



# Nx56/64 Solutions

## Expansion and Plug-On Modules for the TSU™

### Product Features

- Nx56/64 data interfaces for the TSU multiplexer family
- Five different modules to meet a variety of installation requirements
- Single V.35, dual V.35 and single EIA-530 interfaces available
- All modules provide Nx56/64 synchronous operation
- Built in test capabilities to aid in troubleshooting
- Operation for 1 to 24 DS0s per interface
- T-Watch PRO™ monitoring and control
- Easy configuration from the front panel, T-Watch PRO or VT100 terminal
- Standard five-year warranty

The ADTRAN TSU multiplexer family provides end users flexibility with the capability to add and remove option modules for voice, data and video. Some of the most popular applications in which the TSU™ is used involve high speed data interfaces for routers, audio broadcasting systems, and video-conferencing systems. To meet the requirements for high-speed, programmable, synchronous data, ADTRAN® provides five Nx56/64 modules for V.35 and EIA-530 DTE interfaces. The basic expansion modules plug in to the available expansion slot of a TSU multiplexer. Plug on modules plug on to an expansion module.

Designed to interface with standard DTE connectors on routers, bridges, codecs and switches, the ADTRAN Nx56/64 modules provides synchronous data at rates from 56 kbps to 1.536 Mbps. To aid in setup and troubleshooting, the modules provide local and remote loopbacks and built-in test patterns with errored seconds display. In addition, the optional T-Watch PRO™ software package can be used to configure, test and control each Nx56/64 module.

#### Nx56/64 V.35 Expansion Module and Plug-On Module

When a small number of high speed DTE ports are required, the network manager may choose to use the Nx56/64 V.35 Module or Plug-On. Providing a single, female V.35 Winchester interface, the Nx56/64 V.35 Module provides a standard interface to synchronous data applications.

Using the built-in 8 kbps inband management channel, the Nx56/64 V.35 Module provides an end-to-end communications channel for SNMP (Telnet) traffic or T-Watch PRO commands from the host site TSU. The Nx56/64 V.35 (expansion) Module will accept most plug-on modules while the Nx56/64 V.35 Plug-On Module works with any TSU expansion module.

#### DUAL Nx56/64 Expansion Module and Plug-On Module

When density is an issue in your TSU multiplexer installation, the Dual Nx56/64 Module or Plug-On should be used. Providing two miniature DB-26 interfaces, this module uses adapter cables to provide a female V.35 Winchester interface. The Dual Nx56/64 Module provides two standard synchronous data interfaces suitable for most high speed data applications.

Using the same 8 kbps inband management channel as the Nx56/64 V.35 Module, the Dual Nx56/64 Module also provides an end-to-end communications capability for SNMP (Telnet) and T-Watch PRO.

#### Nx56/64 EIA-530 Expansion Module

When your application requires an EIA-530 or EIA-449 interface, the Nx56/64 EIA-530 (expansion) Module should be selected. Available as a plug-in module only, the EIA-530 (expansion) Module provides a single, female DB-25 interface which can be adapted to EIA-449 (user supplied cable). For future expansion, the Nx56/64 EIA-530 (expansion) Module will accept most plug-on modules.



**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



ISO 9001 registered company.



TL 9000 registered company.

Printed in the U.S.A.  
61202054L1-8C May 2002

©2002 ADTRAN, Inc. All rights reserved.

# Nx56/64 Solutions

## Expansion and Plug-On Modules for the TSU™

### Product Specifications

#### Nx56/64 V.35 (Expansion) Module and Plug-On

##### DTE Interface

- CCITT V.35, Electrical

##### Connector

- 34 pin V.35 Winchester DTE (Female)

##### Slot Capacity

- Expansion module plus plug-on provides 2 DTE interfaces

#### Dual Nx56/64 Expansion Module and Plug-On

##### DTE Interface

- Dual CCITT V.35, Electrical

##### Connector

- Sub-miniature DB26
- Adapter available for physical CCITT V.35 34 pin Winchester (Female)

##### Slot Capacity

- Expansion module plus plug-on provides 4 DTE interfaces

#### Nx56/64 EIA-530 (Expansion) Module

##### DTE Interface

- EIA-530, Electrical

##### Connector

- DB 25 DTE (Female)

##### Slot Capacity

- Expansion module provides 1 DTE interface

#### Common Specifications

##### Rates

- 56k to 1.536 Mbps in 56k or 64k increments,  
Synchronous

##### Clock Options

- Internal
- Inverted
- External

#### Data Inversion

- Menu selectable

#### Test

- Local Loopback (Bilateral)
- Remote (V.54)
- Self test

#### Test Pattern Generation

- 511 with errored seconds display

#### InBand Management

- 8k on first DSO (V.35 modules only)
- Off, On or On demand

#### Physical Specifications

- Standard TSU™ option slot format
- Expansion module accepts other plug-on module
- Plug-on module works with any expansion module
- All modules are hot swappable

### Ordering Information

Equipment	Part #
ATNx56/64 V.35 (expansion) Module™	1202054L1
Nx56/64 V.35 Plug-On™	1202053L1
Nx56/64 EIA-530 (expansion) Module	1200054L2
Dual Nx56/64 (expansion) Module	1200142L1#HS
Dual Nx56/64 Module (expansion) w/ cables	4200142L1#HS
Dual Nx56/64 Plug-On	1200159L1
Dual Nx56/64 Plug-On w/ cables	4200159L1
Adapter Cable (6 ft.)	1200167L1

