ETU011
Single Modular Port E1 CSU/DSU

The ETU011 stand-alone DSU/CSU is a digital access unit for Unframed E1, Fractional E1, or Fractional cascaded E1 service. The ETU011 data channel supports user-selectable transmission rates via randomly selected E1 timeslots, which provides integral multiples of 64kbps, up to a maximum 2.048Mbps (unframed), for a line attenuation of up to 43 dB on twisted pair or coax cable. This provides an approximate operating range up to 2km (using 22AWG). The ETU011 packs the data channels into the E1 link in user-selected time slots. The unused time slots can insert IDLE code (in frame mode). The ETU011 front panel sports status LEDs for monitoring both the CSU and DSU conditions and push button switches for initiating local and remote loopback with integral BERT.
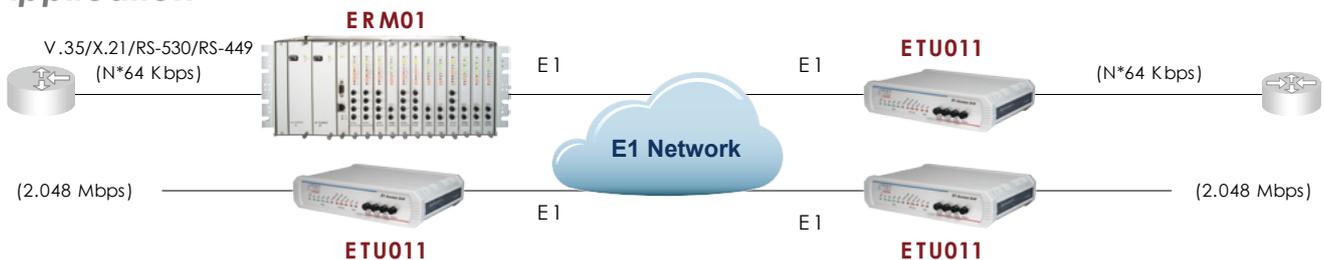
Features

- Supports Fractional E1 and Unframed E1 service
- Removable interfaces, support V.35, X21, RS-530, RS-449, RS-232, G.703 Co-directional, NRZ, Ethernet Bridge and Router
- I/O connectors on rear panel

- Multiple clock source selection
- (Internal or External: E1 recovery, DTE or DCE)
- Built-in BERT with V.54 diagnostic capabilities for performing local and remote loopback

Specifications

G.703 E1		
Framing	Framed CCS (PCM31) CAS (PCM30)/ Unframed CRC4 on/off	
Line Code	AMI/ HDB3	
Bit rate	N*56K or N*64Kbps, where N=1~31 in CCS or N equal 1~30 in CAS	
Relative receive level	-43dB	
Transmit level:		
Pulse	Nominal 2.37V ±10% for 75 ohm	
Amplitude	Nominal 3.00V ±10% for 120 ohm Zero amplitude ±0.1V	
Jitter performance	According to ITU-T G.823	
Connectors	BNC(unbalanced), RJ-48(balanced)	
Clock modes:		
Clock mode 0	Receive & transmit clock (DCE1) (recovered) to the sync DTE	
Clock mode 1	Receive & transmit clock (DCE2) (internal oscillator) to the sync DTE	

G.703 E1		
Clock mode 2	Receive clock to the sync. and transmit (DTE1) clock from the sync device	
Clock mode 3	Receive and transmit clock from the (DTE2) sync DCE (from ETC and ERC pin)	
Clock mode 4	Receive and transmit clock from the (DTE3) sync DCE (all from ETC pin)	
Indicators	LEDs (Power, TD, RD, RTS, DCD, Signal loss, Sync loss, Alarm)	
Standards	ITU-T G.703/G.704/G.706 & G.732	
Power Input	AC: 90-250VAC, DC: -18 ~ -75VDC	
Power Consumption	10W	
Dimensions	250 x 195 x 45 mm (D x W x H)	
Weight	0.51kg	
Temperature	0°C ~ 50°C (Operating), -10°C ~ 70°C (Storage)	
Humidity	10 ~ 90% non-condensing	
Certification	CE, FCC, RoHS compliant	
MTBF	57,000 hrs	

Application

ERM01

V.35/X.21/RS-530/RS-449 (N*64 Kbps)

E1   E1   **ETU011**   (N*64 Kbps)

E1 Network

(2.048 Mbps)

ETU011   E1   E1   **ETU011**   (2.048 Mbps)

Ordering Information

Model Name	Type	Description
ETU011-AC	Power	1U, 19/2", Data port to framed E1 w/ built-in AC 90 ~ 250 VAC
ETU011-DC	Power	1U, 19/2", Data port to framed E1 w/ built-in DC -18 ~ -72 VDC
Interface Module		**Description**
ETU/TTU-V35		V.35 interface module
ETU/TTU-X21		X.21 interface module
ETU/TTU-530		RS-530 interface module
ETU/TTU-449		RS-449 interface module
ETU/TTU-232		RS-232 ASYN/SYNC interface module
ETU/TTU-G64		G.703 64Kbps co-directional interface module
ETU/TTU-NRZ		NRZ interface module (4 * BNC)
ETU/TTU-ET100		10/100 Base-TX Ethernet E1 Bridge interface module
ETU/TTU-ET100R		10/100 Base-TX Ethernet Routing interface module

Power Type

ETU011 – ☐☐

Example: ETU011 – AC

Specifications & design are subject to change without prior notice. Please visit CTC Union website for more details.

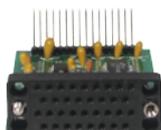ETU011   www.ctcu.com sales@ctcu.com   CTC union   9-12

Interface Module for ETU01A and ETU011

ETU/TTU-V35

V.35 Interface

Features :
- Compliant with ITU-T V.35 standards
- Winchester type 34-pin MB34 M-Block female connector
- Synchronous data rate at Nx64 (where N=1 to 32)
- Data Communications Equipment interface electrically
- compatible to ITU-T V.11 (RS-422)

ETU/TTU-232

RS-232 Interface

Features :
- Compliant with EIA RS-232-C (Unbalanced)
- Compatible to ITU-T V.24 25-pin D Sub female connector
- Synchronous data rate at 64 or 128Kb/s Asynchronous (transparent) at up to 19.2K or 38.4K Data Communications Equipment interface

ETU/TTU-X21

X.21 Interface

Features :
- Compliant with ITU-T X.21 standard (Balanced)
- 15-pin D Sub female connector
- Synchronous data rate at Nx64 (where N=1 to 32)
- Data Communications Equipment interface electrically compatible to V.11

ETU/TTU-530

RS-530 Interface

Features :
- Compliant with Category 1 EIA-530 (Balanced) 25-pin D Sub female connector
- Synchronous data rate at Nx64 (where N=1 to 32)
- Data Communications Equipment interface electrically compatible to RS-422

ETU/TTU-NRZ

Non-Return to Zero Interface

Features :
- 4 BNC connectors: TxD,TxC,RxD and RxC (Data&Clock)
- NRZ line coding Logic "1" 0V +/- 0.3V Logic "0" -1.5V +/- 0.3V
- Synchronous data rate Nx64 (where N=1 to 32)

ETU/TTU-449

RS-449(V.36) Interface

Features :
- Compliant with EIA/TIA-530-A (Balanced)
- 37-pin D Sub female connector
- Synchronous data rate at Nx64 (where N=1 to 32)
- Data Communications Equipment interface electrically compatible to RS-422

ETU/TTU-G64

**G.703 64K
Co-directional Interface**

Fea tures :
- Pulse shape compliant with ITU-T G.703
- Clock frequency: 64KHz
- Pulse Amplitude: 1.0V
- Zero Amplitude: 0V
- Impedance: 120 Ohms
- 15-Pin D Sub connector
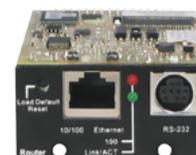- Range: up to 800m with 24AWG

ETU/ TTU-ET100R

10/100 Base-TX Ethernet Router

Features :
- Ethernet port IP Address/subnet mask
- Dynamic Routing RIP I & II, Send or Receive on Ethernet or WAN
- PPP, HDLC and Cisco® HDLC WAN protocol encapsulatoin

ETU/TTU-ET100

10/100 Base-TX Ethernet Bridge

Features :
- High performance bridge for 10Base-T or 100Base-TX Ethernet extension
- Transparent half / Full duplex support on WAN / LAN interface
- Provides Ethernet over E1 economically

Ordering Information

Model Name	Description
ETU/TTU-V35	V.35 interface module
ETU/TTU-X21	X.21 interface module
ETU/TTU-530	RS-530 interface module
ETU/TTU-449	RS-449 interface module
ETU/TTU-232	RS-232 ASYN/SYNC interface module
ETU/TTU-G64	G.703 64Kbps co-directional interface module
ETU/TTU-NRZ	NRZ interface module (4 * BNC)
ETU/TTU-ET100	10/100Base-TX Ethernet E1 Bridge interface module
ETU/TTU-ET100R	10/100Base-TX Ethernet Routing interface module

Interface

ETU/TTU – ☐☐☐

Example: ETU/TTU – V35

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