# Managed E1/T1 Access Unit - ETU01A

# ETU01A

## Single Port Modular E1 CSU/DSU with LCD and SNMP

The ETU01A single port stand-alone CSU/DSU provides our best digital access solution for E1 and Fractional E1 network services termination. A DTE device may be linked to an ETU01A at data rates of 56Kbps to 2048Kbps. The ETU01A features user replaceable dataport modules for a number of interface standards; including Ethernet bridge, router, V.35, X.21, RS-530, RS-449, G.703 64Kbps Co-directional and RS-232. The ETU01A supports local control and diagnostics via LCD display, keypad and LED status indicators located on the front panel as well as via a menu driven RS-232 console port in conjunction with a standard terminal.

These features enable users to easily configure the unit, execute the in-service diagnostics and monitor the network status. The ETU01A provides optional SNMP (Simple Network Management Protocol), which allows the user to remotely control, diagnose and monitor the system using industry standard SNMP protocol, our proprietary MIB and any network management software.
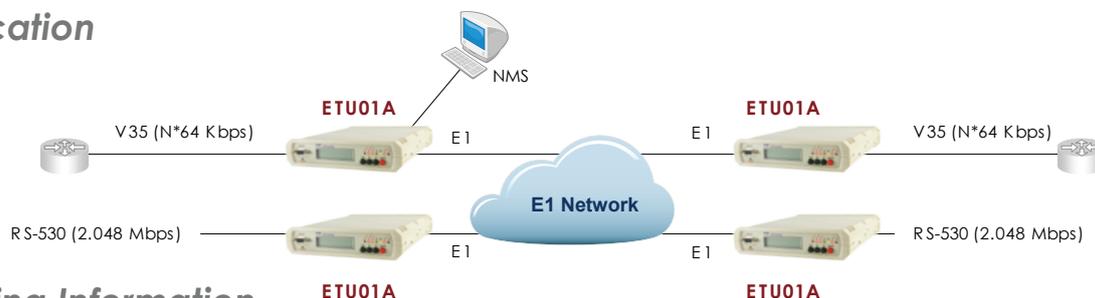
## Features

- Supports Fractional E1 and Unframed E1 service with EOC control
- Removable interfaces, support V.35, X.21, 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)
- Supports Console, Telnet and SNMP management
- Menu keys and LCD display
- SNMP V1, V2C, V3 supported
- Supported by Smart View EMS
- 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 | |
| LCD display | 16*2 character LCD with backlight | |
| Bit rate | N*56K or N*64Kbps, where N=1~31 in CCS or 1~30 in CAS | |
| Relative receive level | 0 to -43dB | |
| **Transmit level:** | | |
| Pulse | Nominal  2.37V ±10% for 75ohm | |
| Amplitude | Nominal 3.00V ±10% for 120ohm 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) | |
| **Diagnostics** | local loopback,Digital remote loopback, Test pattern | |
| **Indicators** | LEDs (Power, TD, RD, Signal loss, Sync loss, Error and test) | |
| **Standards** | ITU-T G.703/G.704/G.706 & G.732 | |
| **Power Input** | AC: 90-250VAC,   DC: 18-72 VCD | |
| **Power Consumption** | 10W | |
| **Dimensions** | 250 x 195 x 45 mm (D x W x H) | |
| **Weight** | 1.5kg | |
| **Temperature** | 0 ~ 50°C (Operating), -1 ~ 70°C (Storage) | |
| **Humidity** | 10 ~ 90% non-condensing | |
| **Certification** | CE, FCC, RoHS compliant | |
| **MTBF** | 65,000 hrs | |

## Application



## Ordering Information

| Model Name | Type | Description |
|---|---|---|
| ETU01A/AC | Power | 1U, 19/2", Data port to framed E1 with 100 ~240VAC |
| ETU01A/DC | Power | 1U, 19/2", Data port to framed E1 with -48VDC |

Power Type

ETU01A / □□

Example: ETU01A /AC

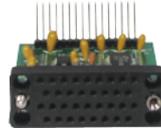| Interface Module | Description |
|---|---|
| ETU/TTU-V35 | V.35 interface module |
| ETU/TTU-X21 | X.21 interface module |
| ETU/TTU-530 | RS-530 interface module |
| ETU/TTU-449 | RS-449 interface module |
| ETU/TTU-232 | RS-232 ASYN/SYNC interface module |
| ETU/TTU-G64 | G.703 64Kbps co-directional 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 |

**Note:**  Please refer to page 9-11

# 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
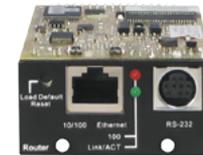- 15-Pin D Sub connector
- Range: up to 800m with 24AWG

## 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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