



T1 ESF CSU

Stand Alone and Smart 16 T1 Network Facility Interface

Product Features

- Provides T1 facility interface and jitter tolerance per ANSI T1.403, T1.102 and AT&T TR 62411
- Supports B8ZS or AMI formats
- Conversion for signal formats and line coding
- Transmits unframed "All 1's" during signal loss from DTE or T1 Network
- Front Panel LCD and 4 button keypad (ACE)
- Automatic or manual line build-out configuration
- Standalone ACE package or Smart 16 single slot card
- Supports Performance Report Messages of ANSI T1.403 and AT&T 54016 maintenance messages
- Industry-leading five-year North American warranty

The ADTRAN T1 ESF CSU™ is a full-featured T1 Channel Service Unit used to connect T1 data terminal equipment (DTE) such as a PBX, switch or channel bank to T1 facilities. Capable of interfacing to both B8ZS or AMI circuits, the T1 ESF CSU can convert signal formats or line code to integrate older equipment. The ESF CSU is designed to provide alarms, loopbacks, signal regeneration, line build-out, and surge protection, while maintaining 1's density for the DTE and T1 network.

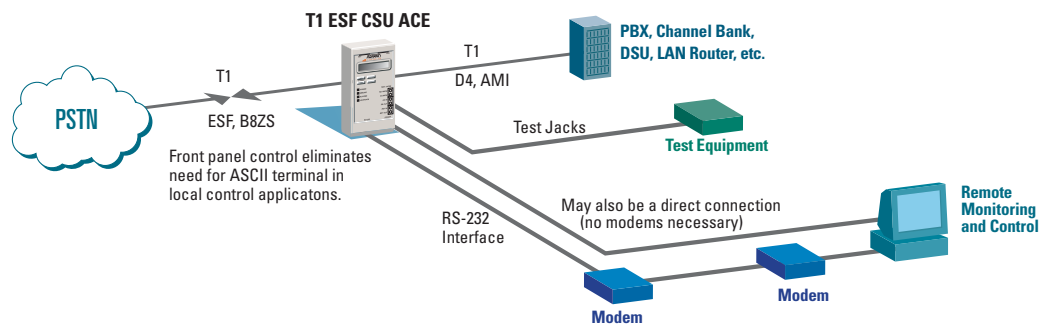
The T1 ESF CSU ACE is suitable for wall-mounting or desktop use, while the T1 ESF CSU Smart 16 Card occupies a single slot in the ADTRAN Smart 16 shelf. A front panel LCD and four user keys on the front of the ACE provide easy configuration and unit monitoring from the front panel. The Smart 16 ESF CSU card can be controlled from the shelf controller through a VT100 interface or the optional Datamate™. For SNMP management, the Smart 16 ESF CSU card is supported by the Smart 16e controller and the ADVISION software package.

The T1 ESF CSU provides a T1 network interface and a DSX-1 DTE connection through modular RJ48C jacks. For testing purposes, the T1 ESF CSU is capable of initiating several built-in local and remote loopback tests and

conducting stress testing of the network with built-in test patterns. For more extensive network testing, the unit uses bantam jack access for external test equipment. To aid with circuit monitoring, the T1 ESF CSU gathers ANSI PRMS information in 15 minute intervals for 24 hours, which is fully accessible from the front panel, over the FDL, or via a dial-up modem connection.

Remote configuration is made simple by using the FDL channel of a T1 ESF formatted circuit with the front panel or the Smart 16 controller interface. Using the remote configuration capability of the T1 ESF CSU enables central site control and setup for ADTRAN T1 CSUs or TSU devices. Compatibility with the popular T-Watch PRO™ software package enables the T1 ESF CSU to integrate easily into ADTRAN TSU environments.

For additional T1 applications, ADTRAN provides several T1 DSU/CSUs and T1 Multiplexers for combining traditional DSX-1 functionality with additional DTE ports. The TSU 100e™, TSU 120e™ and TSU 600e™ are modular T1 DSU/CSUs with embedded SNMP and are capable of supporting a single DSX-1 interface and up to 22 DTE interfaces for data or video applications.





ADTRAN, Inc.

Attn: Enterprise Networks
901 Explorer Boulevard
Huntsville, AL 35806

P.O. Box 140000
Huntsville, AL 35814-4000

256 963-8000 voice
256 963-8699 fax
256 963-8200 fax back

General Information

800 9ADTRAN
info@adtran.com
www.adtran.com

Pre-Sales

Technical Support

800 615-1176 toll-free
application.engineer@adtran.com
www.adtran.com/support

Where to Buy

877 280-8416 toll-free
channel.sales@adtran.com
www.adtran.com/where2buy

Post-Sales

Technical Support

888 423-8726
support@adtran.com
www.adtran.com/support

ACES Installation & Maintenance Service

888 874-ACES
aces@adtran.com
www.adtran.com/support

International Inquiries

256 963 8000 voice
256 963-6300 fax
international@adtran.com
www.adtran.com/international

For the regional office nearest you, visit:

www.adtran.com/where2buy



I.S. EN ISO 9001
ADTRAN is a
ISO 9001 registered company.



TL 9000
ADTRAN is a
TL 9000 registered company.

Printed in the U.S.A.
61203025L1-8C April 2003
Copyright © 2003 ADTRAN, Inc.
All rights reserved.

T1 ESF CSU

Stand Alone and Smart 16 T1 Network Facility Interface

Product Specifications

Network Interface

Line Rate

- T1/FT1 (1.544 Mbps)

Physical Interface

- RJ48C: 8-Pin Modular

Specifications

- ANSI T1.403, AT&T TR62411

Framing

- SF/ESF

Line Code

- AMI/B8ZS

ESF Format

- ANSI T1.403, AT&T 54016

Input Signal

- 0 to -36dB

Transmission Type

- Regenerative transparent: Network & DTE

User Testing

Local

- Payload/Line (NI), DTE (T1)

Remote

- Payload/Line (NI)

Test Patterns

- 1:8, All 0's, All 1's

Performance Monitoring

Performance Data

- BPVs/CRCs, ES, SES, UAS, %AS, %EF SEC
- Alarms, Error Rates

Reports

- NI information stored 24 hrs, every 15 min.

PRMS

- ANSI Performance Report
- Messages (User Selectable)

Equipment Interface

Compliance

- ANSI T1.403, AT&T 62411

Receiver Performance

- Automatic Line Build-out for 0-655 ft.

Keep Alive Signal

- Unframed/framed "All 1's" loss of DTE signal

User Options

Mounting

- Desktop or Wallmount (ACE)
- Single Slot in ADTRAN Smart 16 Chassis

Bantam Jacks

- Test Signal access to Network & DTE
- Non-interrupt signal receive: Network & DTE

LED Indicators (ACE)

- Power
- Alarms
- Errors
- Loopback

LED Indicators (SM 16)

- Status
- Net. & Eq. LOS
- Net. & Eq. AIS
- Net. & Eq. OOF
- Net. & Eq. Yellow Alarm
- Test
- Net. & Eq. Code Violation

Compliance

- FCC part 15, Class A, Part 68, Industry Canada CS03, UL 1459, CUL

Environment

Operating

- 0° to 50°C (32° to 122°F)

Storage

- -20° to 70°C (-4° to 158°F)

Relative Humidity

- Up to 95%, non-condensing

Dimensions

- ACE: 1.675"H x 7.22"D x 4.05"W
- Smart 16 Card: Standard ADTRAN SM 16

Weight

- 1 lb.

Power

- ACE: -42 to -56 VDC, 2.5W
- Smart 16 Card: From Smart 16 Chassis

Product includes

- Manual, T1 Loopback Test Adapter, and RJ45 Cable
- ACE includes AC power supply

Ordering Information

Equipment	Part #
T1 ESF CSU ACE	1203025L1
T1 ESF CSU Smart 16 Rackmount Card	1202066L1



Specifications subject to change without notice. ADTRAN, Datamate and T1 ESF CSU are trademarks of ADTRAN, Inc. All other registered trademarks and trademarks mentioned in this publication are the property of their respective owners.