iConverter

iConverter® 4xT1/E1 MUX
T1/E1 Multiplexer

The *iConverter* 4xT1/E1 MUX multiplexes up to four T1/E1 copper circuits and one optional 10/100 Ethernet UTP port onto a fiber optic link. The aggregated services can be extended up to 120km across a fiber pair or up to 40km across a single fiber link.

The *iConverter* 4xT1/E1 MUX operates in pairs, and can be used in applications where services from legacy TDM equipment requires transport across long distances that exceed the reach or capacity of copper. This includes applications such as T1/E1 extension, mobile backhaul and building-to-building PBX connectivity, making it ideal for Enterprise, Telecom and Utility industries.

The 4xT1/E1 MUX supports fixed-fiber and Small Form Pluggable (SFP) transceivers, enabling adaptability to different fiber types, distances and wavelengths. The 4xT1/E1 MUX supports multimode, single-mode, single-mode single-fiber, and both standard and CWDM wavelengths.

The 4xT1/E1 MUX supports standard T1, E1 and Primary Rate Interface (PRI), voice or data. The converter also supports AMI, B8ZS and HDB3 line codes. DIP-switches provide easy configuration of the T1/E1 line codes and line build-out.

The copper interfaces feature four RJ-48 connectors for balanced T1/E1 applications. An optional adapter cable is available to convert each RJ-48 interface to a BNC interface for unbalanced E1 transport applications.

The 4xT1/E1 MUX features user-selectable local loop-back on both the copper and fiber ports, remote fiber loop-back and circuit test modes. This functionality facilitates diagnosis of the remote unit, and minimizes the need for test equipment and support personnel at each end of a link. Alarm relay and LEDs provide fault notification for loss of power, LOS and AIS.

The 4xT1/E1 MUX is available as a compact, unmanaged standalone unit. Both AC and DC models are available. The AC model accepts AC power input ranging from 100VAC to 240VAC, 50/60Hz, while the DC model accepts 18VDC to 60VDC.

- Multiplexes four independent T1 or E1 channels from copper links into one fiber link

- Supports optional multiplexed 10/100 copper Ethernet port with T1/E1 circuits

- Small Form Pluggable (SFP) transceivers or fixed-fiber connectors

- Supports multimode, single-mode, single-mode single-fiber, and both standard and CWDM wavelengths

- Locally configurable via DIP-switches

- Supports unbalanced E1 through RJ-48 to BNC adapter cable

- Configurable alarm relay contacts for audio/visual fault notification

- Supports local and remote fiber and copper loop-back modes

- Commercial and wide temperature ranges

- Lifetime Warranty and free 24/7 Technical Support

OST Omnitron Systems Technology, Inc.
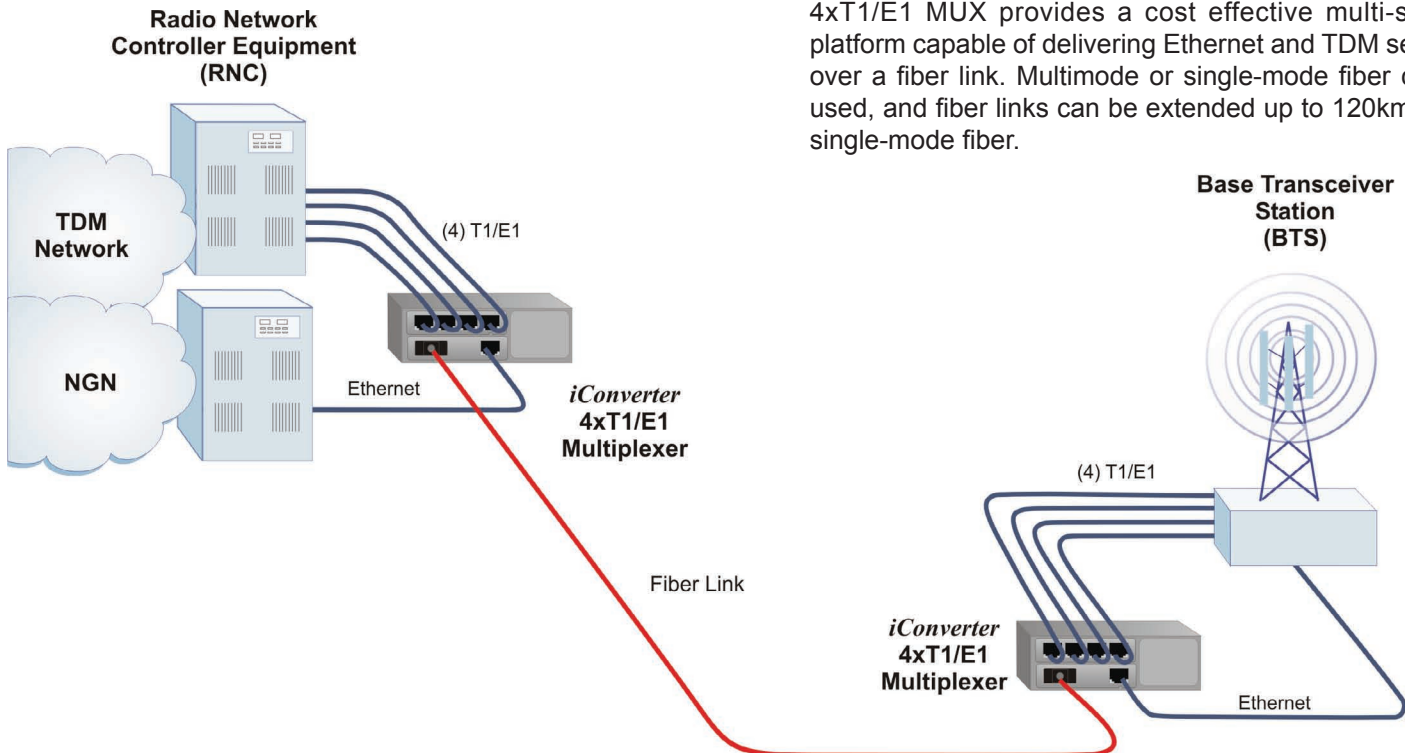
APPLICATIONS

Enterprise Application: PBX to PBX Connectivity

In this application, four T1s are extended between two PBXs using an *iConverter* 4xT1/E1 MUX over a fiber link. Multimode or single-mode fiber can be used, and fiber links can be extended up to 120km using single-mode fiber.
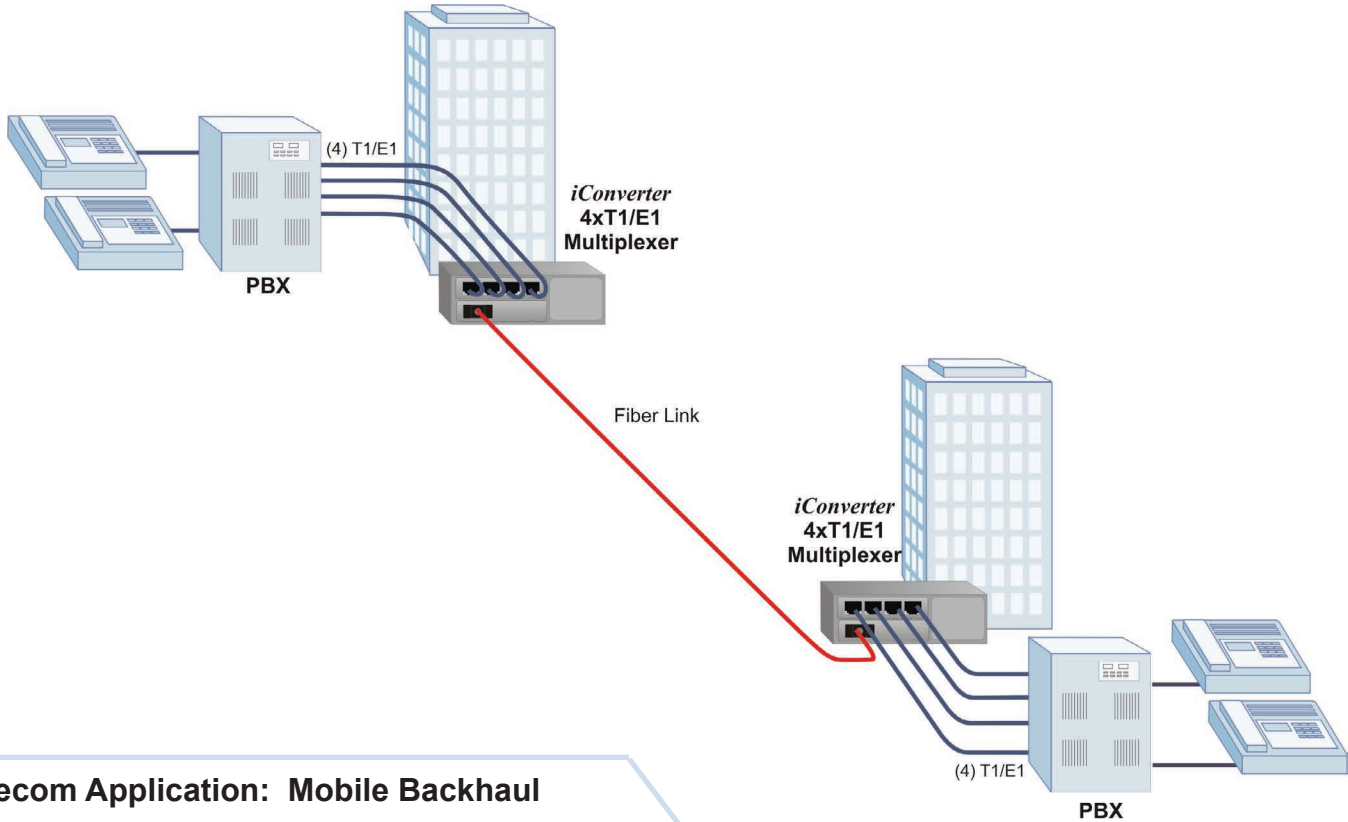
Telecom Application: Mobile Backhaul

In this application, an *iConverter* 4xT1/E1 MUX is used to extend up to four T1s from the TDM Network and an Ethernet connection from the NGN to a BTS. The 4xT1/E1 MUX provides a cost effective multi-service platform capable of delivering Ethernet and TDM services over a fiber link. Multimode or single-mode fiber can be used, and fiber links can be extended up to 120km using single-mode fiber.
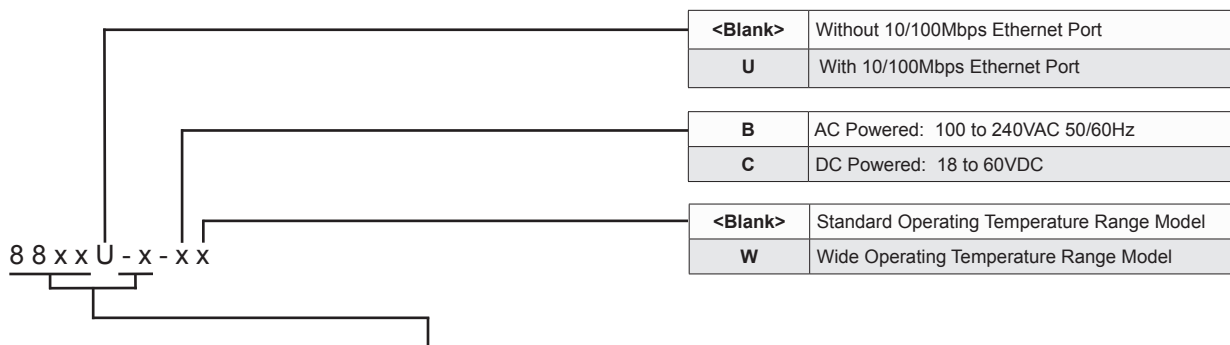

Omnitron Systems Technology, Inc.

SPECIFICATIONS

Model Type	*iConverter* 4xT1/E1 MUX
Protocols (TDM)	ANSI: T1.403, T1.102, AT&T: T62411, ITU: G.703, G.704, G.706, G.736, G.775, G.823, G.824, G.8261 ETSI: ETS 300 166
Protocols (Ethernet)	10BASE-T, 100BASE-TX, 100BASE-FX with 2048 bytes max. frame size
Copper Connectors	RJ-45/RJ-48
Fiber Connectors SFP: Dual Fiber: Single-Fiber:	LC SC, ST, LC MT-RJ SC
Controls	UTP Crossover, CableType / Distance, Loop, Fiber AIS, UTP AIS, Fiber Optic Test
LED Displays	Power, Test, RJ-45/RJ-48 Link, Fiber Optic Link

AC Power Input power requirements: Connector:	100 to 240VAC 50/60Hz 0.5A @ 120VAC IEC320
DC Power Input power requirements: Connector:	18 to 60VDC 2.0A @ - 48VDC 3-pin terminal
Dimensions	W: 6.7" x D: 5.51" x H: 1.87"
Weight	2.5 lbs
*Compliance	UL, CE, FCC Class A, NEBS 3
Temperature	
Standard:	0 to 50º C
Wide:	-40 to 60º C
Storage:	-40 to 80º C
Humidity	5 to 95% (non-condensing)
Altitude	-100m to 4000m
MTBF (hrs)	
AC Model	TBD
DC Model	TBD

*Compliances pending

ORDERING INFORMATION

<Blank>	Without 10/100Mbps Ethernet Port
U	With 10/100Mbps Ethernet Port

B	AC Powered: 100 to 240VAC 50/60Hz
C	DC Powered: 18 to 60VDC

<Blank>	Standard Operating Temperature Range Model
W	Wide Operating Temperature Range Model

8 8 x x U - x - x x

Type	Distance	Connector Type					Tx λ [nm]	Rx λ [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	MT-RJ	LC	SFP								
SFP	-	-	-	-	-	8839-0	-	-	-	-	-	-	-	-
MM/DF	2km	8820-5	8822-5	-	-	-	850	850	-23	-12	-31	-12	-	8
MM/DF	5km	8820-0	8822-0	8824-0	8826-0	-	1310	1310	-24	-14	-31	-14	-	7
SM/DF	30km	8821-1	8823-1	8825-1	8827-1	-	1310	1310	-15	-8	-31	-8	-	16
SM/DF	60km	-	8823-2	-	8827-2	-	1310	1310	-5	0	-31	-3	3	26
SM/DF	120km	-	8823-3	-	8827-3	-	1550	1550	-5	0	-31	-3	3	26
SM/SF	20km	-	8830-1♦	-	-	-	1310	1550	-15	-5	-30	-3	-	15
SM/SF	20km	-	8831-1♦	-	-	-	1550	1310	-15	-5	-30	-3	-	15
SM/SF	40km	-	8830-2♦	-	-	-	1310	1550	-8	0	-30	-3	3	22
SM/SF	40km	-	8831-2♦	-	-	-	1550	1310	-8	0	-30	-3	3	22

♦ When using single-fiber (SF) media converter models, the Tx wavelength on one end has to match the Rx wavelength on the other.

Consult the factory for other configurations

Adapter Cable	
9140-3	RJ-48 to BNC 3 ft cable

OST Omnitron Systems Technology, Inc.