

# ESU 120e

## E1/FE1 MULTIPLEXER

### PRODUCT FEATURES

- Embedded SNMP management via SLIP or 10BaseT interface
- Single DB-25 DTE interface supporting V.35, V.36, X.21/V.11, or EIA-530
- Integrated G.703 Drop interface for PBX connectivity
- Single option module slot supports up to four additional DTE ports
- Customer interface modules available for Frame Relay, High-Speed Data, and Dial Backup
- Integrated IP/IPX router available
- E1 HDSL version available
- Front panel, back-lit LCD for configuration and monitoring
- T-Watch PRO™, ADVISION™, and Telnet support for local and remote units
- Standard 5-Year Warranty

The ADTRAN ESU 120e™ is a modular, full featured E1-Fractional E1 Multiplexer that supports a wide range of end-user applications. Providing a flexible data port and a G.703 Drop port, the ESU 120e supports international applications combining digital voice and high-speed data. For application flexibility, the ESU 120e can utilize most ADTRAN TSU family data modules in the single expansion slot. The embedded Simple Network Management Protocol (SNMP) allows for complete monitoring and control over the ESU 120e through both a SLIP and a 10BaseT Ethernet interface.

A key feature of the ESU 120e is the support of future growth through the unit's single expansion slot. End-user upgradeable expansion modules allow for the connectivity of up to four additional DTE devices. These expansion modules and plug-on modules allow for several interface port combinations, including the integration of Frame Relay over E1 facilities and the ability to implement Dial Backup in case of E1 line failure. To add to the unit's flexibility, an IP/IPX router module is available, allowing the support of integrated routing for branch office connectivity or Internet access. The large variety of available expansion modules allow the ESU 120e to tailor fit most any voice and data application requirements.

The unit has several built-in test functions for testing and trouble shooting the ESU 120e and the E1 circuit. Users can effectively isolate problems within the E1 circuit by utilizing standard loopback tests, DTE tests, network interface tests and test patterns found in the ESU 120e. For additional troubleshooting, the unit supports external test equipment through bantam jack access. In case of an E1 failure or other major unit or network alarms, the ESU 120e supports SNMP Traps and Alarms to the host workstation and, if necessary, dial-outs to pagers.

The configuration and management of the ESU 120e is available through a variety of methods. The ESU 120e supports SNMP with Gets, Sets, and Traps functionality through a built-in agent. ADTRAN MIBs support management for the ESU 120e and all installed expansion modules. For access to SNMP features, the ESU 120e has both a 10BaseT Ethernet and a SLIP connection. In addition to SNMP, the unit utilizes the management capabilities found in optional software products from ADTRAN. For Windows® 95 or NT, the popular T-Watch PRO™ software package facilitates easy configuration and monitoring of the ESU 120e. For more complex network management systems, ADTRAN's ADVISION™ operates on an SNMP enterprise management system such as HP OpenView® and provides full GUI configuration and control via SNMP.

## CORPORATE OFFICE

ADTRAN, Inc.  
901 Explorer Boulevard  
P.O. Box 140000  
Huntsville, AL 35814-4000

800 9ADTRAN  
256 963-8000  
fax: 256 963-6300  
fax back: 256 963-8200  
e-mail: info@adtran.com  
web site: www.adtran.com

## INTERNATIONAL CONTACTS

Asia Pacific/Australia  
+1-256 963-8779  
852-2824-8283 (Hong Kong)

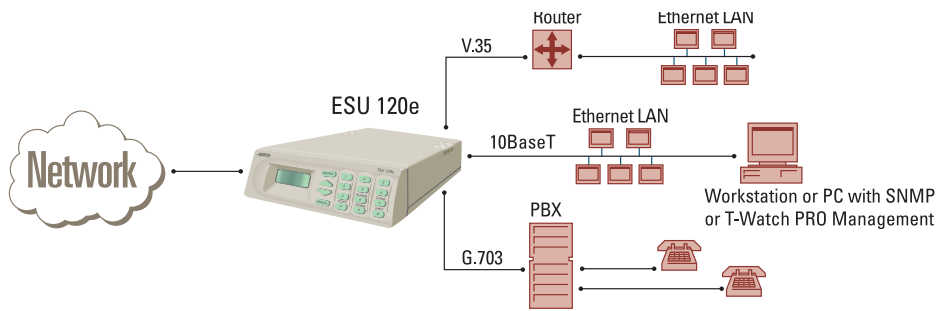
Europe  
+1-256 963-2501  
+1-256 963-8669

Mexico  
+1-256 963-2502  
+1-256 963-8669

Middle East/Africa  
+1-256 963-2503  
+1-256 963-8669

Caribbean/Latin America  
+1-954 746-5355

Canada  
800 232-6811  
(Within the US and Canada)  
+1-256 963-8779  
(Other locations)



## Product Specifications

### NETWORK INTERFACE

#### Line Rate

- E1/FE1 (2.048 Mbps)

#### Electrical

- G.703

#### Physical Interface

- 75-ohm BNC and 120-ohm DB15

#### Framing

- G.704

#### Line Code

- HDB3

#### Input Signal

- 0 to -30 dB

### DTE INTERFACE(S)

#### Data Rate

- Nx56 or Nx64 kbps (N=1 to 30)

#### Electrical and Mechanical

- Electrical: V.35, V.36, X.21/V.11 or EIA-530
- Physical Interface: DB25 connector
- TSO Assignment: User Selectable

### G.703 DROP INTERFACE

#### Line Rate

- E1-FE1 (2.048 Mbps)

#### Electrical

- G.703

#### Physical Interface

- 120 ohm balanced - DB15

#### Framing

- G.704

#### Line Code

- HDB3

### MANAGEMENT OPTIONS AND INTERFACES

#### Control In / Control Out Ports

- Interface: EIA-232, PC serial port, modem or SLIP connection to external router
- Physical Connector: RJ-45, modular 8-pin

#### 10BaseT Interface

- Interface: IEEE 802.3 compliant, 10 MBps
- Physical Connector: RJ-45, modular 8-pin
- Service: SNMP, Telnet, ICMP, ARP, PING, T-Watch PRO™, ADVISION™

### TESTING AND TROUBLESHOOTING

#### Loopbacks

- NI line, NI payload, Add/Drop line, Add/Drop port and DTE bi-directional loopback
- Test pattern generator and detector
- QRSS and 511 (selectable TSOs)
- All 0s and all 1s (transmit only)

#### Performance Monitoring

- Performance statistics based on G.821
- Reports: NI information stored for last 24 hours (15-minute increments)

### ENVIRONMENT

- Operating: 0 to 50° C (32 to 122° F)
- Storage: -20 to 60° C (-4 to 140° F)

### PHYSICAL

- Dimensions: 7.94 cm (3.125") H, 31.75 cm (12.5") D, 21.6 cm (8.5") W
- Weight: 4 lb
- Power: 90-250 VAC, 50/60 Hz
- Agency Approval: UL 1950, IEC 950, CISPR 22, and FCC Part 15 (Class A)

### PRODUCT INCLUDES

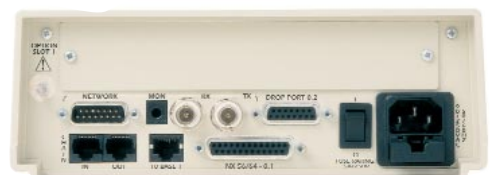
- One 8-pin to 8-pin modular cable
- Modular to female DB-25 adapter
- User Manual

## Ordering Information

| EQUIPMENT                     | PART #    |
|-------------------------------|-----------|
| ESU 120e .....                | 1200420L1 |
| ESU 120e HDSL.....            | 1200421L1 |
| X.21/V.11 Adapter Cable ..... | 1200282L1 |
| V.35 Adapter Cable.....       | 1200285L1 |
| DB-15 to BNC Adapter .....    | 1200209L1 |

ESU 120e, T-Watch PRO, and ADVISION are trademarks of ADTRAN, Inc. HP OpenView is a registered trademark Hewlett Packard Company Windows is a registered trademark of Microsoft Corporation

Specifications subject to change without notice.



I.S. EN ISO 9001

ADTRAN is an ISO 9001 registered company.



Printed in the U.S.A. on recycled paper.  
I61200420L1-8A February 1999  
©1999 ADTRAN, Inc. All rights reserved.