TSU ESP

T1/FT1 DSU/CSU with SNMP

Product Features

- Single V.35 DTE interface

- Nx56 or Nx64 operation

- Embedded SNMP and Telnet

- Control port provides SLIP access to SNMP or VT100 terminal configuration

- Two ESP option slots

- 10BaseT Ethernet port available with ESP Ethernet Card

- Optional ESP DBU cards include 4-wire SW56, Single BRI and External DCE

- Automatic or manual dial backup

- Time of Day and Weekend dial backup lockout options

- Support for T-Watch PRO™ software for optional PC-based configuration

- Standard five-year warranty

The ADTRAN TSU ESP is a full-featured T1-FT1 Data Service Unit/Channel Service Unit (DSU/CSU) with an integral SNMP Agent and optional, modular Dial Backup (DBU) capabilities. It provides an interface between T1 or Fractional T1 service and the customer's Data Terminal Equipment (DTE). The TSU ESP provides access to traditional dedicated point-to-point T1 circuits as well as Frame Relay services.
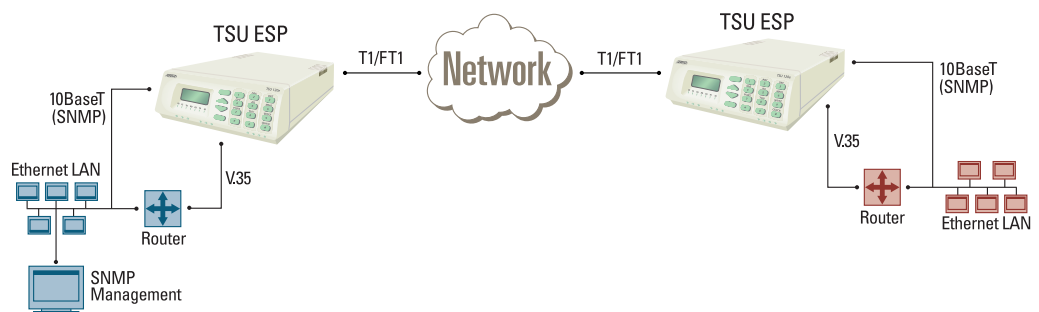
The TSU ESP supports synchronous data rates from 56 kbps to 1.536 Mbps at Nx56 or Nx64 kbps. A single V.35 physical interface provides a connection to the end user's DTE.

Embedded SNMP and Telnet are available through the integral SLIP or an optional 10BaseT Ethernet port when configured with the plug-in ESP Ethernet Card. Through the Management Information Base (MIB)-II standard and an ADTRAN-supplied enterprise MIB, the TSU ESP can be configured and monitored using standard SNMP network management programs such as HP OpenView®, Netview® and SunNet® Manager.

The Dial Backup capability of the TSU ESP allows for automatic switched backup in the event of a dedicated T1 line failure. The Dial Backup is accomplished through a family of

plug-in ESP DBU cards. Several versions of ESP DBU cards are available including 4-wire Switched 56, 2B+D ISDN, and External DCE. When a failure condition occurs on the T1/FT1, the DBU card uses the switched network (ISDN, 4-wire Switched 56) or DTR dialing (External DCE) to initiate a call to the remote end. The user can choose whether the unit automatically or manually reverts to the dedicated circuit when it is restored. Optional Weekend and Time of Day Dial Backup lockout options are provided in the TSU ESP DBU option menu.

The TSU ESP responds to standard loop-back commands from the telephone company central office. In addition, the user has several built-in test capabilities. These include V.54 remote loopback and 511 BERT test patterns. Complete unit control and configuration are available through a 16-key pad and a two-line, 16 character LCD display. A VT100 terminal configuration and control mode is also available through the control port. Optional Windows®-based PC management is available through the T-Watch PRO™ software package. Flash download capability is implemented for installation of new features and future enhancements.

ADTRAN

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Product Specifications

Network Interface
- **Line Rate:** T1/FT1 (1.544 Mbps)

Physical Interface
- **RJ-48C:** 8-pin modular

Framing
- SF/ESF

ESF Format
- AT&T 54016
- ANSI T1.403

Line Code
- AMI/B8ZS

Input Signal
- 0 to –36dB

DS0 Assignment
- Contiguous
- Alternating

T1 Transmit Timing
- Loop timed
- Internal
- DTE

DTE Interface
- **Bit Rate:** 56 kbps to 1.536 Mbps, Nx56 or Nx64 kbps (N=1 to 24)

Electrical
- CCITT V.35

Mechanical
- V.35 (Winchester Type 34 pin)

SNMP & Telnet Integrated
- **SLIP Port:** Physical Connector RJ-48S

ESP Slots
- Optional 10BaseT interface with ESP Ethernet module
- Optional dial backup with ESP Dial Backup modules

Performance Monitor
- **Performance Data:** BPVs/CRCs, ES, SES, UAS, % AS, % EFSEC, Alarms, Errors

Reports
- NI information stored for past 24 hours in 15 minute increments

PRMS
- ANSI performance report messages (user selectable)

Tests
- **Local:** Payload/line loopback, DTE loopback
- **Remote:** Payload/line loopback, V.54 (DTE) loopback
- CSU loopback

Built-In Test Patterns
- 511 (active DS0s) with error insert available
- All 1s (all DS0s)
- All 0s (all DS0s)

Agency Approvals
- FCC part 15, Class A, FCC Part 68, Industry Canada CS03, UL 1950, CUL

Environment
Operating Temperature
- 0 to 50°C, (32 to 122°F)

Storage Temperature
- -20 to 70°C, (-4 to 158°F)

Relative Humidity
- Up to 95%, non-condensing

Physical
- **Dimensions:** 2.4" H, 8" W, 10.4" D
- **Weight:** 4 lbs.
- **Power:** 115 vAC, 60 Hz, 5W

Product Includes
- Two 8-pin to 8-pin modular cables, modular to female DB-9 adapter, and user manual

Ordering Information

Equipment	Part #
TSU ESP	1200169L1
ESP Ethernet Card	1204005L1
ESP 4-wire Switched 56 DBU Card	1204001L1
ESP ISDN DBU Card	1204004L1
ESP External DCE DBU Card	1204006L1

TSU ESP Back