



ORION TELECOM NETWORKS INC.

T1 to E1 Converters

Product Brochure & Data Sheet

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INTRODUCTION

T1 to E1 converter solution offers data (frame), voice (Mu Law to A Law) and signaling conversion between a T1 signal and an E1 signal. The T1 and E1 converter is available in 19 inch rack mount version. The converter provides a simple and cost effective method to convert a T1 stream to an E1 stream.



Each E1 < > T1 converter has an independent power supply and mounts in a 19-inch shelf. Upto 10 E1 < > T1 converters may be mounted in a single 19-inch shelf. The converters may be accessed by the user for configuration and monitoring through a Windows based GUI that is shipped with the system. It may be also accessed remotely over a TCP-IP network (optional extra).

Technical Specifications

E1 Interface

Line Rate	E1 (2.048Mbps \pm 50 bps)
Line Code	HDB3
Available Time Slots	1 - 31 Data or 1-30 Voice
Voice Coding	A Law
Signaling	ITU-T, Q.421 and Q.422
Framing	G.704
Clock	Internal, Loop timed
Electrical	G.703
Jitter	G.823
Impedance	120 Ohms
Connectors	RJ-45 Female or Wire Wrap (both options available)

T1 Interface

Line Rate	T1 (1.544Mbps \pm 50 bps)
Line Code	B8ZS, AMI, (selectable)
Available Time Slots	1 - 24 Voice or 1-23 PRI ISDN
Voice Coding	Mu Law
Signaling	D4 (Robbed Bit Signaling), E&M wink start
Framing	D4
Clock	Internal, Loop Timed (from E1 clock)
Electrical	Meets ITU-T and ANSI T1 recommendations
Jitter	ITU-T 1.431
Impedance	100 Ohms
Connectors	RJ-45 Female or Wire Wrap (both options available)

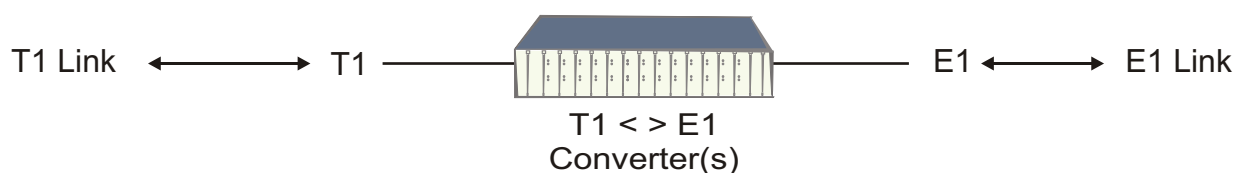
Mechanical Specifications

Rack Mounting	Standard 19-inch DIN rack
Height	133.33mm. (3U)
Depth	260mm.
Width	477mm.
Slots	10 (Upto 10, E1 <> T1 Converters per 19-inch Shelf)

Power Supply

Input DC voltage	-48V DC (nominal)
Range of input	-40V to -60V DC
Output voltages	+5V
Input Voltage Reversal Protection	Provided in the Card
Over Current Protection	Provided in the Card
Short Circuit Protection	Provided in the Card (recovers automatically)
Under Voltage	< 4.5V
Over Voltage	5.4V to 5.6V
Efficiency at full load	>80% Typ.
Ripple at full load	<5mVrms
Spike at full load	<50mV
Power Consumption	2.5W - each E1 <> T1 Converter. 25W (10 E1 <> T1 Converters)
Temperature	0 C to 55 C
Humidity	95% RH (non-condensing)
Cooling	Convection Cooling

T1 to E1 Converter Application Diagram



Ordering Information

VCL-11100	19 - Inch Chassis
VCL-11120	T1 < > E1 Frame Converter (Optional)
VCL-11130	T1 < > E1 Frame, Voice and Signaling Converter (Optional)
VCL-TCP-IP	Remote Configuration - TCP-IP Option

Technical specification are subject to change without notice.

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