

# FTEC-100

## T1/E1 Cross Rate Converter



The FTEC-100 is a standalone T1 (US Standard), E1 (European Standard) converter and timeslot cross connect which enables conversion between one T1 signal and one E1 signal. T1 and E1 signals with frames employ u-Law and A-Law encoding principles respectively and encode those analog signals into 64kbps digital data. The E1 interface supports CCS (PCM31) or CAS (PCM30) frames with or without CRC-4 and with HDB3 line coding. The T1 interface supports D4 or ESF frame formats with B8ZS or AMI line code. Multiple clock source selection provides maximum flexibility in connecting both T1 and E1. The clock source may be from the T1 recovery clock, from the E1 recovery clock, from the internal oscillator, from an external clock or via transparent timing. All setup controls can be performed via RS-232 console port and ASCII terminal. Tests and diagnostics can easily be performed. Diagnostics include T1 local/remote and E1 local/remote loop back

### Features

- Converts between T1 and E1 data and signaling
- Enable equipment to operate at T1 and E1 rates
- Support G.802 Annex B (T1 over E1)
- Configures A-law/ $\mu$ -law and signaling conversion
- Transparent conversion at 64kbps timeslot level
- Controlled slip for buffer over or under flow
- 24 timeslots of T1 Nx64 can be inserted into E1 Nx64, 30/CAS or 31/CCS timeslots

### Specifications

<b>E1 interface</b>	Framing	CAS/PCM30 or CCS/PCM31 selectable
	Bit rate	2.048Mbps
	Line Code	HDB3
	Line Impedance	75 ohm (BNC) / 120 ohm (RJ-45)
		Voice channel sample rule A-Law
	CRC check	CRC-4 enable/disable
	Pulse amplitude	Nominal 2.37V $\pm$ 10% for 75ohm, Nominal 3.00V $\pm$ 10% for 120ohm
	Zero amplitude	$\pm$ 0.1V
	Connector	RJ-45 and BNC pair
	<b>Specifications</b>	Framing
Bit rate		1.544Mbps
Line Code		B8ZS / AMI
Equalization		0 ~ 655 feet settable
CRC check		Voice channel sample rule $\mu$ -Law CRC-6 when ESF

<b>T1 interface</b>	Line Impedance	100 ohms
	Transmit Pulse level	3.0V $\pm$ 10%,
	Receive signal level	0 ~ -10dB
	Connector	RJ-45
<b>LEDs</b>	PWR, Sys, Test, T1/E1	
<b>Standards</b>	ITU-T G.703, G.704, G.706, G.823, G.824, ANSI T1.403	
<b>Power</b>	AC	100~240 V
	DC	36~72 V
<b>Power Consumption</b>	< 5W	
<b>Dimensions</b>	201 x 135 x 35 mm (D x W x H)	
<b>Weight</b>	130g	
<b>Temperature</b>	0 ~ 60°C (Operating), -10 ~ 70°C (Storage)	
<b>Humidity</b>	10 ~ 90% non-condensing	
<b>Certification</b>	CE, FCC, RoHS compliant	
<b>MTBF</b>	57,000 hrs	

### Application



### Ordering Information

Model Name	Description
<b>FTEC-100/AC</b>	E1/T1 Cross rate converter with RS232 console and built-in AC power
<b>FTEC-100/DC</b>	E1/T1 Cross rate converter with RS232 console and built-in DC power

Power Type  
**FTEC - 100** –    
 Example: FTEC - 100 – AC