PRISM 4151
DDS
CSU/DSU

TXPORT®
TRANSPORT

34-00258
3rd Edition

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Reorder # 34-00258

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Documentation Disclaimer

Trademarks

Acknowledgment

Table of Contents

1. General

The TxPORT PRISM 4151 DDS CSU/DSU is the ideal solution for internal networking and frame relay access to a local area network (LAN) or other data applications. It is packaged in a stand-alone housing and provides VT100 and SLIP interfaces for management.

The PRISM 4151 is easy to install and operate. Full access to configuration, status, and diagnostic features is available through the software driven terminal interface connection or a TELNET and/or SNMP set connection from any host on the wide area network (WAN).

The PRISM 4151 is an advanced DDS CSU/DSU with an embedded SNMP agent and TELNET access directly to the LAN. The SNMP agent allows the CSU/DSU to function like any other native LAN element. The agent supports MIB-II and the new DDS MIB that provides information specific to unit operation. The TCP/IP connection may be accessed through the standard SLIP interface or through the optional Ethernet or Token Ring interface.

The PRISM 4151 offers a managed interface into standard DDS service. It supports synchronous data rates at 56 kbps for DDS I and 64 kbps clear channel in DDS II. The DTE supports a V.35 interface. External clocking is supported for use in tail circuit applications.

The PRISM 4151 has diagnostic features which allow quick and easy trouble isolation. The CSU/DSU responds to all standard loop codes from the telco and can initiate remote V.54 loopbacks. An internal BERT may be used for testing. Line conditions are monitored and reported through front panel LEDs, a user connection to the terminal interface, a TELNET connection, or through SNMP.

The chapters in this manual are arranged as follows:

1. *General* - describes product specifications, FCC and warranty information, in addition to TxPORT ordering information and customer service telephone numbers.
2. *Installation* - describes unit mounting, configuration, port and interface connections, and unit powering.
3. *Configuration* - describes switch settings and terminal interface menus and screen settings.
4. *Testing* - describes the front panel LEDs, front panel buttons, and software interface testing features.
5. *Operation* - describes the alarm types and status features for the unit.

A. *Terminal Interface* - describes the features of the unit firmware including the data fields and menu structure.

B. *Pinout Tables* - lists the pinouts for each port on the unit.

C. *SNMP Agent* - defines all MIB entries or responses for the unit.

Features

- Packaged in standalone housing
- Embedded SNMP agent supports the standard MIB-II and the new TxPORT enterprise DDS MIB
- Embedded TELNET support
- Optional Ethernet or Token Ring Network Interface Card (NIC) for integral LAN interface
- TCP/IP connection through the standard SLIP interface or the optional Ethernet or Token Ring interface
- 56 kbps synchronous DDS I or 64 kbps synchronous clear channel DDS II service
- Complete diagnostic capabilities including multiple loops and built-in BERT
- Simple setup and software management through
  - a VT100 compatible terminal interface
  - the embedded SNMP agent
  - a TELNET session
- Programmable alarm thresholds
- Remote communication channel for unit configuration

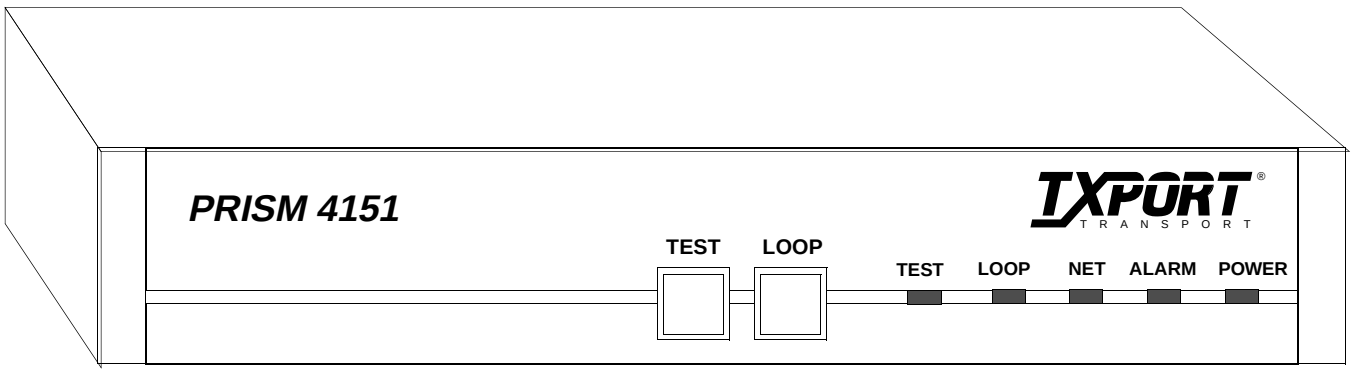


Figure 1-1 PRISM 4151 Unit

- Flash memory allows field software upgrades

Specifications

Network Interface

Service Types:	DDS I or DDS II clear channel conforming to TR62310
Operating Modes:	Full duplex, point-to-point, multi-point
Line Rates:	56 and 72 kbps
Loop Range:	Up to 45 dB of loss
Line Connection:	RJ-48C jack, 8-pin modular
Timing Source:	Network, DTE, Internal

Equipment Interface

Data Rates:	Synchronous 56 and 64 kbps
Antistream Timer:	Off, 10, 30, or 60 seconds
DTE Clocking:	Internal or External
DTE Connection:	34-pin V.35 (CCITT)

Diagnostics

Loopbacks:	V.54 (receive and send), alternating loop, latching loop
BERT:	511 pattern

Management Interfaces

SUPV PORT (SUPERVISORY)

Connection:	8-pin modular (RS-232)
Data Rates:	19.2 kbps

SLIP PORT (SINGLE LINE INTERNET PROTOCOL)

Connection:	8-pin modular (RS-232)
Data Rates:	1.2, 2.4, 9.6, & 19.2 kbps

SNMP/TELNET/Ethernet (OPTIONAL)

Connection:	8-pin modular
Network Protocol:	TCP/IP based networks
Data Rate:	10 Mbps
Compatibility:	10BASE-T, ISO/IEC 8802-3

SNMP/TELNET/Token Ring (OPTIONAL)

Connection:	8-pin modular
Network Protocol:	TCP/IP based networks
Data Rate:	4 and 16 Mbps
Compatibility:	Type 3 UTP, ISO/IEC 8802-5

Power

110 VAC:	100 mA, 12 W, 30 BTU maximum

Mechanical

Housing:	Plastic standalone case
Mounting:	Desktop or horizontal rack
Dimensions:	12 inches (30.40 cm) Wide 2 inches (5.08 cm) High 9 inches (22.86 cm) Deep

Environmental

Operating Temp:	32° to 122°F (0° to 50°C)
Storage Temp:	-4° to 185°F (-20° to 85°C)
Humidity:	95% Maximum (Non-Condensing)

Compatibility

TR62310:	November 1987
TR62310A:	December 1989 (addendum 3)
TR41450:	November 1981
Internet Standards:	RFC1157 (SNMP) RFC 1155 (SMI) RFC1213 (MIB-II) RFC1055 (SLIP) Enterprise TxPORT MIB Enterprise DDS MIB
MIB-II:	Device identification and interface performance data. All applicable objects and reporting traps maintained.

Industry Listings

FCC Compliance:	Part 15 Class A, Subpart B, Part 68
U.S. Safety:	UL 1459
Canadian Safety:	CSA C22.2 No. 225-M90
Industry Canada:	CS03, Issue 8

FCC Requirements

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user is required to correct the interference at his own expense. This device must also accept any interference received, including interference that may cause undesired operation. *Shielded cables must be used to ensure compliance with the Class A FCC limits.*

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment complies with Part 68 of the FCC Rules. On the rear or bottom of the CSU/DSU is a label that contains the FCC registration number and other information. If requested, provide this information to the telephone company.

1. All direct connections to DDS lines must be made using standard plugs and jacks (compliant with Part 68). Table 1-A presents a list of applicable registration jack USOCs, facility interface codes (FIC), and service order codes (SOC). These are required when ordering service from the telco.

Table 1-A USOC FIC

Port ID	REN/SOC	FIC	USOC
56 kbps 64 kbps	6.0F	04DU5-56 04DU5-64	RJ-48S

2. If the CSU/DSU appears to be malfunctioning, it should be disconnected from the DDS lines until the source of trouble is determined to be your equipment or the telephone line. If your equipment needs repair, it should not be reconnected until it is repaired.
3. The CSU/DSU has been designed to prevent harm to the DDS network. If the telephone company finds that the equipment is exceeding tolerable parameters, it can temporarily disconnect service. In this case, the telephone company will give you advance notice, if possible.
4. Under FCC rules, no customer is authorized to repair this equipment, regardless of warranty status.
5. If the telephone company alters its equipment in a manner that will affect the use of this device, it must give you advance warning so that you can have the opportunity for uninterrupted service. You will be advised of your right to file a complaint with the FCC.
6. In the event of equipment malfunction, all repairs should be performed by our company or an authorized agent. It is the responsibility of users requiring service to report the need for service to our company or to one of our authorized agents.

Canadian Emissions Requirements

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

For the DC powered units only, end users should use existing battery sources or a CSA certified power supply.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques (de la class A) prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

Warranty

TxPORT warrants each unit against defects in material and workmanship for a period of five years from the date the CSU/DSU was shipped to the customer. If the CSU/DSU malfunctions at any time during the warranty period, TxPORT will repair, or at TxPORT's option, replace the CSU/DSU free of charge.

The remedies listed herein are the users sole and exclusive remedies. TxPORT shall not be liable for any indirect, direct, incidental or consequential damages. The owner must return the CSU/DSU to the factory, shipping prepaid and packaged to the best commercial standard for electronic equipment. TxPORT will pay shipping charges for delivery on return. The customer is responsible for mode and cost of shipment to TxPORT. This warranty does not apply if the CSU/DSU has been damaged by accident, misuse or as a result of service or modification by other than TxPORT personnel.

Ordering Information

Each PRISM 4151 unit is supplied with a reference manual and is equipped with a V.35 data port (F-4151-001-1110 is the default part number). Also provided is an 8-pin modular to 8-pin modular (four twisted pairs) network cable (P/N 9-1001-004-010). Table 1-B displays the unit ordering numbers and options.

Table 1-B Unit Ordering Numbers

Part Number	Options
F-4151-001--111**C**	SNMP
0	SLIP
1	Ethernet
2	Token Ring
F-4151-100--111	Single Ethernet Card
F-4151-200--111	Single Token Ring Card

The optional Ethernet or Token Ring LAN interface cards may be factory or customer installed.

The following optional equipment may also be needed for the operation of the CSU/DSU.

Table 1-C Optional Equipment

Part Number	Optional Equipment
	Network Cables
9-1001-070-010	DDS cross-over kit
9-1001-004-010	Network
9-1001-004-010	LAN interface
	V.35 Cables
9-1001-001-010	V.35 male to male null cable
9-1001-311-010	V.35 male to male, straight through
9-1001-312-010	V.35 male to female, straight through
	RS-232 Cables
9-1001-044-010	RS-232 male to male null modem cable
9-1001-211-010	RS-232 male to male, straight through
9-1001-212-010	RS-232 male to female, straight through
9-1001-222-010	RS-232 female to female, straight through
	Cable Kits
9-1001-073-2	DB-9 female to 8-pin RJ-48 (PC to SUPV)
	Adapters
9-1001-015-1	DB-25 male to 8-pin (terminal to SUPV)
9-1001-015-2	DB-25 female to 8-pin (terminal to SUPV)
9-1001-016-1	DB-25 male to 8-pin (modem to SUPV)
9-1001-016-2	DB-25 female to 8-pin (modem to SUPV)
9-1001-072-1	8-pin RJ-48 to IBM Type 1
9-1001-091-1	8-pin RJ-48 to DB-25 male (modem to SUPV)
9-1001-091-2	8-pin RJ-48 to DB-25 female (modem to SUPV)
	MIBs
9-1000-1000-1	TxPORT MIB
9-1000-4000-1	DDS MIB
	Rack Mount Kits
9-3100-002-1	19-inch
9-3100-002-2	23-inch

TxPORT Customer Service

TxPORT office hours are Monday through Friday from 8 a.m. to 5 p.m Central Time.

Sales and Marketing

For general, sales, and marketing information, contact TxPORT by telephone or e-mail.

Toll Free: 800-926-0085
Local: (205) 772-3770
e-mail: info@txport.com

Technical Support

Technical support is available 24 hours a day, seven days a week. You may contact a support representative by telephone or e-mail.

Toll Free: 800-285-2755
Local: (205) 772-3770
e-mail: support@txport.com

Returns/RMA

If for any reason you need to return a TxPORT unit, you must have a Return Material Authorization (RMA) number marked on the shipping package. You may obtain an RMA number from customer service at 800-926-0085, ext. 2227.

When calling TxPORT for an RMA, please have the following information available.

- Model number and serial number for each unit.
- Reason for return and symptoms of problem.
- Warranty status (if known).
- Purchase order number to cover charges for out-of-warranty items.
- Name and phone number of person we can contact if we have questions about the unit(s).
- Mode of shipment required (second-day air is the normal mode of shipment for all returned material unless otherwise specified).

Units being returned to TxPORT should be sent to the following address:

TxPORT
127 Jetplex Circle
Madison, Alabama 35758

2. Installation

This chapter contains instructions for physically installing the TxPORT PRISM 4151 as either a standalone or rack mount unit as well as information concerning the communication ports and power supply on the rear of the unit.

Unpacking and Inspection

Upon receipt of your shipment, inspect the shipping container and contents. If the contents of the shipment are incomplete or, if there is mechanical damage or defect, notify TxPORT Customer Service. If the shipping container or cushioning material is damaged, notify the carrier and TxPORT immediately and make a notation on the delivery receipt that the container was damaged (if possible, obtain the signature and name of the person making delivery). Retain the packaging material until the contents of the shipment have been checked for completeness and the instrument has been checked both mechanically and electrically.

Supplied Materials

Your baseline PRISM 4151 shipment contains three items.

- PRISM 4151 unit with a captive power supply
- 8-pin to 8-pin modular network cable (PN 9-1001-004-010)
- Reference manual with configuration guides

Rack Mounting

The PRISM 4151 is housed in a plastic case intended for desktop installation. Kits are available allowing the unit to be mounted into standard 19-inch (33.02 cm) or 23-inch (58.42 cm) racks. Refer to the section Ordering Information on page 1-3 for part numbers. This assembly occupies two rack spaces at 3.5 inches (8.89 cm).

The PRISM 4151 rack mount assembly consists of the following items. See page 1 - 3 for ordering numbers.

- A casing supporting the bottom, sides, and rear of the unit.
- 19-inch or 23-inch plate that bolts to the rack.
- Set of four bolts and nuts that attach the casing to the plate.
- Four screws that attach the assembly to the 19-inch or 23-inch rack.

Rack Mount Installation

1. Insert the PRISM 4151 (rear first) into the casing as shown in Figure 2-1.

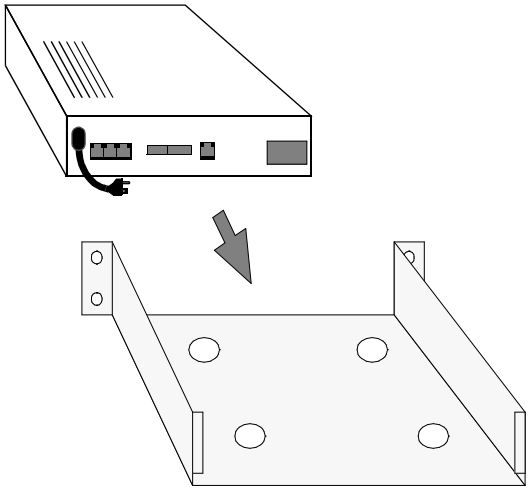


Figure 2-1 PRISM 4151 into casing

2. Connect this assembly to the 19-inch or 23-inch plate using the four nuts and bolts as shown in Figure 2-2. When the mounting plate is attached to the PRISM 4151 and the casing, the unit is secure and cannot be pulled out of the assembly from the front.
3. To install the rack mount assembly into a rack, tighten the four sets of nuts and bolts that attach the plate to the rack as shown in Figure 2-3.

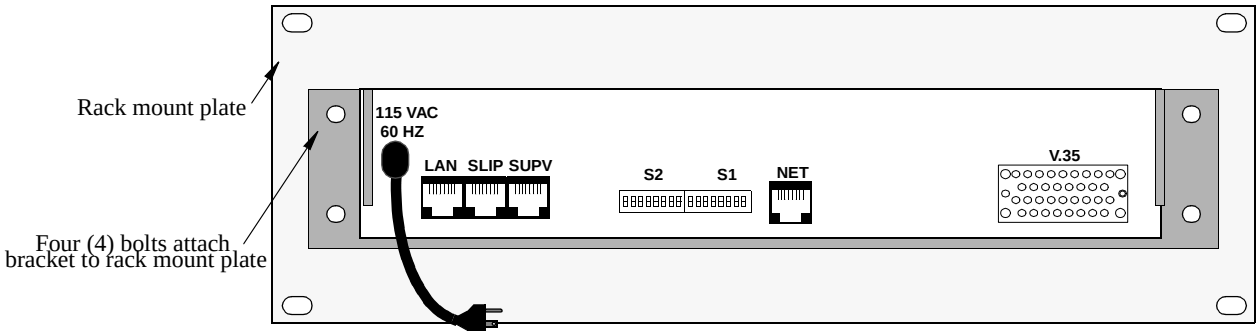


Figure 2-2 Rack Mount Assembly (Rear View)

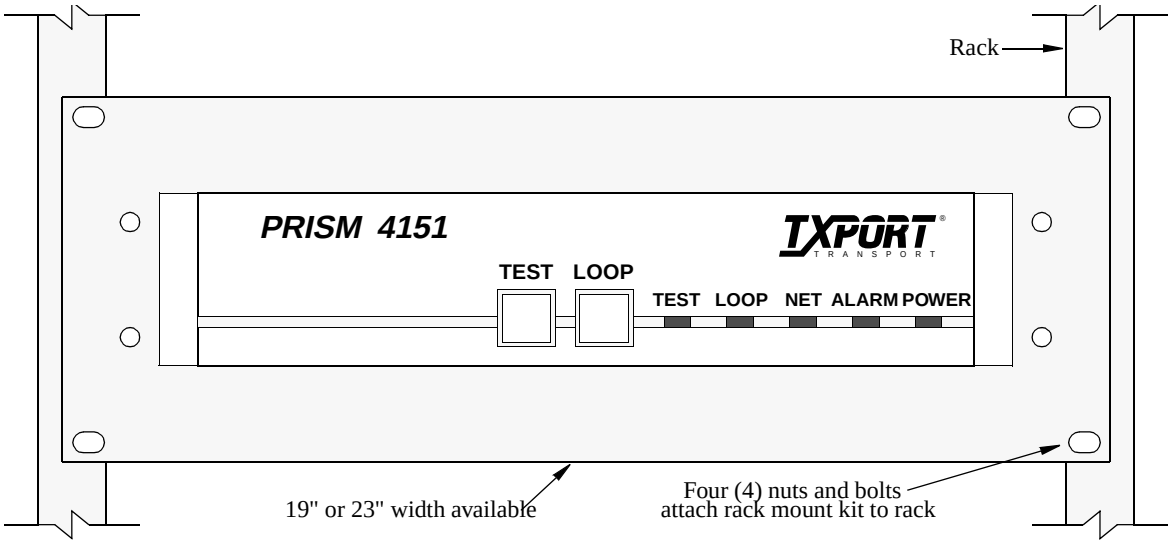


Figure 2-3 Rack Mount Assembly (Front View)

Port Connections

On the rear of the PRISM 4151, there are five port connections as shown in Figure 2-4: LAN, SLIP, SUPV, NET, and Data Port 1.

LAN

The PRISM 4151 is an 8-pin modular jack labeled LAN. It can be equipped with either an internal Ethernet or Token Ring network interface card (NIC) for connection to a local area network (LAN). **This port does not function unless the optional NIC is installed.** The Ethernet interface is 10BASE-T. The Token Ring interface is Type 3. This allows the NIC to be installed without changing the rear panel.

The Simple Network Management Protocol (SNMP) agent is used for monitoring and alarm reporting.

Ethernet: The Ethernet interface complies with standard twisted pair, 10BASE-T requirements. Table 2-D displays the pinout assignments for the 8-pin modular LAN connection.

Table 2-D Ethernet Pinout Assignments

Pin	Ethernet Interface
1	Data Out (+)
2	Data Out (-)
3	Data In (+)
6	Data In (-)

Before connecting the PRISM 4151 to the LAN network, configure the LAN interface using the SNMP Parameters screen (page 3-7) of the unit firmware.

Token Ring: The Token Ring interface is designed to operate on both 4 and 16 Mbps networks and complies with standard unshielded twisted pair (UTP) requirements. Table 2-E displays the pinout assignments for the 8-pin modular LAN connection.

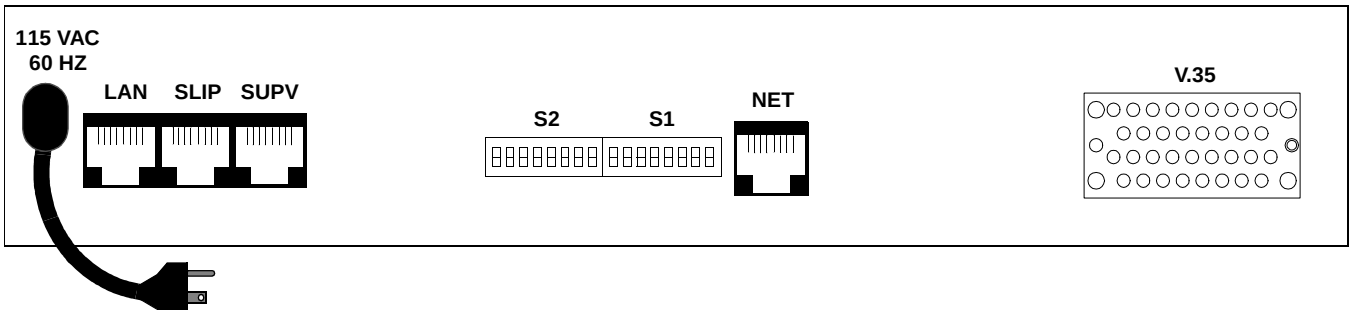


Figure 2-4 PRISM 4151 (Rear View)

Table 2-E Token Ring Pinout Assignments

Pin	Token Ring Interface
3	Data Out (-)
4	Data In (+)
5	Data In (-)
6	Data Out (+)

Before connecting the PRISM 4151 to the LAN network, configure the LAN interface using the SNMP Parameters screen (page 3-7) of the unit firmware.

Connection to an IBM Type 1 cable requires a TxPORT adapter kit (part number 9-1001-072-1). This kit includes an impedance matching adapter.

SLIP

The SLIP port is an 8-pin modular jack (electrically RS-232) DCE port configured for 8 bits, no parity, and 1 stop bit. The bit rate defaults to 19200 bps but may be changed through the terminal interface (see Management Ports on page 3-8). Figure 2-5 provides the pinout assignments. See page 1 - 3 for cable information.

This port allows access to the embedded SNMP agent for trap reporting or SNMP management. You may access this port through either a direct connection or a dial-up connection via an AT command set compatible modem. Serial bit rates can be set from 1200 bps to 19200 bps.

Direct Connection: The SLIP port is connected to a terminal server or router that provides SLIP access to the LAN. The TCP/IP connection is 'always up' in this mode.

Dial Connection: In this mode, a modem is connected to the SLIP port allowing you to initiate a SLIP connection to the CSU/DSU from remote sites whenever access is desired. The modem should be configured to ignore DTR, enable auto answer, inhibit command echo, and return verbose result codes. Also, when the CSU/DSU has alarm messages to transmit, it dials out of the port using the phone number programmed in the Management Ports screen (page 3-8). When a connection is made, the CSU/DSU outputs the ASCII characters stored in its buffer. If a phone number is not programmed, the CSU/DSU never dials out but you can dial in. The IP Connection must be changed to the SLIP port in the 'TCP/IP' screen (page 3-6). The SLIP and LAN port cannot both be active at the same time.

SUPV

The SUPV port is an 8-pin modular jacks (electrically RS-232) DCE port configured for 8 bits, no parity, and 1 stop bit. The SUPV port bit rate is fixed at 19200 bps. Figure 2-5 provides the pinout assignments. See page 1 - 3 for cable information. The COA feature works through the supervisory port only.

You can configure the unit firmware through this port (page 3-2) as well as the Call On Alarm feature (page 3-8). You may access this port through either a direct VT100 connection or a dial-up connection via an AT command set compatible modem. The modem should be configured to ignore DTR, enable auto answer, inhibit command echo, and return verbose result codes.

If you call the unit and send the BREAK *command before receiving the* CONNECT *message, the modem will hang-up.*

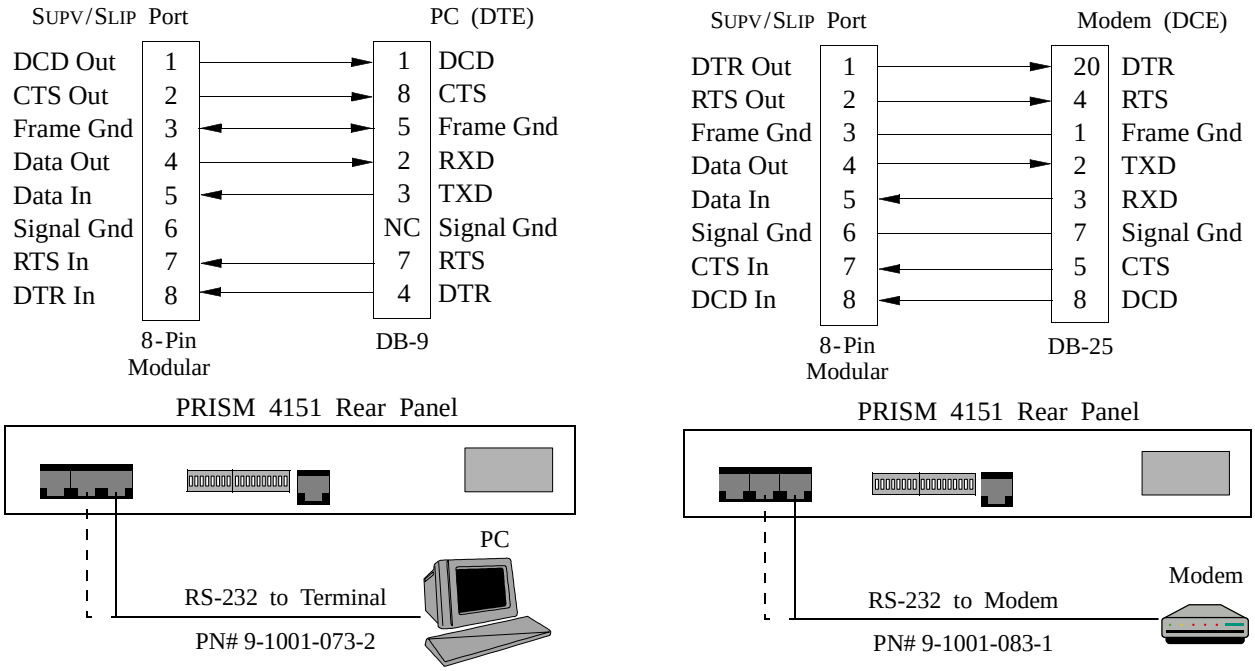


Figure 2-5 SUPV and SLIP Terminal/Modem Connections

NET

The DDS network is connected through a standard RJ-48S (8-pin modular) connector labeled NET. The pinout assignments are displayed in Table 2-F.

Table 2-F RJ-48S Pinout Assignments

Pin	NET Interface
1	Data Out (Tip)
2	Data Out (Ring)
3 - 6	Not Used
7	Data In (Tip)
8	Data In (Ring)

In accordance with FCC Rules, Part 68.218(b), you must notify the telephone company prior to disconnecting this product.

The network side of the CSU/DSU is referred to as the network interface. This interface contains an ALBO (automatic line build-out) allowing the CSU/DSU to be located a substantial distance away from the telco network interface with a receive signal level down to -45 dB.

V.35

The PRISM 4151 is equipped with a V.35 data port (on a standard 34-pin connector). Pin functions for the high speed port interface are listed in Table 2-G.

FCC rules require that interconnecting cables carrying high speed data be shielded appropriately in order to minimize radio frequency interference.

Table 2-G V.35 Interface

CCITT/ EIA Circuit	Common Name	V.35 34-pin	DCE
101/AA	Frame Ground	A	Gnd
102/AB	Signal Ground	B	Gnd
103/BA	Transmit Data	P … S	In
104/BB	Receive Data	R … T	Out
105/CA	Request to Send	C	In
106/CB	Clear to Send	D	Out
107/CC	Data Set Ready	E	Out
108/CD	Data Term Ready	H	In
109/CF	Data Carrier Detect	F	Out
114/DB	Transmit Clock	Y … AA	Out
115/DD	Receive Clock	V … X	Out
113/DA	External Clock	U … W	In
141/LLB	Local Loopback	J	In
140/RLB	Remote Loopback	BB	In
142/TM	Test Mode	K	Out

Network Management

Network management is accomplished via the SUPV port (page 2-3), SLIP port (page 2-3), or the LAN port (page 2-2).

The PRISM 4151 incorporates the full TCP/IP stack and supports inbound TELNET. It has an embedded SNMP agent supporting the TxPORT enterprise MIB, which provides access to the specific functionality of the CSU/DSU, including DDS status information. MIB objects for the PRISM 4151 are listed in Appendix C.

Power Connection

AC powered units use a 110 VAC captive power supply. There is no power switch. The green power LED on the front panel illuminates after the LED initialization sequence ends. If the indicators do not illuminate, recheck the power connections and the primary AC circuit breaker.

3. Configuration

The PRISM 4151 can be configured through manual switch settings and/or through a VT100 terminal connection to the supervisory port.

All default options in this manual are underlined.

Hardware Configuration

Hardware configuration is set using two dual in-line package (DIP) switches located on the rear of the unit. These switches allow you to configure simple applications. Refer to Figure 3-6 for switch locations. A removable configuration guide (45-00105) is included in the back of this manual.

Switch S1

Switch S1 (Figure 3-7) configures the antistream timer, V.54 loop, circuit assurance, and loop mode.

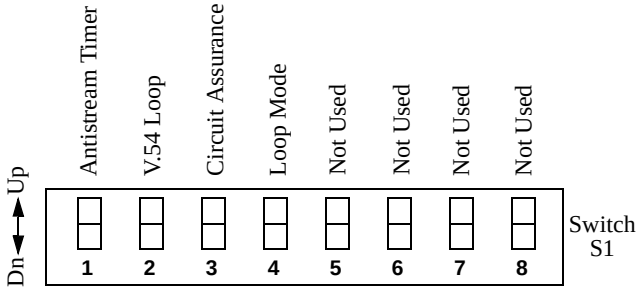


Figure 3-7 Switch S1

Antistream Timer: Switch S1-1 allows the DDS transmitter to send DMI (Data Mode Idle / all ones) if the RTS remains enabled long enough for a timeout to occur. Choices are Off (Dn) or 30 seconds (Up).

V.54 Loop: Switch S1-2 enables (Dn) or disables (Up) the unit's ability to respond to incoming V.54 loop/unloop code. If set to enable, the PRISM 4151 will loop or unloop. If set to disable, loop codes are ignored.

Circuit Assurance: Switch S1-3 configures the CTS/RTS sequence. When Circuit Assurance is disabled (Dn), CTS follows RTS. When enabled (Up), CTS follows RTS if DCD is also enabled (or set to On).

Loop Mode: Switch S1-4 determines the loop direction for the transmit and receive data as either bidirectional (Dn) or unidirection (Up). Refer to page 4-1 for more information concerning the loop modes and with respect to testing.

Switch S2

Switch S2 (Figure 3-8) configures the boot mode, DDS mode, timing source, CTS delay, RTS, CTS, DCD handshake, remote/local loopback, and DTR alarm.

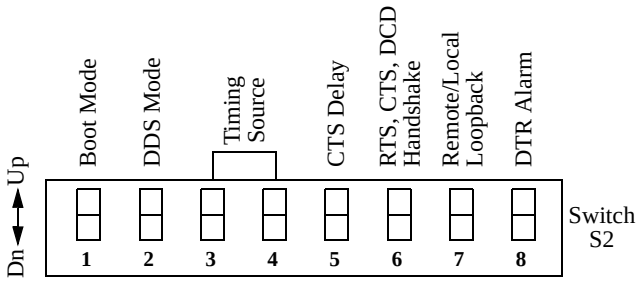


Figure 3-8 Switch S2

Boot Mode: Switch S2-1 determines whether the unit configures itself from the DIP switches or from the saved software configuration. If set to boot from saved software configuration (Up), the switch settings are ignored. If set to boot from switches (Dn), the unit reads the DIP switches on power-up and configures accordingly. Once running, configuration changes can be made through the terminal interface, overriding the switch settings.

DDS Mode: Switch S2-2 establishes the DDS mode as either DDS II/64 kbps (Dn) or DDS I/56 kbps (Up).

Timing Source: Switch S2-3 and S2-4 determine the unit clocking source. The most common timing source for CSU/DSU applications is the network. The PRISM 4151 may also be optioned to time from an internal standard or from the high speed data interface as shown in Table 3-H.

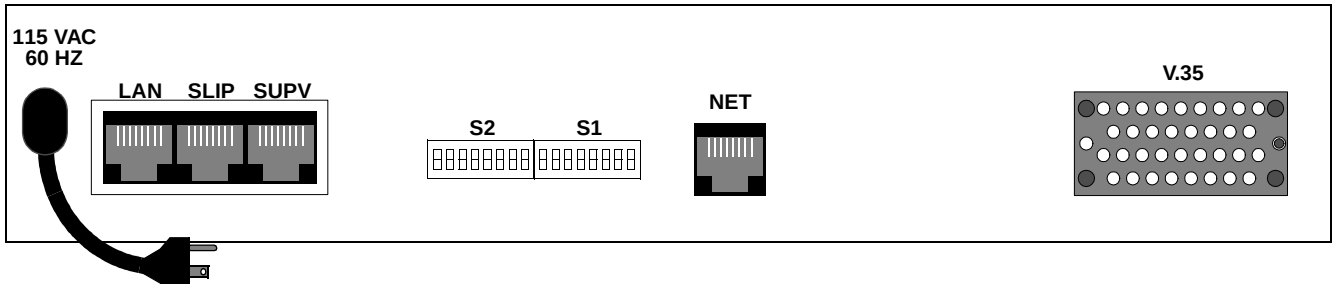


Figure 3-6 PRISM 4151 Rear Panel

Table 3-H Timing Source

S2-3	S2-4	Timing Source
Dn	Dn	Network
Dn	Up	Internal
Up	Dn	DTE
Up	Up	Not Used

CTS Delay: Switch S2-5 allows you to determine the CTS delay as being either Short (Dn) or Long (Up).

RTS, CTS, DCD Handshake: Switch S2-6 determines the handshake process as either Force True (Dn) or Normal (Up).

Remote/Local Loop: Switch S2-7 disables (Dn) or enables (Up) remote and local loop activation by the RL and LL pins on the DTE interface.

DTE Alarm: Switch S2-8 disables (Dn) or enables (Up) the DTE alarm. The DTE alarm is generated when DTR from the DTE device is false.

Software Configuration

The terminal interface is a firmware application program embedded inside the PRISM 4151. You can access this information through the LAN port (page 2-2), SUPV port (page 2-3), or SLIP port (page 2-3) using a TELNET session.

Interface Start-up

Once a compatible terminal is properly connected to the unit, you can start a terminal interface session by sending a BREAK command to the unit (or by pressing <return> four times). If a password has been previously establish, you must enter the correct password to continue the session. *The password is case-sensitive.* If you have forgotten your password, note the date and time shown on your screen and contact TxPORT Technical Support. You can establish a password through the Utilities screen on page 3-10.

Once a valid password has been entered, the Main Menu screen is displayed. If you are unfamiliar with the PRISM 4151 interface, commands, and menu structure, refer to Appendix A, *Terminal Interface*, for specific information concerning the menu structure and operator commands.

> ⚠ ***If you do not enter a keystroke for 10 minutes, the terminal interface automatically logs off.***

Configuration Screen

The Configuration screens allow you to view and set configuration parameters for the network elements.

> *To send a new configuration to the unit, you must press <return> on one of the fields or exit the screen. The underlined values are the factory default parameters.*

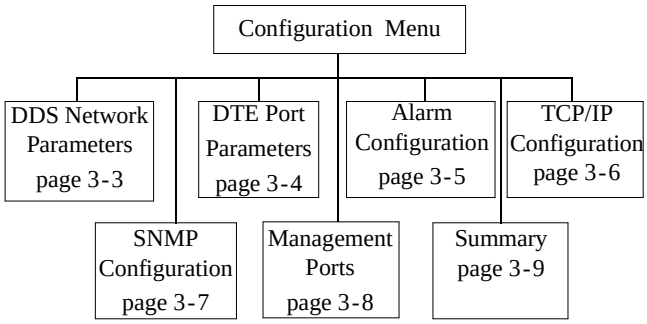


Figure 3-9 Configuration Menu

DDS NETWORK PARAMETERS

The DDS Network Configuration screen (Figure 3-10) allows you to select parameters for the network interface.

Data Mode: Choices are DDS I and DDS II which is a clear channel 64 kbps without secondary channel.

Rate: This field is automatically set to 56K for DDS I and 64K (72K) for DDS II. DDS II mode inserts 64 kbps user data from the DTE into a 72 kbps framed network signal.

Timing: This field selects the bit rate clock source. NET uses the received network signal as the clock source. INT uses the internal oscillator (25 ppm) for the clock source. DTE uses TXC from the DTE interface as the clock source.

Circuit Assurance: When Circuit Assurance is set to Off, CTS follows RTS. When RTS transitions to the On state, CTS will transition to the On state after the RTS/CTS delay. CTS will transition to the Off state within one bit time when RTS transitions to the Off state.

When Circuit Assurance is set to On, CTS follows RTS if DCD is On. When RTS transitions to the On state, CTS will transition to the On state after the RTS/CTS delay if DCD is On. CTS will transition to the Off state within one bit time when RTS transitions to the Off state. CTS is Off if DCD is Off.

RTS should be set to NORMAL on the DTE PORT parameters when Circuit Assurance is On. The FORCE DCD option will be changed to NORMAL.

Antistreaming Timer: The Antistreaming Timer is controlled by RTS. If RTS remains enabled long enough for a timeout to occur, the DDS transmitter will send DMI (Data Mode Idle / all ones). The Antistreaming Timer is reset when RTS transitions to the Off state. Choices are OFF, 10, 30, and 60 seconds.

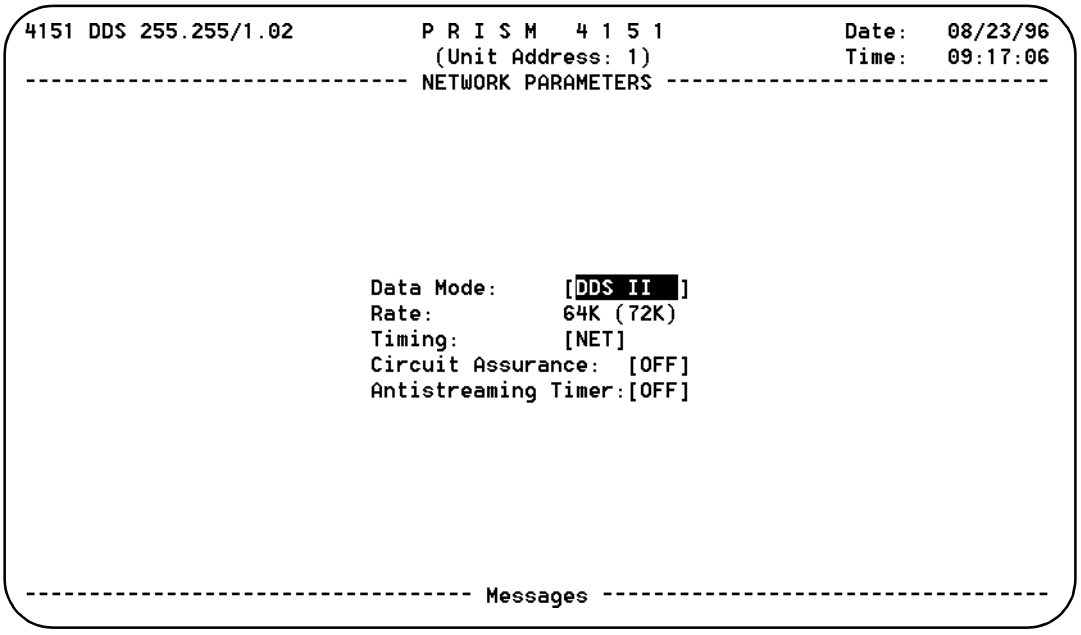


Figure 3-10 DDS Network Parameters Screen

DTE PORT PARAMETERS

The DTE Port Configuration screen (Figure 3-11) allows you to configure the DTE port.

Port Type: The Port Type field displays the active DTE interface which will be either V.35 or RS-232 (if option is installed). The active port is automatically detected on occurrence of transmit data pulses.

Port Rate: Port Rate is determined by the Data Mode selection on the Network Parameters screen. The values are 56K for DDS I and 64K for DDS II.

Port Format: This field shows the data format for the DTE port which is always synchronous.

DSR: This field controls the behavior of the DSR signal during test modes. If TEST>OFF is selected, DSR will transition to the Off state when a loop or BERT test is active. Options are FORCED ON or TEST>OFF.

DCD: This field controls the behavior of the DCD signal during an IDLE condition. When Data Mode Idle codes are received, DCD will transition to Off if this field is set to IDLE>OFF. This only applies to DDS I mode. Options are FORCED ON or IDLE>OFF.

RTS: If this field is set to NORMAL, the RTS signal will control the transmitter and CTS output signal. If set to FORCED ON, the RTS input signal is set to On inside the unit.

RTS/CTS Delay: This field selects the delay from the RTS transition (to On) to the CTS transition. The delays are:

NORMAL =0.4 ms +/- 0.02 ms for DDS I
0.3 ms +/- 0.015 ms for DDS II
LONG = 0.8 ms +/- 0.04 ms for DDS I
0.6 ms +/- 0.03 ms for DDS II

DTR Alarm: This option allows you to enable or disable an alarm if the DTR signal from the DTE device goes false.

V54 Loop: This field controls response to incoming V.54 loop/unloop codes. If set to enable, the PRISM 4151 will loop or unloop. If set to disable, loop codes are ignored.

LL Detect: This option allows you to enable or disable the local loop activation by the local loopback signal (V.35 pin J or RS-232 pin 18) on the DTE interface.

RL Detect: This option allows you to enable or disable the remote loop activation by the remote loopback signal (V.35 pin BB or RS-232 pin 21) on the DTE interface. Remote loopback causes transmission of V.54 loop or unloop codes to the far end device.

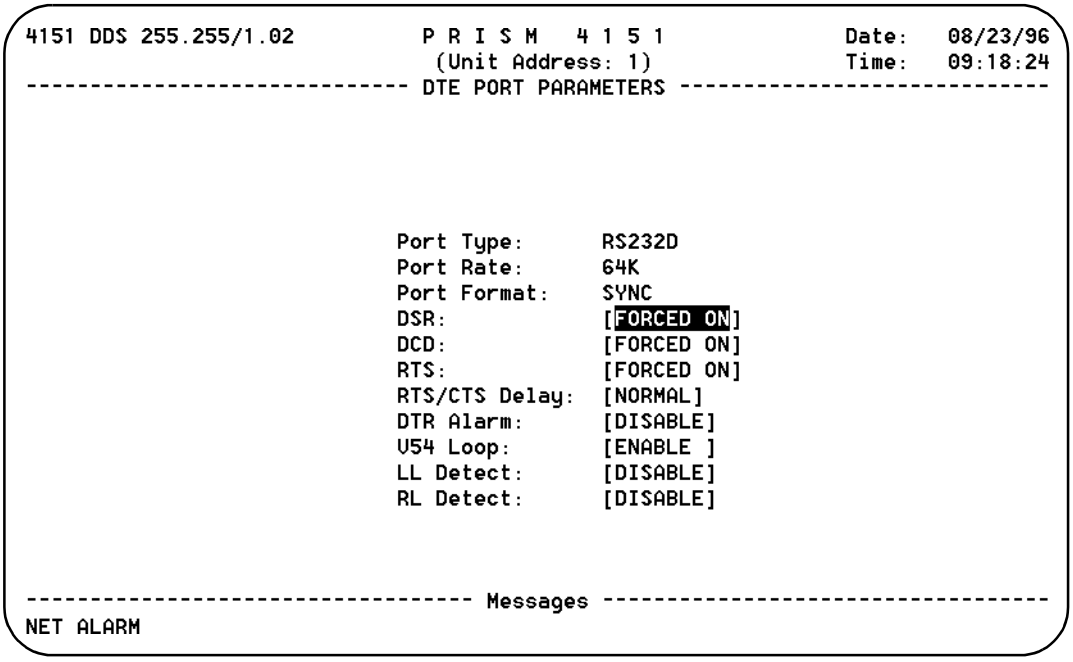


Figure 3-11 DTE Port Parameters Screen

ALARM CONFIGURATION

The Alarm Configuration screen (Figure 3-12) allows you to review and set alarm related thresholds for the selected element. These thresholds are the minimum acceptable performance levels. To modify the parameters, highlight the desired statistic and press the spacebar to increase the value or backspace to decrease the value and press <return>. If this value is later surpassed, an alarm indication will appear. A field set to none (- -) will cause the element not to alarm on that statistic.

Loss of Signal Seconds: A one second period in which the DDS received signal is interrupted. Options are 1, 2, 3, 4, 5, 10, 20, 30, and none (--).

Out of Service Seconds: A one second period during which the Out Of Service code is received. Options are 1, 2, 3, 4, 5, 10, 20, 30, and none (--).

Out of Frame Seconds: A one second period in which the Out Of Frame code is received or a frame sync loss occurred. Options are 1, 2, 3, 4, 5, 10, 20, 30, and none (--).

Alarm Reset Timer: Determines the number of seconds after alarm conditions clear before indications are removed. Options are 10, 30, 60, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, and None. If this value is set to None, the alarm conditions will not automatically reset.

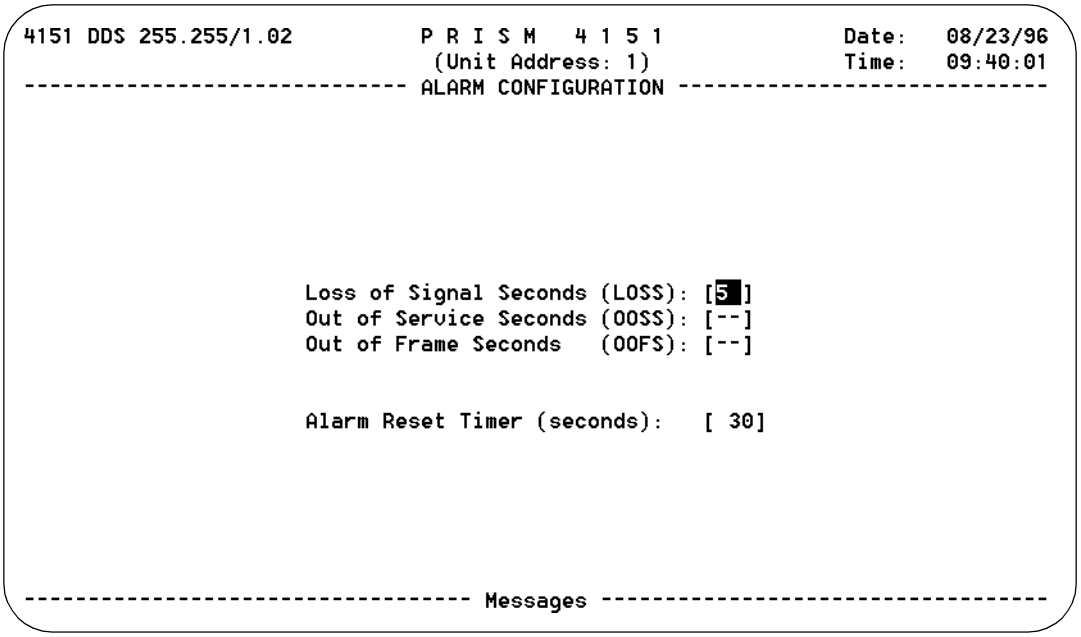


Figure 3-12 Alarm Configuration Screen

TCP/IP CONFIGURATION

The TCP/IP Configuration screen (Figure 3-13) is accessible for the SLIP, Ethernet or Token Ring SNMP interface. It allows for the entry of those parameters required for proper operation with an Ethernet or Token Ring-based LAN manager.

Reset LAN Interface: For changes to take effect, the LAN interface must be reset or the parameters must be stored to the EEPROM. Selecting this field brings up a confirmation screen which prompts you to proceed with the reset.

LAN Connection: This field allows you to select SLIP, Ethernet, or Token Ring interface for the network connection.

PRISM IP Address: This field accepts IP addresses. Each device connected to the LAN is required to have a unique IP address identifier.

Subnet Mask: This field is provided to manually override the subnet mask setting which is otherwise discovered by the SNMP agent.

Router IP Address: This field accepts the IP address of the default router.

Filter IP Address: These eight fields accept the IP address of the source packet filter. If any of these fields are set, access is allowed only by the specified IP addresses.

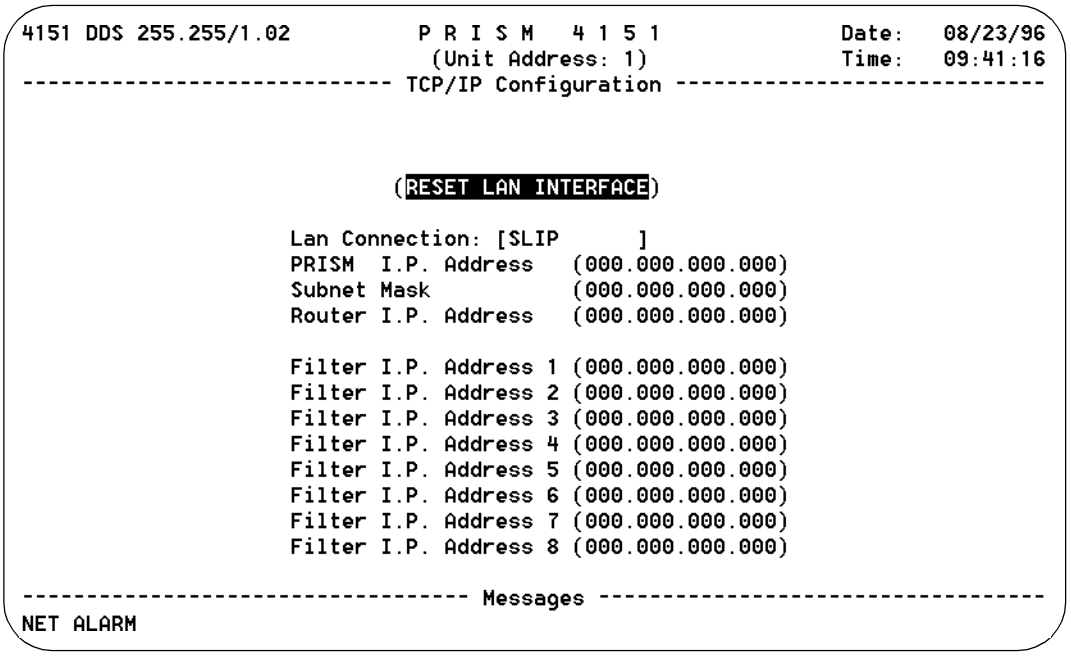


Figure 3-13 TCP/IP Configuration Screen

SNMP CONFIGURATION

The SNMP Configuration screen (Figure 3-14) is accessible for the SLIP, Ethernet or Token Ring SNMP interface. It allows for the entry of those parameters required for proper operation with an SNMP-based network manager.

The PRISM 4151 supports alarm reporting by SNMP TRAPs when running the LAN or SLIP interface. If the unit's IP connection is LAN or direct SLIP, it expects an IP connection to always be present and thus outputs its TRAP messages immediately. If the IP connection is dial SLIP, the unit dials out from the modem connected to the SLIP port using the number programmed in the SNMP Configuration screen and outputs trap messages upon connection.

The PRISM 4151 has an embedded SNMP agent supporting MIB-2 and a proprietary DDS MIB. The SET command is supported and has the functionality described below. The PRISM 4151 also supports a single TELNET session.

SNMP Sets: This field enables or disables the set command responses for SNMP. Refer to Appendix C, SNMP Agent, for detailed information on these responses.

TRAP IP Address: These six rows require numeric entries. Each row contains four 3-digit numbers which are separated by periods. Each of these numbers can range from 0 to 255.

These fields accept the IP address of a network device to which alarm reporting traps are to be sent. The unit detects and reports alarms and provides several options for reporting them, one of which is SNMP traps. When an alarm occurs, the unit sends a trap message to up to six destinations on the user's network. The trap message is formatted per RFC 1157. The generic trap type is enterprise-specific (generic-trap = 6).

Up to six trap IP addresses can be assigned to report via SNMP. The unit will report each alarm by transmitting an SNMP trap to each trap IP address. DDS network problems often cause more than one alarm type. In these cases, multiple trap messages are generated, each with a different specific trap type.

The following five menu items allow the entry of up to 58 characters identifying the appropriate group, person, device function, or unit location.

Read Community: This display accepts a character string identifying the group authorized to perform read operations. The default setting is public.

Write Community: This display accepts a character string identifying the group authorized to perform write operations. The default setting is a null string (' ').

System Contact: This display accepts a character string identifying the person responsible for a network device. The default setting is no system contact.

System Name: This display accepts a character string identifying the functionality of the network device. The default setting is no system name.

System Location: This display accepts a character string identifying the physical location of network device. The default setting is no system location.

```
4151 DDS 255.255/1.02          P R I S M   4 1 5 1              Date:   08/23/96
                                (Unit Address: 1)               Time:   09:42:39
------------------------------ SNMP Configuration ------------------------------




                     SNMP Sets: [DISABLE]

                     Trap I.P. Address 1 (000.000.000.000)
                     Trap I.P. Address 2 (000.000.000.000)
                     Trap I.P. Address 3 (000.000.000.000)
                     Trap I.P. Address 4 (000.000.000.000)
                     Trap I.P. Address 5 (000.000.000.000)
                     Trap I.P. Address 6 (000.000.000.000)

Read Community      (public                                                   )
Write Community     (                                                         )
System Contact      (no system contact                                        )
System Name         (no system name                                           )
System Location     (no system location                                       )

---------------------------------- Messages ----------------------------------
NET ALARM
```

Figure 3-14 SNMP Configuration Screen

MANAGEMENT PORTS

The Management Ports screen (Figure 3-15) sets the following parameters for the Call On Alarm (COA) connection on both the SUPV and SLIP ports.

COA Connection (SUPV): This field controls the remote alarm reporting. ASCII alarm reporting through the supervisory port is independent of trap alarm reporting. The ASCII alarm report type is set by the following choices:

[DISABLED] - Alarm reporting is disabled.

[DIAL] - Sends reports through an attached AT command set compatible modem connected to the SUPV serial port, which must dial out to a remote modem. The message format is described in the Element ID field.

[DIRECT] - Sends reports to a printer or terminal connected directly to the supervisory port.

COA messages are reported in the following format in the [DIAL] or [DIRECT] modes only:

Element ID<CR><LF>

TxPORT DDS DSU Alarm Report HH:MM:SS MM/DD/YY<CR><LF>

NET Alarms: alarms <CR> <LF>

DTE Alarms: alarms <CR> <LF>

where (alarms) is a string consisting of some or all of the identifiers LOS, OOF, OOS, or DTR. The following is an example:

Joesunit 17:24:55

TxPORT DDS DSU Alarm Report 08/04/96

NET Alarms: LOS

DTE Alarms: DTR

The user programmable Element ID string (see Utilities on page 3-10) is transmitted first to allow the COA function to send a message with a specific meaning to some host (such as a log on message).

Primary Dial String, Secondary Dial String: These fields are ASCII strings for the primary and secondary call on alarm phone numbers used in the [DIAL] mode. The strings must include the ATDT command prefix (ex. ATDT555-1212).

The unit attempts three times to connect using the primary number. If all three attempts fail, it will attempt three times to connect using the secondary number (if it is not blank). If the secondary number fails, the unit waits five minutes and then attempts to communicate with the primary number again. When a connection is detected, the unit outputs the notification message and then disconnects.

Initialization String: The modem initialization string is entered in this field. Refer to the modem's documentation for further information. The default setting is ATE1Q0V1S0=1.

Disconnection String: This field identifies the character string to be output when the modem session is terminated. The default setting is ATH.

SLIP Port Rate: Options are 1.2K, 2.4K, 9.6K, and 19.2K.

SLIP Connection: This field controls remote SNMP trap reporting. Trap reporting through the SLIP port is independent of ASCII alarm reporting. The trap report type is set by the following choices:

[DISABLED] - Trap reporting is disabled.

[DIAL] - Sends traps through a modem to the SLIP server.

[DIRECT] - Sends traps directly to the SLIP server.

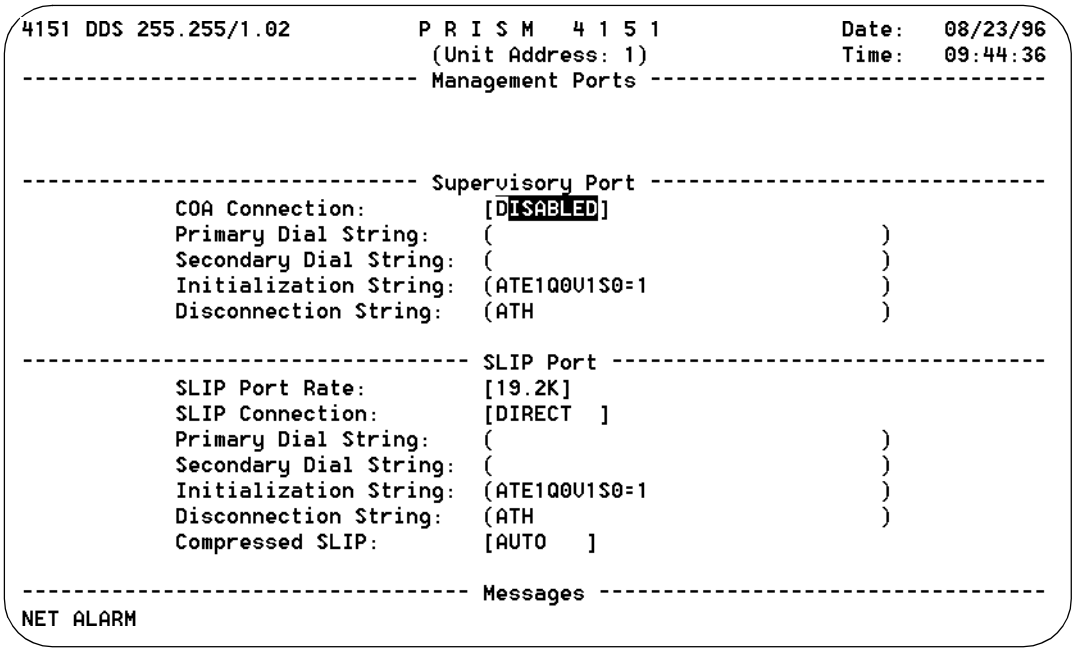


Figure 3-15 Management Ports Screen

Primary Dial String, Secondary Dial String: These fields are ASCII strings for the primary and secondary call on alarm phone numbers used in the [DIAL] mode. The strings must include the ATDT command prefix (ex. ATDT555-1212).

The unit attempts three times to connect using the primary number. If all three attempts fail, it will attempt three times to connect using the secondary number (if it is not blank). If the secondary number fails, the unit waits five minutes and then attempts to communicate with the primary number again. When a connection is detected, the unit outputs the SNMP trap message and then disconnects.

Initialization String: The modem initialization string is entered in this field. Refer to the modem's documentation for further information. The default setting is ATE1Q01V1S0=1.

Disconnection String: This field identifies the character string to be output when the modem session is terminated. The default setting is ATH.

Compressed SLIP: The choices are AUTO, ENABLE, and DISABLE. The AUTO setting allows the 4151 to negotiate with the far end to enable or disable SLIP compression, depending on the type of connection.

SUMMARY

The Summary screen (Figure 3-16) is a ***display-only*** screen summarizing the unit configuration including stored memory and switch settings. The current column displays the current unit configuration. The saved column displays the configuration stored in memory. The switches column displays all the configuration switch settings.

```
4151 DDS 255.255/1.07          P R I S M   4 1 5 1              Date:   01/16/97
No Remote Access                (Unit Address: 1)               Time:   09:39:56
------------------------------------ SUMMARY -------------------------------------

 Configuration Item    Current     Saved     Switches    Other Information
 ------------------    -------     -------   --------    -----------------
 DTE Bit Rate:         64K         64K       64K         Serial Num: 065535
 Line Bit Rate:        72K         72K       72K         Port Type:  V.35
 Line Clk Source:      NET         NET       NET         LAN:        TOKEN RING
 Loop Mode:            BIDIR       BIDIR     UNIDIR      HW Ad: 00c0e605ffff
 RTS Delay Norm/Dbl:   NORMAL      NORMAL    NORMAL      IP Ad: 198.198.198.004
 RTS/CTS Norm/On:      FORCED      FORCED    FORCED
 Data Mode:            DDS II      DDS II    DDS II
 LL/RL Detect:         DIS/DIS     DIS/DIS   DISABLE
 DTR Alarm:            DISABLE     DISABLE   DISABLE
 AntiStreaming Timer:  OFF         OFF       OFF
 V.54 Loop:            ENABLE      ENABLE    ENABLE
 Circuit Assurance:    OFF         OFF       OFF
 Supv Bit Rate:        19.2K
 Slip Bit Rate:        19.2K
 Unit ID:                1
 Boot Mode:            SAVED                 SAVED
---------------------------------- Messages --------------------------------------
NET ALARM
```

Figure 3-16 Summary Screen

Utilities

The Utilities screen (Figure 4-23) handles the functions described in the following paragraphs.

Element ID: This field allows the entry of an ASCII string (29 characters in length) identifying the unit to the device receiving the alarm notification messages. This ASCII string is also displayed at the top of all terminal interface screens.

Unit Address: The unit address between 1 and 250.

Set Time: The current time may be entered in this field using the 24-hour HH:MM:SS format. For example, 3:45 AM is entered as 03:45:00 and 3:45 PM is entered as 15:45:00.

Set Date: The current date may be entered in this field using the MM/DD/YY format. For example, July 4, 1996 is entered as 07/04/96.

The PRISM 4151 is Year 2000 date compliant. All date related functions for the year 2000 and after will operate without discrepancies or interruptions.

New Password: This field allows entry of a password of up to 10 characters. An empty string (carriage return only) may be entered to disable the password feature. After <return> is pressed, the new password is activated and is no longer visible. Therefore, type carefully when entering a new password and verify before pressing <return>. When the terminal interface is exited and later reactivated, this password must be entered exactly to gain access. If the wrong password is entered, the following message will appear:

```
Incorrect Password; Please Enter Again.
```

Do not exit the terminal interface program until the password procedure is fully understood. If a password has been specified, it must be typed exactly to reenter the program.

If you program a password and later forget it, contact TxPORT Technical support for a one-time backdoor password.

Store Parameters to EEPROM: This command causes the unit to store all user-selectable parameters into non-volatile memory. These settings then become the *saved* configuration which can be loaded at power-up.

This command causes the unit to restart and will interrupt network traffic. Pressing <RETURN> on this field to activate the command brings up the following warning:

ARE YOU SURE? - THIS WILL INTERRUPT DDS DATA
(NO!) (YES)

Maintenance Reset: This field will clear all user selectable parameters, performance registers, passwords, and alarms but saves the IP Address. All alarm threshold parameters are set to default values. These settings are then written to non-volatile memory as the *saved* configuration.

This command causes the unit to restart and will interrupt network traffic. Pressing <RETURN> on this field to activate the command brings up the following warning:

ARE YOU SURE? - THIS WILL INTERRUPT DDS DATA
(NO!) (YES)

```
4151 DDS 255.255/1.02          P R I S M   4 1 5 1              Date:   08/23/96
                                (Unit Address: 1)               Time:   09:46:58
---------------------------------- UTILITIES ----------------------------------




                  Element ID: (                            )

                              Unit Address: (  1)


                             Set Time: (09:46:55)
                             Set Date: (08/23/96)

                           New Password: (**********)

                          (STORE PARAMETERS TO EEPROM)

                              (MAINTENANCE RESET)
                                (FACTORY RESET)

---------------------------------- Messages -----------------------------------
NET ALARM
```

Figure 3-17 Utilities Screen

Factory Reset: Clears all user selectable parameters including the IP Address.

To exit this screen without performing the reset function, press <return>with NO selected. To proceed with the reset function, move the cursor to YES and press <return>.

The reset operation sets all parameters to the factory default settings and zeros all performance registers.

⚠ This command causes the unit to restart and will interrupt network traffic. Pressing <RETURN> on this field to activate the command brings up the following warning:

ARE YOU SURE? - THIS WILL INTERRUPT DDS DATA

(NO!) (YES)

4. Testing

This chapter describes hardware and software testing procedures and responses for the PRISM 4151.

Hardware Testing

The PRISM 4151 front panel (Figure 4-1) has five LED indicators and two control buttons from which you can perform basic unit testing.

Front Panel LEDs

Five front panel LEDs allow a visual identification of the test results and alarms. These LEDs are: TEST, LOOP, NET, ALARM, and POWER.

TEST

This LED flashes amber when the unit is transmitting loop or unloop code. It is green continuously when BERT is on with no errors. It is red when the BERT is on and is receiving errors or is out of pattern sync.

LOOP

This amber LED lights continuously when the unit is in any loop condition.

NET

This LED is green when the unit is in frame sync and does not detect a Loss of Signal. It is red when the unit is out of frame sync and/or detects Loss of Signal.

ALARM

Red LED lights continuously when the unit is in an active alarm condition.

POWER

Green LED lights continuously when power is applied to the unit.

Front Panel Buttons

Two front panel buttons allow you to perform loopback tests. The two buttons are: TEST and LOOP.

TEST

When this button is pushed once, the unit transmits V.54 loop code sequence out to the network. The indicator blinks amber during transmission of the loop code.

At completion of the loop pattern, 511 BERT pattern is transmitted toward the network. The received pattern is compared and if the pattern is received error free, the TEST indicator remains green. If pattern errors are detected, the TEST indicator turns red for one second for each errored second. Therefore, if five errored seconds are received, the indicator will remain red for five seconds. The DTE port is looped back toward the DTE during the test.

If the TEST button is pushed again, the unit transmits V.54 loop down code and returns to normal operating mode. The TEST indicator is then turned off.

LOOP

When this momentary push button is pushed once, the unit activates a line loopback, looping the network receive data back to the network, and looping the data from the DTE ports back to the DTE. The TEST indicator is illuminated while the unit is in loop. If pushed again, the unit clears the loop and turns off the LOOP indicator.

> *For additional information concerning test and loop options, refer to the section Software Configuration on page 3-2.*

Software Testing

When in-depth testing is necessary, you can use the PRISM 4151 Maintenance screen (Figure 4-2 on page 4-2) to perform loop tests and/or BERT functions on the DDS circuit. You can activate and clear loops and the BERT tester. BERT is performed by using on-board test facilities. No other test equipment is needed. Some of these tests may also be activated by the front panel push buttons as described in Hardware Testing on page 4-1.

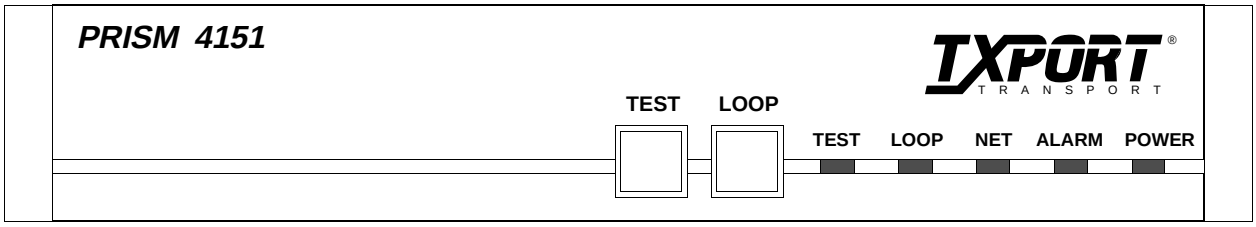


Figure 4-1 Front Panel Controls and Indicators

Clear Tests: Pressing <return> on this field clears all local tests and any line loops that have been initiated.

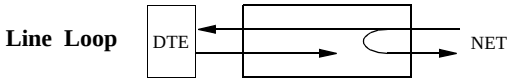
Clear Alarms: Pressing <return> on this field causes all near end alarms to be cleared.

Loop: The type of loop is chosen by toggling the <spacebar> and is executed by pressing <return>. Options include LOCAL, V.54, and FAR V.54. Local and V.54 generate near end loops. Far V.54 generates a V.54 loop at the far end.

Unloop: Pressing <return> takes down the specified loop from the currently selected port. The type of loop is chosen by toggling the <spacebar> and is executed by pressing <return>. Options include LOCAL, V.54, and FAR V.54.

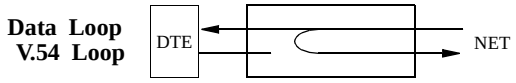
Loop Mode: Options include BIDIRECTIONAL and UNIDIRECTIONAL. When set to Unidirectional, the NET receive data is looped back to the NET as NET transmit data and continues to pass through the data port to the DTE. Transmit data from the DTE is terminated. When set to Bidirectional, the NET receive data is looped back to the NET as NET transmit data. Transmit data from the DTE is looped back through the data port as receive data to the DTE.

Line Loop: Occurs at the DDS network interface and activated by the reversal of the simplex, 20 mA sealing current. This is a unidirectional loop that ignores the CSU/DSU transmit data and retransmits the received DDS data. Receive data is unaffected and circuits DSR and CD are forced OFF.



Data Loop: Occurs at the DDS network interface. In DDS I mode, the data loop is activated when the CSU/DSU receives alternating loop codes in the network receive data stream. Technically, it is activated by the receipt of at least 4 consecutive loop commands and remains looped as long as each 3rd pattern byte is the loop command. It returns to normal operation after at least 4 pattern bytes that are not the loop command. This is a unidirectional loop that retransmits the CSU/DSU received data on the CSU/DSU transmit data including the remapped loop code. Receive data is unaffected (but includes the modified loop codes) and circuits DSR and CD are OFF.

In DDS II mode, the data loop is activated when the latching loopback sequence is received. The sequence consists of 35 or more TIP bytes, 35 or more LSC bytes, 100 or more LBE bytes, 32 or more FEV bytes. Latching loop is deactivated when 31 or more TIP bytes are received.

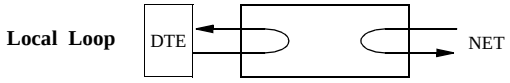


V.54 Loop: Occurs at the DDS network interface and is activated upon receipt of inband V.54 loop codes for at least two seconds followed by all ones in the network receive data stream. This loop is unidirectional and returns the CSU/DSU receive data to the CSU/DSU transmit data, and subsequently the DDS transmit data. Receive data is unaffected and DSR and DCD are forced OFF.

Local Loop: Bidirectional and occurs at the DDS network interface. It returns the DDS receive data to the DDS transmit line and the CSU/DSU transmit data to the CSU/DSU receive data output.

```
4151 DDS 255.255/1.04          P R I S M   4 1 5 1              Date:   10/14/96
No Remote Access                (Unit Address: 1)               Time:   08:14:28
------------------------------ ELEMENT MAINTENANCE ------------------------------



    (CLEAR TESTS)                                    BERT:      [DTE        ]
    (CLEAR ALARMS)                                   Test Length:    [Cont. ]

    Loop:       [LOCAL    ]                          Pattern Sync:    NO TEST
    Unloop:     [LOCAL    ]                          Elapsed Time:   00:00:00
    Loop Mode: [BIDIRECTIONAL  ]                     Bit Errors:             0
                                                     Errored Seconds:        0
    (ACTIVATE REMOTE ACCESS)                         % EFS:                100

                                                     (START TEST)
                                                     (RESET ERRORS)

NET Status: LOS OOF
DTE Status: OK
Near Loops:
Far Loops:
---------------------------------- Messages ----------------------------------
NET ALARM
```

Figure 4-2 Element Maintenance Screen



Activate Remote Access: Pressing <return> on this field initiates communication with another PRISM 4151 DDS unit at the far end of the network link.

The near unit will transmit an activation signal to the far end unit for five seconds. At the end of this period, both units should be in remote access mode. While in this mode, the DCD and DSR signals to the DTE interface are FALSE and the transmit data from the DTE is not transmitted to the network. The command field also changes to DEACTIVATE REMOTE ACCESS.

While Remote Access is active, the far end type/revision information should be displayed in the upper left corner of each screen. Also on each screen, a field labeled *Element* with selectable values of *Near* and *Far* appears. Pressing <return> on this field activates the user interface for the selected element.

To terminate Remote Access, press <return> on the DISABLE REMOTE ACCESS field. Both units will immediately return to normal operation.

> *During Remote Access, either unit will return to normal operation if communication with the far end is lost for 30 seconds.*

BERT: These fields control the Bit Error Rate Test feature. BERT is performed on the NET interface and preempts user data.

Test Length: Defines the run-time of test pattern generation and error accumulation. The choices are [15 min], [30 min], [60 min], [24 Hour], and [Continuous].

Pattern Sync: This field displays the current state of pattern sync during a test. If no test is in progress, NO TEST is displayed. If a test is active, but the receiver is not in pattern sync, NO SYNC is displayed. If the receiver is in pattern sync, IN SYNC is displayed.

Elapsed Time: Displays the amount of time elapsed since a timed test began or, if completed, the total test time.

Bit Errors: Displays the total number of bit errors detected since the test began or since error statistics were cleared (Up to a maximum number of 999,999).

Errored Seconds: This field displays the number of asynchronous errored seconds that have been detected since the test began or since error statistics were last cleared. This parameter includes bit error seconds and sync loss seconds.

% EFS: This ratio is derived from the number of error free seconds divided by the number of seconds accumulated in Elapsed Time.

Start Test: Pressing <return> with the cursor on this field starts the selected test pattern. TEST IN PROGRESS appears once the test has started. To end the test, press <return> on STOP TEST.

Reset Errors: Pressing <return> with the cursor on this field causes the test error results to be cleared to zero.

NET/DTE Status: These two fields display the fault status of the network and the far end DTE. They indicate current fault conditions. They do not indicate that alarm thresholds are exceeded. Status indications are described in NET/DTE Status: These two fields display the fault status of the network and the T1 DTE. They indicate current fault conditions. They do not indicate that alarm thresholds are exceeded. Status indications are described in Table 4-I.

Table 4-I Status Indications

Status	Description
-------	No status is available
OK	No errors are currently detected.
LOS	A loss of signal condition exists.
OOF	An out of frame condition exists or OOF codes are received.
OOS	Out of Service codes are received.
DTR	DTR from the DTE device is false.

Near Loops: Displays the loop status of the near element.

Far Loops: Displays the loop status of the far element.

5. Operation

This chapter describes the alarm types and status for the PRISM 4151.

Interface Start-up

Once a compatible terminal is properly connected to the unit, you can start a terminal interface session by sending a BREAK command to the unit (or by pressing <return> four times). If a password has been previously establish, you must enter the correct password to continue the session. *The password is case-sensitive.* If you have forgotten your password, note the date and time shown on your screen and contact TxPORT Technical Support. You can establish a password through the Utilities screen on page 3-10.

Once a valid password has been entered, the Main Menu screen is displayed. If you are unfamiliar with the PRISM 4151 interface, commands, and menu structure, refer to Appendix A, *Terminal Interface*, for specific information concerning the menu structure and operator commands.

> ⚠ ***If you do not enter a keystroke for 10 minutes, the terminal interface automatically logs off.***

Alarms

The Alarms screen (Figure 5-3) allows you to view the current alarm status of the network and the DTE lines.

NET Alarms: These status lines display the selected element's current network signal alarm state (Table 3-J). Alarms are determined by the selectable thresholds in Alarm Configuration on page 3-5.

Table 3-J NET Alarm Indicators

Alarm	Description
-------	No status is available
None	No alarm threshold has been exceeded, although errors may exist which do not exceed thresholds.
LOSS	The Loss Of Signal Seconds threshold is exceeded.
OOFS	The Out Of Frame Seconds threshold is exceeded.
OOSS	The Out Of Service Seconds threshold is exceeded.

DTE Alarms: These status lines display the selected element's current DTE signal alarm state (Table 3-K). Alarms are determined by the selectable thresholds in Alarm Configuration on page 3-5.

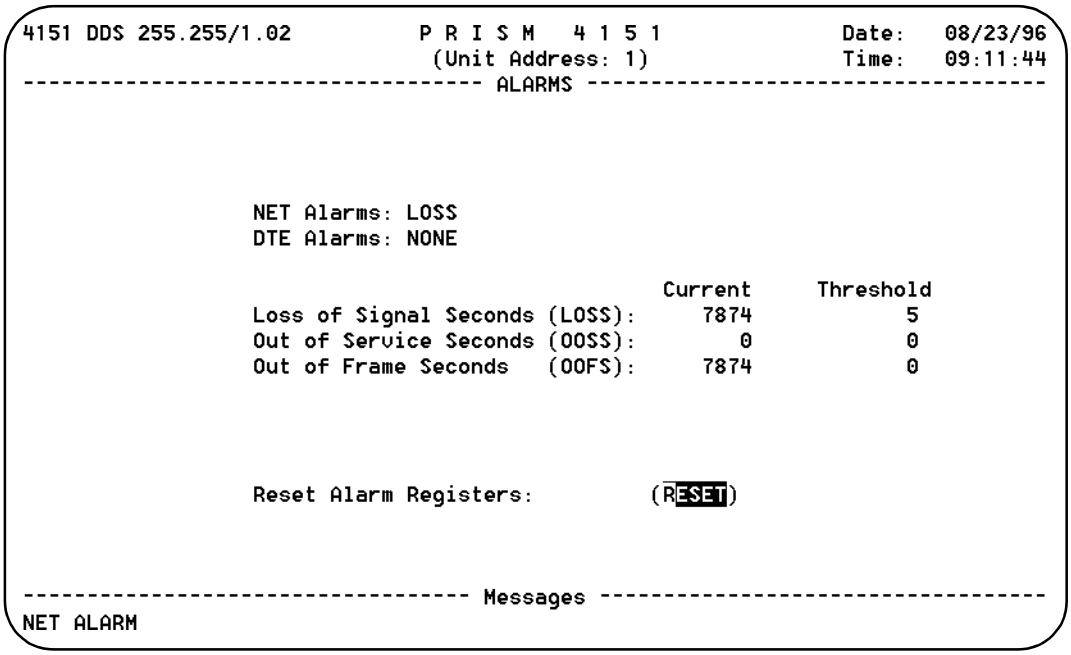


Figure 5-3 Alarms Screen

Table 3-K DTE Alarm Indicators

Alarm	Description
None	DTR on DTE interface is true, or the alarm has been disabled.
DTR	DTR on DTE interface is false.

Selectable thresholds in the Alarm Parameters screen and the DTR Alarm may be enabled or disabled for the ports in the Port Parameters screen.

(alarm status): The main body of the Alarms screen shows the current count for parameters that may be used to trigger an alarm.

The Current column displays the consecutive seconds during which the error condition has existed.

The Threshold column displays the values set in the Alarm Configuration screen (page 3-5). Parameters having a current value equal to or greater than its non-zero threshold generates an alarm. Any parameter with a threshold value of zero is disabled from generating alarms. An alarm is declared when the current value of any parameter exceeds its non-zero threshold.

The parameters shown on the Alarms screen are updated at approximately five second intervals.

Reset Alarm Registers: Pressing <return> on (RESET) zeros the value of all Current alarm parameters.

A. Terminal Interface

This chapter describes the screens structure and menu controls for the TxPORT PRISM 4151 terminal interface. The interface is a firmware application program embedded inside the unit.

It requires an ANSI compatible VT100 terminal (ASCII), or a computer running an ANSI terminal emulation program. The terminal interface uses ASCII BREAK and ESCAPE functions, which are implemented differently with the various terminal emulation programs.

Screen Components

Terminal interface screens have several components common to all screens (Figure A-4).

Device Type and Revision: The device type (such as PRISM 4151) and the revision control numbers are shown in the upper left corner. The first number is the hardware revision and the second number is the software revision. Information is displayed for the near end unit (connected directly to the terminal) on the top line, and for the far end unit (connected to the network T1 interface) on the second line. Far end information is displayed only when activated, otherwise, *No Remote Access* is displayed. Refer to this information when contacting the factory with inquiries.

Date/Time: The top right corner of the terminal screen displays the current date and time. The setting of these functions is described in the section entitled Utilities on page 3-10.

Element ID: Below the header (PRISM 4151), the Element ID is displayed. Refer to the section entitled Management Ports on page 3-8 for information on the Element ID.

Menu Title: The menu title (third line, center) denotes the general classification of functions currently accessible by the user (such as MAIN or PERFORMANCE).

Messages: Diagnostic messages may be displayed at the bottom of the screen.

Cursor Controls

The terminal interface utilizes a highlighted cursor to make selections from menus and select fields within screens to be operated on. The cursor is moved in different ways, depending on the terminal emulation program used. Most programs allow use of the <tab> and <shift-tab> keys. Others allow use of the arrow keys. Once a field is highlighted, it is manipulated as described in Section .

For keyboards which do not have these standard keys or have only some of them, an alternate set of cursor control commands is provided. Each command is performed by pressing a letter key while holding down the <Ctrl> key.

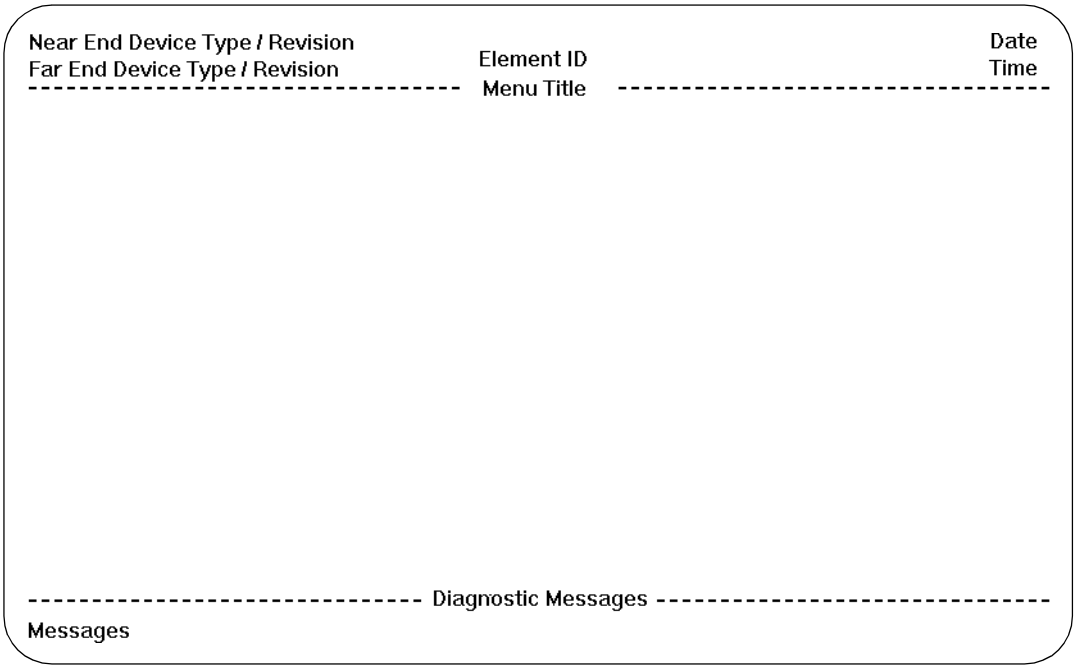


Figure A-4 Terminal Interface Layout

Alternate commands may be freely mixed with the keyboard commands at your discretion.

Table A-L Keyboard / Alternate Commands

Keyboard Command	Alternate Command
< left arrow >	< Ctrl - S >
< right arrow >	< Ctrl - D >
< up arrow >	< Ctrl - E >
< down arrow >	< Ctrl - X >
< backspace >	< Ctrl - H >
< delete >	< Ctrl - Z >

Field Types

Each screen is made up of fields. The two basic field types are user-selectable and display-only. If the highlighted cursor can be moved to a field, it is a user selectable field. All other fields are for display only. User selectable fields allow for changes to be made or commands to be executed.

Fields without brackets or parenthesis are display-only. They cannot be changed on the screen. Most user selectable fields are enclosed in brackets or parenthesis and are described in the following paragraphs.

Fields enclosed in brackets [ ] offer the user a list of selections from which to choose. The selections may be toggled by pressing the <spacebar>. Each time it is pressed, a new item appears. When the appropriate choice is displayed, press <return> to select it.

Fields enclosed in parenthesis ( ) are manipulated by one of the following two methods:

1. Pressing <return> on such fields as (Reset) and (Start Test) simply execute the function.
2. The most common type of field in parenthesis accepts typed input in the form of letters and/or numbers. Typing characters when the field is highlighted causes the current entry to be replaced with the new characters. To edit an existing entry rather than replace it, press the <right arrow> key to move the cursor to the point that needs editing. Characters may then be inserted or deleted. Typed data is always inserted rather than typed over. If the field is full, though, at least one character must be deleted to add another.

Many fields of this type may also be toggled by pressing the <spacebar>. Other fields are range checked, where the user is not allowed to exit with an illegal value set.

Any screen may be redisplayed (or refreshed) by pressing <Ctrl - U>.

Menu Structure

The Main Menu screen lists the functional user accessible menus. To activate a menu, highlight the desired selection and press <return>. To exit this or any subsequent menu, press <esc>. If the Main Menu is exited, the terminal interface program terminates. This is a valid way to end a session. If any other menu is exited, the previous screen is returned. The menu structure (Figure A-5) shows all the screens accessible from the Main Menu.

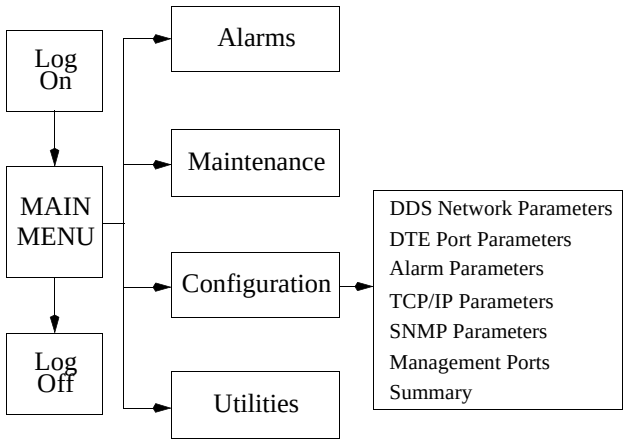


Figure A-5 Terminal Interface Menu Structure

If you do not enter a keystroke for 10 minutes, the terminal interface logs off automatically.

B. Pinout Tables

This appendix displays the pinout assignments for each port and option on the rear of the PRISM 4151.

LAN Port - Ethernet

Pin	Signal Name
1	Data Out
2	Data Out
3	Data In
6	Data In

LAN Port - Token Ring

Pin	Signal Name
3	Data Out
4	Data In
5	Data In
6	Data Out

SLIP / SUPV Port - PC

Pin	Signal Name	DTE	Pin
1	DTR Out	DCD	1
2	RTS Out	CTS	8
3	Frame Gnd	Frame Gnd	5
4	Data Out	RXD	2
5	Data In	TXD	3
6	Signal Gnd	Signal Gnd	NC
7	CTS In	RTS	7
8	DCD In	DTR	4

SLIP / SUPV Port - Modem

Pin	Signal Name	DCE	Pin
1	DTR Out	DTR	20
2	RTS Out	RTS	4
3	Frame Gnd	Frame Gnd	1
4	Data Out	TXD	2
5	Data In	RXD	3
6	Signal Gnd	Signal Gnd	7
7	CTS In	CTS	5
8	DCD In	DCD	8

Net

Pin	Signal Name
1	Data Out (Tip)
2	Data Out (Ring)
3-6	Not Used
7	Data In (Tip)
8	Data In (Tip)

Data Port

Signal Name	V.35	Acronym
Frame Ground	A	FG
Transmit Data	P, S	TD
Receive Data	R, T	RD
Request to Send	C	RTS
Clear to Send	D	CTS
Data Set Ready	E	DSR
Signal Ground	B	SG
Data Carrier Detect	F	DCD
Transmit Clock	Y, AA	TXC
Receive Clock	V, X	RXC
Local Loopback	J	LL
Data Term Ready	H	DTR
Remote Loopback	BB	RL
Terminal Timing	U, W	TT, EXC

C. SNMP Agent

This unit has an embedded SNMP agent which can be accessed either through the built in SLIP interface or the optional Network Interface Card (NIC). The NIC can either be an Ethernet or Token Ring interface. With these interfaces, you can gain access to the PRISM 4151 through TELNET or SNMP. The TELNET session is simply a connection to the user interface of the unit.

SNMP access to the unit is limited to Management Information Bases (MIBs) supported by the embedded SNMP agent. The SNMP agent supports MIB-II (RFC 1213). This appendix describes in detail how the embedded SNMP agent conforms to the RFC.

RFC 1213

This RFC defines the MIB-II specification.

systemTable

sysDescr: (read-only)

This entry is a textual description of the entity. It should include the full name and version identification of the system's hardware type, software operating-system, and networking software. It is mandatory that this only contain printable ASCII characters. For the PRISM 4151, this value returns the string *TxPORT SNMP Agent*.

sysObjectID: (read-only)

The vendor's authoritative identification of the network management subsystem contained in the entity. This value is allocated within the enterprises subtree (1.3.6.1.4.1) and provides an easy and unambiguous means for determining ‘what kind of box' is being managed. For example, if vendor ‘Flintstones, Inc.' was assigned the subtree 1.3.6.1.4.1.4242, it could assign the identifier 1.3.6.1.4.1.4242.1.1 to its ‘Fred Router'. For the PRISM 4151, this value returns the Object Identifier of *1.3.6.1.4.1.254.1.1*.

sysUpTime: (read-only)

The time (in hundredths of a second) since the network management portion of the system was last re-initialized.

sysContact: (read-write)

The textual identification of the contact person for this managed node, together with information on how to contact this person. The string defaults to ‘no system contact.’

sysName: (read-write)

An administratively-assigned name for this managed node. By convention, this is the node's fully-qualified domain name. The default is ‘no system name’

sysLocation: (read-write)

The physical location of this node (e.g.,‘telephone closet, 3rd floor'). The default is ‘no system location’

sysServices: (read-only)

A value which indicates the set of services that this entity primarily offers. The value is a sum. This sum initially takes the value zero. Then, for each layer, L, in the range 1 through 7, that this node performs transactions for, 2 raised to (L - 1) is added to the sum. For example, a node which performs primarily routing functions would have a value of 4 ($2^{(3-1)}$). In contrast, a node which is a host offering application services would have a value of 72 ($2^{(4-1)} + 2^{(7-1)}$). Note that in the context of the internet suite of protocols, values should be calculated accordingly:

1 physical (e.g.,repeaters)

2 datalink/subnetwork (e.g., bridges)

3 internet (e.g., IP gateways)

4 end-to-end (e.g., IP hosts)

7 applications (e.g., mail relays)

For systems including OSI protocols, layers 5 and 6 may also be counted. The PRISM 4151 returns a value of *72* representing a host offering application services.

ifTable

ifNumber: (read-only)

The number of network interfaces (regardless of their current state) present on this system. There are always a minimum of 3 (SLIP, Network - DDS, and Port 1). The optional interface is an NIC (Ethernet or Token Ring) card.

ifIndex: (read-only)

A unique value for each interface. Its value ranges between 1 and the value of ifNumber. The value for each interface must remain constant at least from one re-initialization of the entity's network management system to the next re-initialization.

With NIC	Without NIC
1 - SLIP	**1** - SLIP
2 - NIC	**2** - DDS
3 - DDS	**3**- DTE Port
4 - DTE Port	

ifDescr: (read-only)

A textual string containing information about the interface. This string should include the name of the manufacturer, the product name and the version of the hardware interface.

‘SLIP Interface’ - returned for the SLIP Interface

‘Ethernet NIC’ - returned for the NIC, for Ethernet interface

'Token Ring NIC' - returned for the NIC, for Token Ring

'DDS Network Interface' - returned for the DDS interface

'DDS DTE RS-232/V.35 Port' - returned for DTE Port

ifType: (read-only)

The type of interface, distinguished according to the physical/link protocol(s) immediately 'below' the network layer in the protocol stack.

other(1) - none of the following

regular1822(2)

hdh1822(3)

ddn-x25(4)

rfc877-x25(5)

ethernet-csmacd(6) - Ethernet NIC

iso88023-csmacd(7)

iso88024-tokenBus(8)

iso88025-tokenRing(9) - Token Ring NIC

iso88026-man(10)

starLan(11)

proteon-10Mbit(12)

proteon-80Mbit(13)

hyperchannel(14)

fddi(15)

lapb(16)

sdlc(17)

ds1(18)

e1(19) - european equiv. of T-1

basicISDN(20)

primaryISDN(21) - proprietary serial

propPointToPointSerial(22) - Port 1

ppp(23)

softwareLoopback(24)

eon(25) - CLNP over IP [11]

ethernet-3Mbit(26)

nsip(27) - XNS over IP

slip(28) - generic SLIP

ultra(29) - ULTRA technologies

ds3(30) - T-3

sip(31) - SMDS

frame-relay(32)

ifMtu: (read-only)

The size of the largest datagram which can be sent/received on the interface, specified in octets. For interfaces that are used for transmitting network datagrams, this is the size of the largest network datagram that can be sent on the interface.

296 - returned for the SLIP Interface

1500 - returned for the NIC interface (if Ethernet)

2000 - returned for the NIC interface (if Token Ring)

0 - returned for the DDS and Port 1 interfaces

ifSpeed: (read-only)

An estimate of the interface's current bandwidth in bits per second. For interfaces which do not vary in bandwidth or for those where no accurate estimation can be made, this object should contain the nominal bandwidth

9600 - returned for the SLIP Interface at 9600 baud

19200 - returned for the SLIP Interface at 19200 baud

38400 - returned for the SLIP Interface at 38400 baud

56000 - returned for the SLIP Interface at 56000 baud

10000000 - returned for the NIC (if Ethernet)

4000000 - returned for the NIC (if Token Ring at 4 Mbps)

16000000 - returned for the NIC (if Token Ring at 16 Mbps)

ifPhysAddress: (read-only)

The interface's address at the protocol layer immediately 'below' the network layer in the protocol stack. For interfaces which do not have such an address (e.g., a serial line), this object should contain an octet string of zero length. One exception is the NIC interface which returns the physical address of the unit

ifAdminStatus: (read-write)

The desired state of the interface. The testing(3) state indicates that no operational packets can be passed. For the PRISM 4151, you do not have write permission.

up(1) - Ready to pass packets

down(2)

testing(3) - In test mode

ifOperStatus: (read-only)

The current operational state of the interface. The testing(3) state indicates that no operational packets can be passed.

up(1) - Ready to pass packets. This value is returned if the interface is active, and does not have a testing status.

down(2) - Returned if the interface is not enabled

testing(3) - In test mode. This value is returned for the DDS and DTE interfaces if the interface has a test loop or BERT active.

IfLastChange: (read-only)

The value of sysUpTime at the time the interface entered its current operational state. If the current state was entered prior to the last re-initialization of the local network management subsystem, then this object contains a zero value.

The PRISM 4151 returns the time in hundredths of a second since the interface was changed, or reset

DDS

The TxPORT enterprise DDS MIB contains the following objects that allow unit management from any SNMP manager.

DDS Network Objects

ddsNetRate: (read-write)

This object allows you to verify or set the identifier of the current DDS network rate. Only the *ddsNetRate56000* and *ddsNetRate64000* apply to the PRISM 4151. Both rates are controlled by the *ddsNetMode* setting and cannot be changed independently.

ddsNetRate2400 - 2400bps

ddsNetRate4800 - 4800bps

ddsNetRate9600 - 9600bps

ddsNetRate19200 - 19200bps

ddsNetRate38400 - 38400bps

ddsNetRate56000 - 56000bps

ddsNetRate64000 - 64000bps

ddsNetMode: (read-write)

This variable describes mode in which data is being sent from the DDS unit back towards the network. Changing the value of this variable can cause a loss of remote communications.

ddsNetModeNormal(1) - normal data mode of operation.

ddsNetModeProprietary(2) - Data being sent out on the DDS network is in a proprietary mode to allow for remote communications, rate adaption, and SYNC to ASYNC modes.

ddsNetMode64KClearChannel(3) - A special case of DDs-II, where the line rate is 72K, the data rate is 64K, and there is no secondary channel.

ddsNetSendCode: (read-write)

This variable describes what type of test code is being sent from the DDS unit back towards the network.

ddsNetSendNoCode(1) - Normal data mode of operation

ddsNetSendOtherTestPattern(2) - Sending some other stress pattern than 511

ddsNetSend511Pattern(3) - Sending 511 stress pattern toward the network

ddsNetLoopConfig: (read-write)

This variable allows you to set or view the current loop state of the DDS network interface.

ddsNetNoLoop(1) - Normal data mode of operation

ddsNetLocalLoop(2) - Data is looped back toward the DDS network switch activated loop

ddsNetLineLoop(3) - Data is looped back toward the DDS network sealing current activated loop

ddsNetOtherLoop(4) - Other loop than listed above is active

ddsNetFarEndLineLoop(5) - Far end unit currently has a line loop active

ddsNetStatus: (read-only)

Reports current operational status of the network interface

ddsNetNoAlarm(1) - DDS network interface has no current alarms

ddsNetLOS(2) - DDS network interface has Loss Of Signal

ddsNetOOS(3) - DDS network interface is receiving Out Of Service codes

ddsNetOOF(4) - DDS network interface has Out Of Frame condition

ddsNetTimingSource: (read-write)

Allows you to select or verify the current timing source for the DDS network interface.

ddsNetTimingNet(1) - Unit dependent upon network for DDS network interface timing

ddsNetTimingInt(2) - Unit supplying timing for DDS network interface

ddsNetTimingDTE(3) - Unit dependent upon DTE device for network interface timing

ddsNetRemComm: (read-)only

Reports status of the remote communications link

ddsNetRemCommEnabled(1) - Remote communications can be carried out end to end

ddsNetRemCommDisabled(2) - Remote communications are not allowed

ddsNetRemCommNotAvailable(3) - This unit does not support remote communications

ddsNetCircuitAssur: (read-write)

Allows you to enable or check setting of the circuit assurance option. Circuit Assurance does not apply to the DDS-II operating mode.

ddsNetCircuitAssurEnabled(1) - Circuit Assurance is enabled and the integrity of the DDS loop will be maintained

ddsNetCircuitAssurDisabled(2) - Circuit Assurance is disabled

ddsNetCircuitAssurNotAvailable(3) - This unit does not support Circuit Assurance

ddsNetAntiStrTimer: (read-write)

This variable describes the current setting for the anti streaming timer.

ddsNetAntiStrTimerOff(1) - AntiStreaming Timer is off

ddsNetAntiStrTimer10(2) - AntiStreaming Timer is set to 10 seconds

ddsNetAntiStrTimer30(3) - AntiStreaming Timer is set to 30 seconds

ddsNetAntiStrTimer60(4) - AntiStreaming Timer is set to 60 seconds

ddsNetLoopMode: (read-write)

Allows you to review or set Loop Mode to unidirectional or bidirectional

ddsNetLoopModeUnidirectional(1) - Line, Data, and V54 loops will be unidirectional Local loop will be bidirectional

ddsNetLoopModeBidirectional(2) - All loops will be bidirectional

DDS DTE Objects

ddsDteRate: (read-write)

Allows you to verify or select the DDS DTE data rate. Only the *ddsDteRate56000* and *ddsDteRate64000* apply to the PRISM 4151. Both rates are controlled by the *ddsNetMode* setting and cannot be changed independently.

ddsDteRate2400 - 2400bps

ddsDteRate4800 - 4800bps

ddsDteRate9600 - 9600bps

ddsDteRate19200 - 19200bps

ddsDteRate38400 - 38400bps

ddsDteRate54000 - 54000bps

ddsDteRate56000 - 56000bps

ddsDteRate57600 - 57600bps

ddsDteRate62000 - 62000bps

ddsDteRate64000 - 64000bps

ddsDteFormat (read-write)

This variable describes the current operations format of the DTE interface. Only the *ddsDteFormatSync* applies to the PRISM 4151.

ddsDteFormatSync(1) - DTE interface is currently set to operate in Synchronous clocking format

ddsDteFormatAsync(2) - DTE interface is currently set to operate in the Asynchronous clocking format

ddsDteFormatNotAvail(3) - DTE interface operating format is not available

ddsDteParity: (read- write)

Allows you to verify or select parity for the DTE interface. This variable is only valid when the DTE Mode is set to ASYNC. For the PRISM 4151, the value always returns *ddsDteParityNotAvail*. This value cannot be modified.

ddsDteParityNone(1) - DTE interface is currently set for no parity bit checking or generation

ddsDteParityOdd(2) - DTE interface is currently set for odd parity

ddsDteParityEven(3) - DTE interface is currently set for even parity

ddsDteParityMark(4) - DTE interface is currently set for mark parity

ddsDteParitySpace(5) - DTE interface is currently set for space parity

ddsDteParityNotAvail(6) - Parity setting on the DTE interface is not available.

ddsDteStopBit: (read- write)

Allows you to verify or set the stop bit setting for the DTE interface. This variable is only valid when the DTE interface is set to ASYNC. For the PRISM 4151, the value always returns *ddsDteStopBitNotAvail*. This value cannot be modified.

ddsDteStopBit1(1) - DTE interface is configured to operate in the ASYNC mode with 1 stop bit

ddsDteStopBit2(2) - DTE interface is configured to operate in the ASYNC mode with 2 stop bits

ddsDteStopBitNotAvail(3) - Stop bit information is not available. The DTE interface is probably configured for synchronous operation.

ddsDteSendCode: (read- write)

Allows you to start or verify the setting of the DTE BERT. This variable describes what type of test code is being sent from the DDS unit back towards the DTE. For the PRISM 4151, only the *ddsDteSendNoCode* applies. Other values are accepted but not acted upon.

ddsDteSendNoCode(1) - Normal data mode of operation

ddsDteSendOtherPattern(2) - Sending some other stress pattern than 511

ddsDteSend511Pattern(3) - Sending 511 stress pattern toward the DTE

ddsDteLoopConfig: (read- write)

Allows you to set a DTE loop or verify the status of a DTE loop

ddsDteNoLoop(1) - Normal data mode of operation

ddsDteV54Loop(2) - Data is looped back toward the DDS network and toward the DTE loop activated via V.54 loop codes

ddsDteDataLoop(3) - Data is looped back toward the DTE loop activated via data loop code received from the network

ddsDteOtherLoop(4) - DTE interface has some loop other than one of the above listed loops active

ddsDteFarEndV54Loop(5) - The far end unit has a V.54 loop current on it's DTE interface

ddsDteStatus: (read- only)

Reports the current operations status of the DTE interface

ddsDteNoAlarm(1) - DTE interface has no current alarms

ddsDteDtrAlarm(2) - DTE interface has currently declared a loss of DTR alarm

ddsDteInterfaceType: (read- only)

Reports the DTE interface type being used

ddsDteInterfaceV35(1) - DTE interface is a V.35

ddsDteInterface232(2) - DTE interface is a RS232

ddsDteInterfaceOther(3) - DTE interface is something other than listed above

ddsDteInterfaceNotAvail(4) - DTE interface type is not available

ddsDteV54Loop: (read- write)

Allows you to select or verify the operational state of the V.54 option

ddsDteV54LoopEnabled(1) - The unit will currently respond to V.54 loop codes

ddsDteV54LoopDisabled(2) - The unit will not respond to V.54 loop codes

ddsDteRtsCtsDelay: (read- write)

Allows you to verify or select the delay used in the transition time on RTS and CTS. For the PRISM 4151, only the *ddsDteRtsCtsDelayNormal* and *ddsDteRtsCtsDelayLong* option are valid.

ddsDteRtsCtsDelayOff(1) - Delay is turned off

ddsDteRtsCtsDelayNormal(2) - Delay is a normal amount based on the data rate and the hardware

ddsDteRtsCtsDelayLong(3) - Delay is generally doubled from the normal delay

ddsDteRtsCTSDelayUserDefined(30) - Delay has been user defined to some other value, when this value is set the delay is set to 30ms

ddsDteRtsStatus: (read- only)

Reports the current status of the RTS control lead

ddsDteRtsStatusHigh(1) - RTS control lead is in the active HIGH state

ddsDteRtsStatusLow(2) - RTS control lead is in the active LOW state

ddsDteCtsStatus: (read- only)

Reports the current status of the CTS control lead

ddsDteCtsStatusHigh(1) - CTS control lead is in the active HIGH state

ddsDteCtsStatusLow(2) - CTS control lead is in the active LOW state

ddsDteDcdStatus: (read- only)

Reports the current status of the DCD control lead

ddsDteDcdStatusHigh(1) - DCD control lead is in the active HIGH state

ddsDteDcdStatusLow(2) - DCD control lead is in the active LOW state

ddsDteDtrStatus: (read- only)

Reports the current status of the DTR control lead

ddsDteDtrStatusHigh(1) - DTR control lead is in the active HIGH state

ddsDteDtrStatusLow(2) - DTR control lead is in the active LOW state

ddsDteDsrStatus: (read- only)

Reports the current status of the DSR control lead

ddsDteDsrStatusHigh(1) - DSR control lead is in the active HIGH state

ddsDteDsrStatusLow(2) - DSR control lead is in the active LOW state

ddsDteDsrControl: (read-write)

Allows you to review and configure the DTE DSR lead (Circuit 107/CC)

ddsDteDsrControlTestOff(1) - DSR is on except when the unit is in test

ddsDteDsrControlForcedOn(2) - DSR is on regardless of any unit condition

ddsDteDcdControl: (read-write)

Allows you to review and configure the DTE DCD lead (Circuit 109/CF).

ddsDteDcdControlIdleOff(1) - DCD is on except when the unit is receiving Idle Code from the network.

ddsDteDcdControlForcedOn(2) - DCD is on regardless of any unit condition

ddsDteRtsControl: (read-write)

Allows you to review or configure the DTE RTS and CTS leads (Circuit 105/CA and 106/CB).

ddsDteRtsControlNormal(1) - RTS, Circuit Assurance, and Antistreaming control CTS

ddsDteRtsControlForcedOn(2) - RTS is ignored, CTS is on regardless of any unit condition

ddsDteDtrAlarm: (read-write)

Allows you to enable or disable monitoring on the DTR lead (Circuit 108/CD).

ddsDteDtrAlarmEnabled(1) - DTR low is an alarm condition

ddsDteDtrAlarmDisabled(2) - DTR is ignored

ddsDteRLDetect: (read-write)

Allows you to override the DTE RL input pin on the Remote Loopback lead (Circuit 140/RLB)

ddsDteRLDetectEnabled(1) - RLB high activates the Remote V.54 Loop

ddsDteRLDetectDisabled(2) - RLB is ignored

ddsDteLLDetect: (read-write)

Allows you to override the DTE LL input pin on the Local Loopback lead (Circuit 141/LLB).

ddsDteLLDetectEnabled(1) - LLB high activates the Local Loop

ddsDteLLDetectDisabled(2) - LLB is ignored

TxPORT

The TxPORT enterprise proprietary MIB contains objects that allow unit management from any SNMP manager. Far End parameters can only be retrieved when the unit is configured for proprietary mode of operation on both ends of the network.

companyName (read-only)

Displays the company name (*TxPORT, Inc.*).

companyStatement (read-only)

Displays the TxPORT vision statement.

companyStreetAddr (read-only)

Displays the TxPORT headquarters street address (*127 Jetplex Circle*).

companyCityState (read-only)

Displays the TxPORT headquarters location (*Madison, AL 35758*).

companyTechService (read-only)

Displays the TxPORT Technical Support telephone number (*1-800-285-2755*).

companyInHouseSales (read-only)

Displays the TxPORT Sales telephone number (*1-800-926-0085*).

companyEmailAddr (read-only)

Displays the mail address to obtain information concerning TxPORT and its products (*info@txport.com*).

productModelNumber (read-only)

Displays the product model number for the device currently being queried (*Model 4151*).

productModelDescr (read-only)

Displays a brief description of the product (*DDS CSU/DSU*).

productElementId (read-only)

Displays the element ID of the unit.

productSoftwareRev (read-only)

Displays the current unit software revision.

productHardwareRev (read-only)

Displays the current unit hardware revision.

productSerialNum (read-only)

Displays the unit's serial number.

productPhysicalAddress (read-only)

Displays the unit's physical ethernet or token ring address.

productNmsAddress (read-only)

Displays the unit's NMS address.

optionCardDesc (read-only)

Displays a brief description of the option card.

optionCardSoftwareRev (read-only)

Displays the software revision of the option card.

optionCardHardwareRev (read-only)

Displays the hardware revision of the option card.

optionCardPhysicalAddress (read-only)

Displays the physical address tied to the option card.