status information, remote parameter configuration and trap notification
- Commercial (0 to 50°C) and wide (-40 to 60°C) temperature ranges
- TAA, BAA and NDAA compliant, and Made in the USA
- Lifetime Warranty and free 24/7 Technical Support

APPLICATION

The iConverter T1/E1 media converter provides a cost-effective solution for extending telecom demarcation points. A pair of T1/E1 converters is used to extend the demarcation between buildings via fiber. Multimode or single-mode fiber can be used, and fiber links can be extended up to 60km using single-mode fiber.



Use the 9140-3 RJ-48 to Coax Adapter cable (3 meters sold separately) to interface with types of equipment requiring a 75 Ohm coax connector.



SPECIFICATIONS

Description	***iConverter* T1/E1** T1/E1 Managed Media Converter	
Data Rates	T1 or ISDN PRI:	1.544Mbps
	E1:	2.048Mbps
Standard Compliances	ANSI: T1.403, T1.102 AT&T: T62411 ITU: G.703, G.704, G.706, G.736, G.755, G.823 ETSI: ETS 300 166	
Regulatory Compliances	Safety:	UL, CE, UKCA
	EMI:	FCC Class A
	ACT:	TAA, BAA, NDAA
Environmental	RoHS, WEEE, REACH	
Port Types	Copper:	T1/E1 (RJ-45/RJ-48)
	Fiber:	Dual fiber ST, SC, LC and SFP Single-fiber SC and SFP
Cable Types	Copper:	Category 3 or better (T1: 100 Ohm, E1: 120 Ohm) (Active Pairs are Pins 1, 2 and 4, 5)
	Fiber:	Multimode: 50/125µm, 62.5/125µm Single-mode: 9/125µm
MTBF (hrs)	Plug-in:	580,000
	Standalone w/o Adapter:	590,000
	Standalone w/ US Adapter:	250,000
	Standalone w/ Uni Adapter:	100,000

AC Power Requirements	AC Adapter: (US)	100 - 240VAC/50 - 60Hz 0.05A @ 120VAC
	AC Adapter: (Universal)	100 - 240VAC/50 - 60Hz 0.05A @ 120VAC
DC Power Requirements	DC Input: (Backplane)	3.3VDC, 0.7A @ 3.3VDC
	DC Input: (Terminal Block)	5 - 32VDC, 0.3A @ 9VDC 2-Pin Terminal (non-isolated)
	DC Input: (AC Adapter)	5 - 32VDC, 0.3A @ 9VDC 2.5mm Barrel Connector
Dimensions W x D x H	Plug-in:	0.85" x 4.5" x 2.8" (21.6 mm x 114.3 mm x 71.1 mm)
	Standalone:	3.8" x 4.8" x 1.0" (96.5 mm x 121.9 mm x 25.4 mm)
Weight	Plug-in:	8 oz. (226.8 grams)
	Standalone w/o Adapter:	1.0 lb. (453.6 grams)
	Standalone w Adapter:	1.5 lbs. (680.4 grams)
Temperature	Commercial:	0 to 50°C
	Wide:	-40 to 60°C
	Storage:	-40 to 80°C
Humidity	5 to 95% (non-condensing)	
Altitude	-100m to 4,000m	
Warranty	Lifetime warranty with 24/7/365 free Technical Support	

ORDERING INFORMATION

Step 1: Choose a Base Part Number (xxxx-x-pt)

Fiber Type	Distance	Connector Types				Tx / Rx Lambda (nm)	Min. Tx Power (dBm)	Max. Tx Power (dBm)	Min. Rx Power (dBm)	Max. Rx Power (dBm)	Min. Attenuation (dB)	Link Budget (dB)
		ST	SC	LC	SFP							
-	-	-	-	-	8719-0-pt	-	-	-	-	-	-	-
MM/DF	5km	8700-0-pt	8702-0-pt	8706-0-pt	-	1310 / 1310	-23	-12	-31	-12	-	8
SM/DF	30km	8701-1-pt	8703-1-pt	8707-1-pt	-	1310 / 1310	-15	-8	-31	-8	-	16
SM/DF	60km	8701-2-pt	8703-2-pt	8707-2-pt	-	1310 / 1310	-5	0	-31	-3	3	26
SM/DF	120km	-	8703-3-pt	8707-3-pt	-	1550 / 1550	-5	0	-31	-3	3	26
SM/SF[1]	20km	-	8710-1-pt	-	-	1310 / 1550	-15	-5	-30	-3	-	15
SM/SF[1]	20km	-	8711-1-pt	-	-	1550 / 1310	-15	-5	-30	-3	-	15
SM/SF[1]	40km	-	8710-2-pt	-	-	1310 / 1550	-8	0	-30	-3	3	22
SM/SF[1]	40km	-	8711-2-pt	-	-	1550 / 1310	-8	0	-30	-3	3	22

[1] When using single-fiber (SF) media converter models, the Tx wavelength on one end has to match the Rx wavelength on the other.
MM = Multimode, SM = Single-mode, DF = Dual Fiber, SF = Single-fiber
Contact Omnitron for other configurations and extended temperature (-40 to 75°C) models.
Order the appropriate Fast Ethernet SFPs separately. Visit the Omnitron Optical Transceivers web page. For chassis options, see iConverter Chassis Overview web page.

Step 2: Choose a Power Option (xxxx-x-pt)

<leave blank> = Plug-in module
D = Barrel Connector and AC/DC Power Adapter, 100-240VAC, 50-60Hz, with US power cord with integrated mounting brackets
E = Barrel Connector and Universal AC/DC Adapter, 100-240 VAC, 50-60Hz, No Power Cord, with integrated mounting brackets
F = Direct DC input, 2 pin terminal connector, no AC/DC power adapter, with integrated mounting brackets

Step 3: Choose a Operating Temperature Range (xxxx-x-pt)

<leave blank> = Commercial temperature (0 to 50°C)
W = Wide temperature (-40 to 60°C)

ACCESSORIES

Model Number	Description
8251-0	DIN-Rail Mounting Clips
8260-0	19" 1U Rack Mount Shelf for Standalone Modules (up to 4 converters)
9140-3	RJ-48 to Coax Adapter Cable (3 meters)
9142-1	Relay Breakout Adapter Cable