ATLAS 830
System Manual

1200780L1 ATLAS 830 System, AC
1200781L1 ATLAS 830 System, DC

61200780L1-1A
August 2002

Trademarks

Any brand names and product names included in this manual are trademarks, registered trademarks, or trade names of their respective holders.

To the Holder of the Manual

The contents of this manual are current as of the date of publication. ADTRAN reserves the right to change the contents without prior notice.

In no event will ADTRAN be liable for any special, incidental, or consequential damages or for commercial losses even if ADTRAN has been advised thereof as a result of issue of this publication.

901 Explorer Boulevard
P.O. Box 140000
Huntsville, AL 35814-4000
Phone: (256) 963-8000

About this Manual

This manual provides a complete description of the ATLAS 830 system and system software. The purpose of this manual is to provide the technician, system administrator, and manager with general and specific information related to the planning, installation, operation, and maintenance of the ATLAS 830. This manual is arranged so that needed information can be quickly and easily found. The following is an overview of the contents.

Revision History

This is the 1st issue of this manual.

Notes provide additional useful information.

Cautions signify information that could prevent service interruption.

WARNING

Warnings provide information that could prevent damage to the equipment or endangerment to human life.

Safety Instructions

When using your telephone equipment, please follow these basic safety precautions to reduce the risk of fire, electrical shock, or personal injury:

1. Do not use this product near water, such as a bathtub, wash bowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.
2. Avoid using a telephone (other than a cordless-type) during an electrical storm. There is a remote risk of shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord, power supply, and/or batteries indicated in the manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for special disposal instructions.

Save These Important Safety Instructions

Affidavit Requirements for Connection to Digital Services

- An affidavit is required to be given to the telephone company whenever digital terminal equipment without encoded analog content and billing protection is used to transmit digital signals containing encoded analog content which are intended for eventual conversion into voiceband analog signals and transmitted on the network.
- The affidavit shall affirm that either no encoded analog content or billing information is being transmitted or that the output of the device meets Part 68 encoded analog content or billing protection specifications.
- End user/customer will be responsible for filing an affidavit with the local exchange carrier when connecting unprotected customer premise equipment (CPE) to 1.544 Mbps or subrate digital services.

Until such time as subrate digital terminal equipment is registered for voice applications, the affidavit requirement for subrate services is waived.

Affidavit for Connection of Customer Premises Equipment to 1.544 Mbps and/or Subrate Digital Services

For the work to be performed in the certified territory of _____ (telco name)

State of _____

County of _____

I, _____ (name), _____ (business address),

_____ (telephone number) being duly sworn, state:

I have responsibility for the operation and maintenance of the terminal equipment to be connected to 1.544 Mbps and/or _____ subrate digital services. The terminal equipment to be connected complies with Part 68 of the FCC rules except for the encoded analog content and billing protection specifications. With respect to encoded analog content and billing protection:

( ) I attest that all operations associated with the establishment, maintenance, and adjustment of the digital CPE with respect to analog content and encoded billing protection information continuously complies with Part 68 of the FCC Rules and Regulations.

( ) The digital CPE does not transmit digital signals containing encoded analog content or billing information which is intended to be decoded within the telecommunications network.

( ) The encoded analog content and billing protection is factory set and is not under the control of the customer.

I attest that the operator(s)/maintainer(s) of the digital CPE responsible for the establishment, maintenance, and adjustment of the encoded analog content and billing information has (have) been trained to perform these functions by successfully having completed one of the following (check appropriate blocks):

( ) A. A training course provided by the manufacturer/grantee of the equipment used to encode analog signals; or

( ) B. A training course provided by the customer or authorized representative, using training materials and instructions provided by the manufacturer/grantee of the equipment used to encode analog signals; or

( ) C. An independent training course (e.g., trade school or technical institution) recognized by the manufacturer/grantee of the equipment used to encode analog signals; or

( ) D. In lieu of the preceding training requirements, the operator(s)/maintainer(s) is (are) under the control of a supervisor trained in accordance with _____ (circle one) above.

I agree to provide _____ (telco's name) with proper documentation to demonstrate compliance with the information as provided in the preceding paragraph, if so requested.

_____Signature

_____Title

_____ Date

Transcribed and sworn to before me

This _____ day of _____, _____

_____
Notary Public

My commission expires:

_____

FCC regulations require that the following information be provided in this manual:

1. This equipment complies with Part 68 of FCC rules. On the back of the equipment housing is a label showing the FCC registration number and ringer equivalence number (REN). If requested, provide this information to the telephone company.
2. If this equipment causes harm to the telephone network, the telephone company may temporarily discontinue service. If possible, advance notification is given; otherwise, notification is given as soon as possible. The telephone company will advise the customer of the right to file a complaint with the FCC.
3. The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper operation of this equipment. Advance notification and the opportunity to maintain uninterrupted service are given.
4. If experiencing difficulty with this equipment, please contact ADTRAN for repair and warranty information. The telephone company may require this equipment to be disconnected from the network until the problem is corrected or it is certain the equipment is not malfunctioning.
5. This unit contains no user-serviceable parts.
6. An FCC compliant telephone cord with a modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using an FCC compatible modular jack, which is Part 68 compliant.
7. The following information may be required when applying to the local telephone company for service:

Service Type	REN	FIC	USOC
1.544 Mbps - SF	6.0F	04DU9-BN	RJ-48C
1.544 Mbps - SF and B8ZS		04DU9-DN	
1.544 Mbps - ESF		04DU9-1KN	
1.544 Mbps - ESF and B8ZS		04DU9-1SN	

8. The REN is useful in determining the quantity of devices you may connect to your telephone line and still have all of those devices ring when your number is called. In most areas, the sum of the RENs of all devices should not exceed five. To be certain of the number of devices you may connect to your line as determined by the REN, call your telephone company to determine the maximum REN for your calling area.
9. This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs. Contact your state public utility commission or corporation commission for information.

Federal Communications Commission Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the 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 frequencies. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Shielded cables must be used with this unit to ensure compliance with Class A FCC limits.

WARNING

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.

Industry Canada Compliance Information

Notice: The Industry Canada label applied to the product (identified by the Industry Canada logo or the "IC:" in front of the certification/registration number) signifies that the Industry Canada technical specifications were met.

Notice: The Ringer Equivalence Number (REN) for this terminal equipment is supplied in the documentation or on the product labeling/markings. The REN assigned to each terminal device indicates the maximum number of terminals that can be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices should not exceed five (5).

Canadian Emissions Requirements

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioelectriques applicables aux appareils numériques de Class A prescrites dans la norme sur le materiel brouilleur: "Appareils Numériques," NMB-003 edictee par le ministre des Communications.

Warranty and Customer Service

ADTRAN will repair and return this product within 5 years from the date of shipment if it does not meet its published specifications or fails while in service. For detailed warranty, repair, and return information refer to the ADTRAN Equipment Warranty and Repair and Return Policy Procedure.

Return Material Authorization (RMA) is required prior to returning equipment to ADTRAN.

For service, RMA requests, or further information, contact one of the numbers listed at the end of this section.

LIMITED PRODUCT WARRANTY

ADTRAN warrants that for 5 years from the date of shipment to Customer, all products manufactured by ADTRAN will be free from defects in materials and workmanship. ADTRAN also warrants that products will conform to the applicable specifications and drawings for such products, as contained in the Product Manual or in ADTRAN's internal specifications and drawings for such products (which may or may not be reflected in the Product Manual). This warranty only applies if Customer gives ADTRAN written notice of defects during the warranty period. Upon such notice, ADTRAN will, at its option, either repair or replace the defective item. If ADTRAN is unable, in a reasonable time, to repair or replace any equipment to a condition as warranted, Customer is entitled to a full refund of the purchase price upon return of the equipment to ADTRAN. This warranty applies only to the original purchaser and is not transferable without ADTRAN's express written permission. This warranty becomes null and void if Customer modifies or alters the equipment in any way, other than as specifically authorized by ADTRAN.

EXCEPT FOR THE LIMITED WARRANTY DESCRIBED ABOVE, THE FOREGOING CONSTITUTES THE SOLE AND EXCLUSIVE REMEDY OF THE CUSTOMER AND THE EXCLUSIVE LIABILITY OF ADTRAN AND IS IN LIEU OF ANY AND ALL OTHER WARRANTIES (EXPRESSED OR IMPLIED). ADTRAN SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, INCLUDING (WITHOUT LIMITATION), ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO THIS EXCLUSION MAY NOT APPLY TO CUSTOMER.

In no event will ADTRAN or its suppliers be liable to the Customer for any incidental, special, punitive, exemplary or consequential damages experienced by either the Customer or a third party (including, but not limited to, loss of data or information, loss of profits, or loss of use). ADTRAN is not liable for damages for any cause whatsoever (whether based in contract, tort, or otherwise) in excess of the amount paid for the item. Some states do not allow the limitation or exclusion of liability for incidental or consequential damages, so the above limitation or exclusion may not apply to the Customer.

Customer Service, Product Support Information, and Training

ADTRAN will repair and return this product if within 5 years from the date of shipment the product does not meet its published specification or the product fails while in service.

A return material authorization (RMA) is required prior to returning equipment to ADTRAN. For service, RMA requests, training, or more information, use the contact information given below.

Repair and Return

If you determine that a repair is needed, please contact our Customer and Product Service (CAPS) department to have an RMA number issued. CAPS should also be contacted to obtain information regarding equipment currently in house or possible fees associated with repair.

CAPS Department (256) 963-8722

Identify the RMA number clearly on the package (below address), and return to the following address:

ADTRAN Customer and Product Service
901 Explorer Blvd. (East Tower)
Huntsville, Alabama 35806

RMA # _____

Pre-Sales Inquiries and Applications Support

Your reseller should serve as the first point of contact for support. If additional pre-sales support is needed, the ADTRAN Support web site provides a variety of support services such as a searchable knowledge base, latest product documentation, application briefs, case studies, and a link to submit a question to an Applications Engineer. All of this, and more, is available at:

http://support.adtran.com

When needed, further pre-sales assistance is available by calling our Applications Engineering Department.

Applications Engineering (800) 615-1176

Post-Sale Support

Your reseller should serve as the first point of contact for support. If additional support is needed, the ADTRAN Support web site provides a variety of support services such as a searchable knowledge base, updated firmware releases, latest product documentation, service request ticket generation and trouble-shooting tools. All of this, and more, is available at:

http://support.adtran.com

When needed, further post-sales assistance is available by calling our Technical Support Center. Please have your unit serial number available when you call.

Technical Support	(888) 4ADTRAN

Installation and Maintenance Support

The ADTRAN Custom Extended Services (ACES) program offers multiple types and levels of installation and maintenance services which allow you to choose the kind of assistance you need. This support is available at:

http://www.adtran.com/aces

For questions, call the ACES Help Desk.

ACES Help Desk	(888) 874-ACES (2237)

Training

The Enterprise Network (EN) Technical Training Department offers training on our most popular products. These courses include overviews on product features and functions while covering applications of ADTRAN's product lines. ADTRAN provides a variety of training options, including customized training and courses taught at our facilities or at your site. For more information about training, please contact your Territory Manager or the Enterprise Training Coordinator.

Training Phone	(800) 615-1176, ext. 7500
Training Fax	(256) 963-6700
Training Email	training@adtran.com

SYSTEM DESCRIPTION

This section of ADTRAN's ATLAS 830 System Manual is designed for use by network engineers, planners, and designers for overview information about the ATLAS 830.

It contains general information and describes physical and operational concepts, card functions, network relationships, provisioning, testing, alarm status, and system monitoring. This section should be used in conjunction with Section 2, *Engineering Guidelines*, of the system manual.

CONTENTS

1. SYSTEM OVERVIEW

The ATLAS 830 is a modular, highly scalable platform that provides robust solutions for the wide-area communication needs of medium-to-large corporations and network access providers. The ATLAS 830 is an Integrated Access System with extensive support of dedicated bandwidth management and access switching. It contains a high-performance CPU and powerful communications drivers which supports applications such as frame relay and call switching.

The ATLAS 830 architecture also includes a packet switching and a circuit switching bussing scheme. The result is a system capable of supporting bandwidth requirements of up to 30 T1 or Primary Rate ISDN (PRI) circuits. Designed for standalone or rackmount, the ATLAS 830 provides eight expansion slots that accommodate hot-swappable option modules. (A redundant power supply may be installed in slots 7 and 8, if desired.) A 10/100BaseT Ethernet connection for IP routing and network management is standard with the ATLAS 830. The ATLAS 830 also comes standard with two onboard T1/PRI interfaces.

With the ATLAS 830, you can consolidate your voice, data, and video applications into a single platform while optimizing wide area bandwidth and reducing equipment costs. The ATLAS 830 architecture and expansion slots allow for a variety of modules, making it one of the most versatile access systems on the market.

2. FEATURES AND BENEFITS

The following is a brief list of ATLAS 830 features and benefits:

Configuration and Management

- VT100 Emulation
- SNMP, per MIB II (RFC1213), DS1 MIB (RFC1406), and ADTRAN private MIBs
- Telnet
- Dial up remote management via external analog modem
- Six levels of password protection and privileges

Software Upgradeable

- Flash memory
- TFTP download
- XMODEM via control port

Signaling Support

- ISDN D Channel
- Robbed bit, E&M, Ground Start, Loop Start
- Convert between Robbed Bit Signaling and ISDN D Channel
- Direct Inward Dialing

ISDN Switch Types

- 5ESS™, DMS-100™, National ISDN, 4ESS™, Euro ISDN

Dedicated Connection Maps

- Up to five connection maps
- Time of day/day of week configurable
- Preserves signaling through cross-connect
- No effect on non-configured channels

Switched Connection Maps

- Inbound and outbound call filtering and blocking

Testing

- Local and remote: payload/line, V.54 (depending on installed modules)
- Patterns: 511, QRSS, all ones, all zeros (depending on installed modules)

Performance Monitoring

- Reports: Information is stored for last 24 hours, last 15 minutes, and last 5 minutes.
- Frame relay performance can be stored at user-specified intervals (5, 10, 15, 20, 30 mins).
- Performance statistics per TR54016, T1.403, RFC1406
- Alarm reporting per TR54016, T1.403

Frame Relay

- Routes Internet Protocol (IP) traffic between a public frame relay network, a private frame relay network, or a point-to-point (PPP) network and the Ethernet port.
- Concentrates IP traffic from a public or private frame relay network to one or more serial ports (V.35). The protocol passed over the serial port is frame relay (RFC 1490 encapsulation).
- Passes Systems Network Architecture (SNA), Bisync, and other legacy protocols between a public or private frame relay network and an external DTE running frame relay to ATLAS.
- Performs voice compression/decompression (G.723.1) and interfaces to either a Private Branch Exchange (PBX) or the Public Switched Telephone Network (PSTN). (This feature requires an additional option module, the VCOM Module—P/N 1200221Lx.)
- Supports LMI, Annex D, or Annex A signaling on frame relay connections.

PPP Switching

- Supports up to 100 simultaneous PPP connections.
- Performs PAP, CHAP, or EAP authentication methods on a per connection basis.
- Includes keepalive functionality for PPP connections.
- Provides capability for numbered or unnumbered PPP interfaces.

3. OPTION MODULES

The following option modules are available in the ATLAS 830 chassis:

- Quad T1/PRI Option Module (P/N 1200185L3)
- Quad E1/PRA Option Module (P/N 1200264L1)
- Quad Nx 56/64 Option Module (P/N 1200184L1)
- Quad USSI Option Module (P/N 4200261Lx)
- Octal Basic Rate ISDN (U-Interface) Option Module (P/N 1200186L2)
- Octal Basic Rate ISDN (S/T Interface) Option Module (P/N 1200343L1)
- T3 Option Module (P/N 1200223L1)
- T3 Option Module with Drop and Insert Interface (P/N 1200225L1)
- Dual Video Option Module (P/N 4200773Lx)
- NxT1 HSSI/V.35 Option Module (P/N 1200771L1)
- Octal FXS Option Module (P/N 1200338L1)
- 8,16,24, 32 Channel Voice Compression Resource Modules (P/N 1200221Lx)
- Nx 56/64 BONDing Resource Module (P/N 1200262L1)
- HDLC Resource Module (P/N 1200222L1)
- Modem-16 Resource Module (P/N 1200181L1)
- Async-232 Option Module (P/N 1200182L1)

Each option module is hot-swappable with configuration restored upon replacement.

Replacing an option module with a different module type will result in configuration loss.

Each option module has a variety of performance and alarm status information. Several features of each module are user-configurable, although default values reflect the most common configurations. All option modules contain an extensive self-test as well as tests designed for the technology they incorporate.

Quad T1/PRI Option Module (P/N 1200185L3)

The Quad T1/PRI Option Module provides four channelized T1 or PRI interfaces. Each interface can operate independently in DS-1, DSX-1, or PRI mode, and any port can deliver timing for the system.

Quad E1/PRA Option Module (P/N 1200264L1)

The Quad E1/PRA Option Module provides four channelized E1 or PRA interfaces using a supplied 120 ohm DB-15 converter cable. The Quad E1/PRA Option Module may also be purchased to include BNC converter cables (P/N 4200264L1). This interface operates in CCS or CAS signaling mode and can deliver timing for the system.

Quad Nx 56/64 Option Module (P/N 1200184L1)

The Quad Nx 56/64 module provides four synchronous V.35 DTE ports (using supplied DB-78 to V.35 converter cables) that can operate from 56K to 2.048 Mbps in steps of 56 or 64 kbps. Any port can deliver timing for the system.

Quad USSI Option Module (P/N 4200261Lx)

The Quad USSI Option Module provides four synchronous DTE ports that can operate from 56K to 2.048 Mbps in steps of 56 or 64 kbps. The DTE ports available (using adapter cables) are: EIA-530, RS-449, RS-232, and CCITT X.21. Any port can deliver timing for the system.

Octal Basic Rate ISDN (U-Interface) Option Module (1200186L2)

The Octal Basic Rate ISDN module provides eight Basic Rate ISDN (BRI) U interfaces, each capable of operating in either NT or LT mode. Any port can deliver timing for the system.

Octal Basic Rate ISDN (S/T Interface) Option Module (1200343L1)

The Octal Basic Rate ISDN (S/T Interface) module provides eight Basic Rate ISDN (BRI) S/T interfaces, each capable of operating in NT (User Term) mode only. This module does not deliver timing for the system.

T3 Option Module (P/N 1200223L1)

The T3 Option Module provides a single channelized T3 interface that allows bandwidth management of up to 28 T1s. Functions as a T3 DSU/CSU, M13 multiplexer, and 3/1/0 timeslot interchange DACS. The T3 clock or any of the odd T1s contained in the T3 circuit may deliver timing for the system.

T3 Option Module with Drop and Insert Interface (P/N 1200225L1)

The T3 Option Module with Drop and Insert Interface provides a single channelized T3 interface for primary service and an additional drop and insert interface for passing T3 channels (in T1 pairs) to a secondary channelized T3 device. Functions as a T3 DSU/CSU, M13 multiplexer, and 3/1/0 timeslot interchange DACS. The T3 clock or any of the odd T1s contained in the T3 circuit may deliver timing for the system.

Dual Video Option Module (P/N 4200773Lx)

The Dual Video Module provides two independent video ports, each including an RS-366 dialing interface (DB-25) and a synchronous DTE port (interface connector determined by custom cable). When used in conjunction with the Nx56/64 BONDing Option Module (P/N 1200262L1), the Dual Video Module provides high-bandwidth videoconferencing. The Dual Video Module does not provide timing for the ATLAS 830 system.

NxT1 HSSI/V.35 Option Module (1200771L1)

The NxT1 HSSI/V.35 Option Module aggregates bandwidth for 1 to 8 T1s into a single logical channel on the HSSI interface (or V.35 interface using the optional adapter cable). The NxT1/V.35 Option Module supports point-to-point T1 applications only. Any of the 4 built-in T1 ports of the NxT1 HSSI/V.35 Option Module can provide timing for the ATLAS 830 system.

Octal FXS Option Module (P/N 1200338L1)

The Octal FXS Option Module provides eight analog voice-grade interfaces. Each interface provides talk battery, off-hook supervision, E&M signaling conversion, and ringing in loop-start or ground-start operation. Call progress tones, where necessary, are provided to the modules by the ATLAS 830.

8,16,24, 32 Channel Voice Compression Resource Modules (P/N 1200221Lx)

The Voice Compression Module (VCOM Module) combines with other ATLAS 830 components to implement voice over frame relay (VoFR) capability. The Voice Compression Resources modules support 8, 16, 24, or 32 simultaneous compressed calls using G.723.1 or Netcoder compression algorithms.

Nx 56/64 BONDing Resource Module (P/N 1200262L1)

The Nx 56/64 BONDing Resource Option Module supports multiple, independent BONDING sessions with each session capable of using from 2 to 32 channels of 56K or 64K data. The Nx 56/64 BONDing Resource Module combines with other ATLAS 830 components to provide a flexible disaster recovery system.

HDLC Resource Module (P/N 1200222L1)

Certain ATLAS applications require a large number of High-level Data Link Control (HDLC) controllers beyond the 35 supplied on the system controller module. The HDLC Resource Module contains 128 HDLC controllers and is used when the application requirements call for more HDLC controllers than are provided with the other ATLAS hardware components. The HDLC Resource Module provides no physical interfaces.

Modem-16 Resource Module (P/N 1200181L1)

The Modem-16 Resource Module is a high-capacity card for the ATLAS Integrated Access System, capable of processing 16 modem calls and 16 ISDN calls. Modem or ISDN calls are presented to the ATLAS via one or more Primary Rate ISDN (PRI), Basic Rate ISDN (BRI), or T1 circuits. The Modem-16 Resource Module can be used in cooperation with the Safe-T-Net feature of the ATLAS 830 to provide a V.34 disaster recovery solution.The Modem-16 Resource Module combines with the Async-232 Module to enable dial-up access for up to 32 users. The Modem-16 Resource Module provides no physical interfaces.

Async-232 Option Module (P/N 1200182L1)

The Async-232 Module combines with the ATLAS 830 components to provide solutions for a variety of wide area networking (WAN) applications. Providing sixteen asynchronous EIA-232 data terminal equipment (DTE) ports, the Async-232 Module serves as the interface to terminal servers and other DTE equipment. Each port of the Async-232 Module can be configured to operate at any standard asynchronous rate up to 115.2 kbps. The Async-232 Module is only supported in dial-up applications (using the Modem-16 Resource Module) and is not a valid interface for TDM data.

ENGINEERING GUIDELINES

CONTENTS

FIGURES

TABLES

1. EQUIPMENT DIMENSIONS

The ATLAS 830 is 17.5” W, 12.5” D, and 5.5” H and is equipped for table top use or mounted in a 19-inch rack (mounting brackets included in shipment). All other equipment (option modules) fit inside the unit.

2. POWER REQUIREMENTS

AC System

The ATLAS 830 has a maximum power consumption of 200 W and a maximum current draw of 3.5 A regardless of the configuration of option modules installed in the unit.

Without any option modules installed, the AC powered ATLAS 830 will have a power consumption of 50 W and a current draw of 0.64 A maximum at 115 Vrms.

DC System

The ATLAS 830 has a maximum power consumption of 200 W and a maximum current draw of 4.2 A at -48 VDCregardless of the configuration of option modules installed in the unit.

Without any option modules installed, the DC powered ATLAS 830 will have a power consumption of 45 W at -48 VDC.

3. REVIEWING THE FRONT PANEL DESIGN

The front panel contains the Alarm Cut-off (ACO) switch, the CRAFT port, and the system and option module status LEDs. The LEDs provide visual information about the ATLAS 830 and any option module that may be installed. Figure 1 identifies the ACO switch, the CRAFT port, and the LEDs.

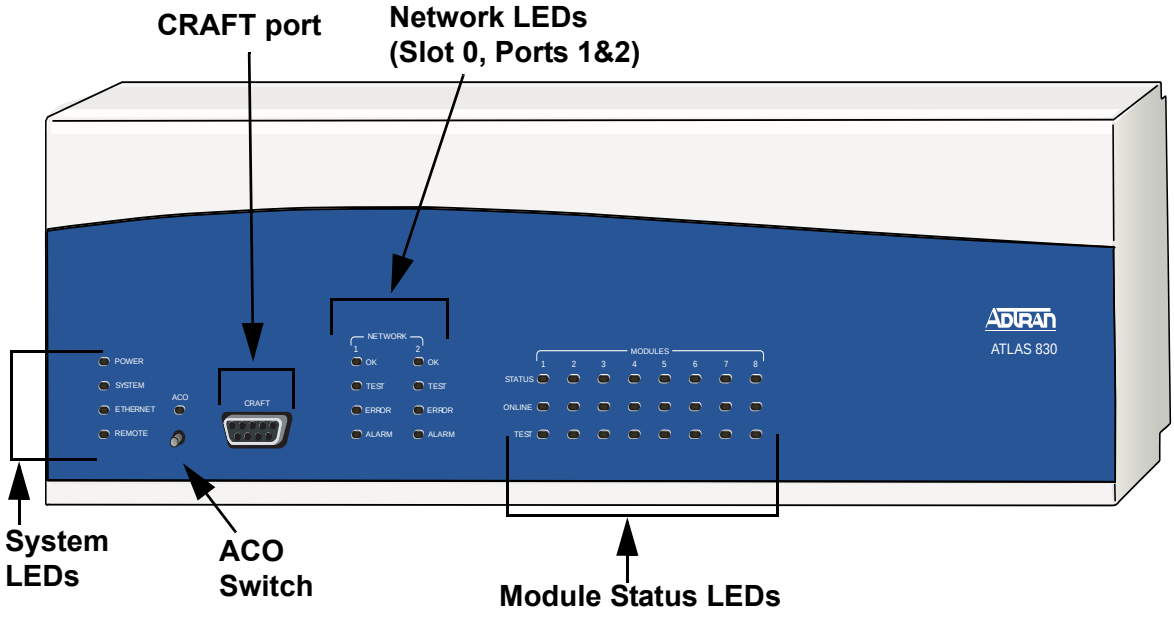


Figure 1. ATLAS 830 Front Panel Layout

ACO Switch

The ACO switch deactivates (clears) the Alarm Relay, located on the rear panel of the ATLAS 830, after an alarm condition has occurred. If an alarm condition is corrected and then reoccurs, the Alarm Relay will activate again.

CRAFT Port

Use the **CRAFT** port to configure the system via an EIA-232 connection. The connector type is shown below, and Table 1 gives the **CRAFT** port pinout.

Connector type DB-9 (female)

Table 1. CRAFT Port Pinout

PIN	NAME	DESCRIPTION
1	DCD	Data Carrier Detect (output) -- not connected
2	RD	Receive Data (output)
3	TD	Transmit Data (input)
4	DTR	Data Terminal Ready (input) -- not connected
5	SG	Signal Ground
6	DSR	Data Set Ready (output) -- not connected
7	RTS	Request to Send (input) -- not connected
8	CTS	Clear to Send (output) -- not connected
9	RI	Ring Indicate (output) -- not connected

Front Panel LEDs

With the ATLAS 830 powered-up, the front panel LEDs provide visual information about the status of the ATLAS 830 and any option modules that may be installed. Table 2 provides a brief description of the front panel features, and Table 3 on page 25 provides detailed information about the LEDs.

Table 2. ATLAS 830 Front Panel Description

Feature	Description
System Status LEDs	Displays the status of the power supply, controller, and other system parameters for the ATLAS 830. (See Table 3 on page 25.)
Power	Indicates the status of the power supply.
System	Indicates the status of the unit controller and other system parameters.
Ethernet	Indicates the status of the ethernet port.
Remote	Indicates whether a user (Telnet or VT100) is logged into the unit.
ACO	Indicates the status of the ACO switch.

Table 2. ATLAS 830 Front Panel Description (Continued)

Feature	Description
Network Port LEDs	Displays the status of the two built-in T1/PRI interfaces on the rear panel of the unit. (These are referred to in the menus as Slot 0, Ports 1 and 2.)
OK	Indicates that the network interface has passed self test and is operating correctly.
Test	Indicates that there is an active test on the T1/PRI interface.
Error	Blinks to indicate the occurrence of error events (including clock slip seconds (CSS), bipolar violations (BPV), errored seconds (ES), etc.).
Alarm	Indicates an active alarm condition on the T1/PRI interface.
Option Module LEDs	Displays by row the operational condition of each module installed in the option slots. (See Table 3.) All LEDs will be off if no option module is installed or configured.
Status	Indicates the operational condition of modules installed in the option slots.
Online	Indicates whether the module is available for use or is currently in use. If the module is manually taken offline, this LED is turned off.
Test	Indicates that one or more ports within a module are in test.
ACO Switch	Clears the Alarm Relay connection located on the rear panel of the ATLAS 830.
CRAFT Port	Allows the ATLAS 830 to connect to a computer using a VT100 terminal or terminal emulator.

Table 3. ATLAS 830 LEDs

For these LEDs...	This color light...	Indicates that...
Power	Red (solid)	Power supply error condition or temperature alarm.
	Green	The unit is on and connected to a power source.
	Off	The unit is off.
System	Green (solid)	No diagnosed system faults were found.
	Green (fast blink)	System Controller is offline.
	Yellow (fast blink)	Flash download is in progress.
	Yellow (solid)	Self-test in progress.
	Red (solid)	Internal error condition.

Table 3. ATLAS 830 LEDs (Continued)

For these LEDs...	This color light...	Indicates that...
	Red (fast blink)	Flash download or flash error condition.
	Off	Power is not currently supplied to the system or the power switch is in the off position.
Ethernet	Green	Link has been established.
	Off	Link has not been established.
Remote	Yellow	A user is logged into the unit via Telnet or VT100.
	Off	No users are logged into the unit.
ACO	Yellow	ACO switch is pressed.
	Off	ACO switch is not pressed.
Network Port LEDs		
OK	Green (solid)	The network T1/PRI interface is operating normally with error-free operation.
	Off	The interface has experienced an alarm.
TEST	Yellow (solid)	The T1/PRI interface is in a test mode.
ERROR	Red (blinking)	Blinks with the occurrence of an error event including BPV, CRC, and ES.
ALARM	Red (solid)	The T1/PRI interface is currently in alarm (including loss of frame (LOF), loss of signal (LOS), etc.).
Module Status	Green (solid)	Module is present.
	Green (fast blink)	Module has been manually taken offline by the user.
	Red (solid)	Module is in an alarm state.
	Red (fast blink)	Module has no response, has been removed, or is not supported.
	Red (slow blink)	Module is not ready.
	None	No module occupies the slot.
Module Online	Green (solid)	Module has an active connection.
	Green (fast blink)	Module has invalid flash memory or is downloading firmware.
Module Test	Yellow (solid)	Module is in a test mode.

4. REVIEWING THE REAR PANEL DESIGN

The ATLAS 830 rear panel contains an **ADMIN** port for connecting to a VT100 terminal (or terminal emulator) or modem, a 10/100BaseT interface for ethernet access, alarm contacts, two built-in T1/PRI interfaces, and 8 slots for housing option modules which provide a variety of additional resources and data ports. All slots are functionally identical. The ATLAS 830 also contains a single vertical slot dedicated for power supply use only (see Figure 2). An optional redundant power supply may be installed in slots 7 and 8.

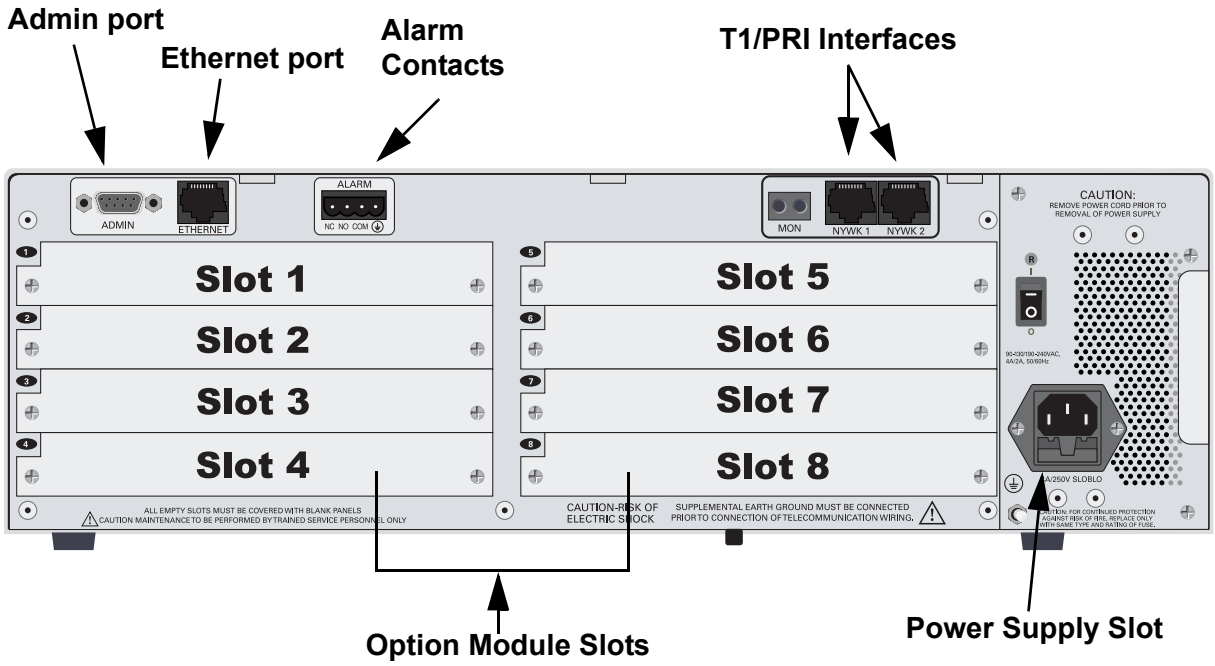


Figure 2. ATLAS 830 Rear Panel

Admin Port

The Admin port (EIA-232) connects to a computer or modem. The control port input provides the following functions:

- Accepts EIA-232 input from a PC or a modem for controlling the ATLAS 830.
- Operates at 2400, 9600, 19200, or 38400 bps.
- Acts as input for either VT100 or PC control.
- Acts as an interface for flash memory software downloads using XMODEM.

The Admin connection follows, and Table 4 shows the pinout.

Connector type DB-9 (female)

Table 4. Admin Port Pinout

PIN	NAME	DESCRIPTION
1	DCD	Data Carrier Detect (output)
2	RD	Receive Data (output)
3	TD	Transmit Data (input)
4	DTR	Data Terminal Ready (input)
5	SG	Signal Ground
6	DSR	Data Set Ready (output) -- not connected
7	RTS	Request to Send (input)
8	CTS	Clear to Send (output)
9	RI	Ring Indicate (output) -- not connected

10/100BaseT Connection

The 10/100BaseT port (RJ-45) provides a 10/100BaseT Ethernet LAN connection, which is used for IP Routing, TFTP, SNMP, and Telnet connections. The network connection follows, and Table 5 shows the pinout.

Connector type RJ-45

Table 5. Ethernet Pinout

PIN	NAME	DESCRIPTION
1	TX1	Transmit Positive
2	TX2	Transmit Negative
3	RX1	Receive Positive
4, 5	UNUSED	—
6	RX2	Receive Negative
7, 8	UNUSED	—

Alarm Relay Connection

This connection alerts the user when a selected alarm condition exists. The four-pin, removable terminal block connects with external wiring. Refer to DLP-011, *Connecting the Alarm Contacts* for detailed instructions. Clear the alarm condition by pressing the ACO switch located on the front panel of the ATLAS 830.

Table 6 shows the pinout for the Alarm Relay connector.

Table 6. Alarm Relay Connector Pinout

Pin	Name	Description
1	Normally Closed (NC)	Opens when a selected alarm condition is present.
2	Normally Open (NO)	Closes when a selected alarm condition is present.
3	Common (COM)	Common connection between external circuitry and NC or NO terminal.
4	Chassis Ground (GND)	

MON

The **MON IN** and **OUT** Bantam test jacks provide a bridged access jack for non intrusive monitoring of the incoming T1. When connected to this jack, configure the test equipment for bridged termination.

T1/PRI Connections

Each of the T1/PRI ports, NTWK1 and NTWK2, uses a single eight-position modular jack to connect to the T1 or PRI circuit. Table 7 shows the pinout for this connector.

5. OPTION MODULES

Quad T1/PRI Option Module (P/N 1200185L3)

Each port of the Quad T1/PRI Option Module uses a single, eight-position modular jack to connect to the T1 or PRI circuit. Table 7 gives the pinout for this jack.

CONNECTOR TYPE (USOC) RJ-48C

Table 7. T1/PRI Pinout

PIN	NAME		DESCRIPTION
1	R	RXDATA-RING	Receive data from the network
2	T	RXDATA-TIP	Receive data from the network
3	—	UNUSED	—
4	R1	TXDATA-RING	Send data towards the network
5	T1	TXDATA-TIP	Send data towards the network
6,7,8	—	UNUSED	—

Quad E1/PRA Option Module (P/N 1200264L1)

The DB-62 port of the Quad E1/PRA Option Module supplies a DB-15 connection as defined in Table 8 using provided adapter cables. The DB-62 interface pinout is shown in Table 9 on page 31.

Table 8. DB-15 Connector Pinout

PIN	NAME	DESCRIPTION
1	RT	Receive Tip
2	GND	Ground
3	TT	Transmit Tip
4	GND	Ground
5	GND	Ground
7	GND	Ground
9	RR	Receive Ring
11	TR	Transmit Ring

Table 9. DB-62 Connector Pinout

Pin	Name	Description	Pin	Name	Description
1	P4 TT	Port 4 Transmit Tip	42	GND	Ground
2	P4 TR	Port 4 Transmit Ring	43	P4 RT	Port 4 Receive Tip
3	GND	Ground	44	P4 RR	Port 4 Receive Ring
6	GND	Ground	45	GND	Ground
7	P3 TT	Port 3 Transmit Tip	48	GND	Ground
8	P3 TR	Port 3 Transmit Ring	49	P3 RT	Port 3 Receive Tip
9	GND	Ground	50	P3 RR	Port 3 Receive Ring
12	GND	Ground	51	GND	Ground
13	P2 TT	Port 2 Transmit Tip	54	GND	Ground
14	P2 TR	Port 2 Transmit Ring	55	P2 RT	Port 2 Receive Tip
15	GND	Ground	56	P2 RR	Port 2 Receive Ring
18	GND	Ground	57	GND	Ground
19	P1 TT	Port 1 Transmit Tip	60	GND	Ground
20	P1 TR	Port 1 Transmit Ring	61	P1 RT	Port 1 Receive Tip
21	GND	Ground	62	P1 RR	Port 1 Receive Ring

Note: Pins that are not identified are not used. P(1-4) indicates the Port

Quad Nx 56/64 Option Module (P/N 1200184L1)

Each DB-78 port of the Quad Nx 56/64 Option Module supplies a V.35 Winchester-style connection as defined in Table 10 using provided adapter cables. The DB-78 interface pinout is shown in Table 11.

Table 10. V.35 Winchester Pinout

Pin	CCITT	DESCRIPTION
A	101	Protective ground (PG)
B	102	Signal ground (SG)
C	105	Request to send (RTS) from DTE
D	106	Clear to send (CTS) to DTE
E	107	Data set ready (DSR) to DTE
F	109	Received line signal detector (DCD) to DTE
H	—	Data terminal ready (DTR) from DTE
J	—	Ring indicator (RI)
R	104	Received data (RD-A) to DTE
T	104	Received data (RD-B) to DTE

Table 10. V.35 Winchester Pinout (Continued)

Pin	CCITT	DESCRIPTION
V	115	RX clock (RC-A) to DTE
X	115	RX clock (RC-B) to DTE
P	103	Transmitted data (TD-A) from DTE
S	103	Transmitted data (TD-B) from DTE
Y	114	TX clock (TC-A) to DTE
AA	114	TX clock (TC-B) to DTE
U	113	External TX clock (ETC-A) from DTE
W	113	External TX clock (ETC-B) from DTE
NN	—	Test mode (TM) to DTE

Table 11. DB-78 Pinout for the Quad Nx 56/64 Option Module

Pin	Signal Description	Pin	Signal Description
1	RXD-A 2/4	41	RTS-B 2/4
2	RXD-B 2/4	42	GND
3	RXC-A 2/4	43-48	Not used
4	RXC-B 2/4	49	MOD2
5	TXD-A 2/4	50	MOD0
6	TXD-B 2/4	51	EXT-TXC-A 1/3
7	TXC-A 2/4	52	DTR-B 1/3
8	TXC-B 2/4	53	DTR-A 1/3
9	EXT-TXC-A 2/4	54	DCD-B 1/3
10	EXT-TXC-A 2/4	55	DCD-A 1/3
11-17	Not used	56	DSR-B/RI 1/3
18	GND	57	DSR-A 1/3
19	GND	58	CTS-B 1/3
20	CHASIS GND	59	CTS-A 1/3
21	CTS-A 2/4	60	CHASIS GND
22	CST-B 2/4	61	GND
23	DSR-A 2/4	62-68	Not used
24	DSSR-B/RI 2/4	69	MOD1
25	DCD-A 2/4	70	EXT-TXC-B 1/3

Note:1/3 or 2/4 indicates the port on the Nx 56/64 Module

Table 11. DB-78 Pinout for the Quad Nx 56/64 Option Module (Continued)

Pin	Signal Description	Pin	Signal Description
26	DCD-B 2/4	71	TXC-B 1/3
27	DTR-A 2/4	72	TXC-A 1/3
28	DTR-B 2/4	73	TXD-B 1/3
29-37	Not used	74	TXD-A 1/3
38	RTS-A 1/3	75	RXC-B 1/3
39	RTS-B 1/3	76	RXC-A 1/3
40	RTS-A 2/4	77	RXD-B 1/3
		78	RXD-A 1/3

Note:1/3 or 2/4 indicates the port on the Nx 56/64 Module

Quad USSI Option Module (P/N 4200261Lx)

Table 12 through Table 16 show pinouts for the available interfaces for the Quad USSI Option Module and the cable part numbers required by each interface.

Table 12. DB-78 Pinout for the Quad USSI Option Module

Pin	Signal Description	Pin	Signal Description
1	RXD-A 2/4	41	RTS-B 2/4
2	RXD-B 2/4	42	GND
3	RXC-A 2/4	43-48	Not used
4	RXC-B 2/4	49	MOD2
5	TXD-A 2/4	50	MOD0
6	TXD-B 2/4	51	EXT-TXC-A 1/3
7	TXC-A 2/4	52	DTR-B 1/3
8	TXC-B 2/4	53	DTR-A 1/3
9	EXT-TXC-A 2/4	54	DCD-B 1/3
10	EXT-TXC-A 2/4	55	DCD-A 1/3
11-17	Not used	56	DSR-B/RI 1/3
18	GND	57	DSR-A 1/3
19	GND	58	CTS-B 1/3
20	CHASIS GND	59	CTS-A 1/3
21	CTS-A 2/4	60	CHASIS GND
22	CST-B 2/4	61	GND

Note:1/3 or 2/4 indicates the port on the USSI Module

Table 12. DB-78 Pinout for the Quad USSI Option Module (Continued)

Pin	Signal Description	Pin	Signal Description
23	DSR-A 2/4	62-68	Not used
24	DSSR-B/RI 2/4	69	MOD1
25	DCD-A 2/4	70	EXT-TXC-B 1/3
26	DCD-B 2/4	71	TXC-B 1/3
27	DTR-A 2/4	72	TXC-A 1/3
28	DTR-B 2/4	73	TXD-B 1/3
29-37	Not used	74	TXD-A 1/3
38	RTS-A 1/3	75	RXC-B 1/3
39	RTS-B 1/3	76	RXC-A 1/3
40	RTS-A 2/4	77	RXD-B 1/3
		78	RXD-A 1/3

Note:1/3 or 2/4 indicates the port on the USSI Module

Connector type EIA-530
System part number 4200261L2

Table 13. EIA-530 Connector Pinout

Pin	Signal Description	Pin	Signal Description
1	Shield (Ground)	13	Clear to Send (B)
2	Transmit Data (A)	14	Transmit Data (B)
3	Received Data (A)	15	Transmit Clock (A)
4	Request to Send (A)	16	Received Data (B)
5	Clear to Send (A)	17	Receive Clock (A)
6	DCE Ready (A)	18	Local Loopback
7	Signal Ground	19	Request to Send (B)
8	Carrier Detect (A)	20	DTE Ready (A)
9	Received Clock (B)	21	Remote Loopback
10	Carrier Detect (B)	22	DCE Ready (B)
11	Ext. Transmit Clock (B)	23	DTE Ready (B)
12	Transmit Clock (B)	24	Ext. Transmit Clock (A)
		25	Test Mode

Connector type RS-449/V.36

System part number 4200261L1

Table 14. RS-449/V.36 Connector Pinout

Pin	Signal Description	Pin	Signal Description
1	Shield (Ground)	19	Signal Ground
2	Signaling Rate Indicator	20	Receive Common
3	Not Used	21	Not Used
4	Transmit Data (A)	22	Transmit Data (B)
5	Transmit Clock (A)	23	Transmit Clock (B)
6	Received Data (A)	24	Receive Data (B)
7	Request to Send (A)	25	Request to Send (B)
8	Receive Clock (A)	26	Receive Clock (B)
9	Clear to Send (A)	27	Clear to Send (B)
10	Local Loopback	28	Terminal in Service
11	DCE Ready (A)	29	DCE Ready (B)
12	DTE Ready (A)	30	DTE Ready (B)
13	Carrier Detect (A)	31	Carrier Detect (B)
14	Remote Loopback	32	Select Standby
15	Ring Indicator	33	Signal Quality
16	Select Frequency	34	New Signal
17	Ext. Transmit Clock (A)	35	Ext. Transmit Clock (B)
18	Test Mode	36	Standby/Indicator
		37	Send Common

Connector type RS-232
System part number 4200261L4

Table 15. RS-232 Connector Pinout

Pin	Signal Description	Pin	Signal Description
1	Shield (Ground)	14	Sec. Transmit Data
2	Transmit Data	15	DCE Transmit Clock
3	Received Data	16	Sec. Received Data
4	Request to Send	17	Receive Signal Element Timing
5	Clear to Send	18	Not used
6	Data Set Ready	19	Sec. Request to Send
7	Signal Ground	20	Data Terminal Ready
8	Received Line Signal Detector	21	Signal Quality Detector
9	+ Voltage	22	Ring Indicator
10	- Voltage	23	Data Signal Rate Selector
11	Not used	24	DTE Transmit Clock
12	Sec. Received LIne Signal Indicator	25	Not used
13	Sec. Clear to Send		

Connector type CCITT X.21 V.11
System part number 4200261L3

Table 16. CCITT X.21 V.11 Connector Pinout

Pin	Signal Description	Pin	Signal Description
1	Shield (Ground)	8	Signal Ground
2	Transmit Data (A)	9	Transmit Data (B)
3	Request to Send (A)	10	Request to Send (B)
4	Received Data (A)	11	Received Data (B)
5	Carrier Detect (A)	12	Carrier Detect (B)
6	Transmit/Receive Clock (A)	13	Transmit/Received Clock (B)
7	Ext. Transmit Clock (A)	14	Ext. Transmit Clock (B)
15	Not Used		

Octal BRI ISDN (U-Interface) Option Module (P/N 1200186L2)

Each port of the Octal BRI ISDN (U-Interface) Option Module uses a single RJ-45 jack to connect to a standard BRI U interface circuit. Table 17 shows the network pinout connection. The required wiring connection follows:

Connector Type RJ-45

Table 17. BRI Pinout (U-Interface)

PIN	NAME	DESCRIPTION
1, 2, 3, 6, 7, 8	Unused	—
4	Ring	Ring to and from the Network Interface
5	Tip	Tip to and from the Network Interface

Octal BRI ISDN (S/T Interface) Option Module (P/N 1200343L1)

Each port of the Octal BRI ISDN (S/T Interface) Option Module uses a single RJ-45 jack to connect to a standard BRI S/T interface circuit. The Octal BRI ISDN (S/T Interface) Option Module is only available for use in NT mode (User Term) applications. Table 18 shows the network pinout connection. The required wiring connection follows:

Connector Type RJ-45

Table 18. BRI Pinout (S/T Interface)

PIN	NAME	DESCRIPTION
1, 2, 7, 8	Unused	—
3, 6	Receive	Receive for User Term (NT Mode)
4, 5	Transmit	Transmit for User Term (NT Mode)

Async-232 Option Module (P/N 1200182L1)

Each Async-232 Interface provides a DB-25 connection as defined in Table 19 using provided adapter cables.

Table 19. DB-25 Connector Pinout

PIN	NAME	DESCRIPTION
1	Shield	Shielded ground connection
2	TXD	Transmit data from DTE
3	RXD	Receive data to DTE
4	RTS	Request to send from DTE
5	CTS	Clear to send to DTE
6	DSR	Data set ready to DTE
7	GND	Ground
8	DCD	Data carrier detect to DTE
9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 23, 24, 25	Unused	n/a
20	DTR	Data terminal ready from DTE
22	RI	Ring indicator to DTE

T3 Option Module (P/N 1200223L1)

Each T3 Option Module provides BNC connectors for the transmit and receive connections defined in Table 20 using the provided RG 59, 75 ohm cables (P/N 3125I054).

Connector Type BNC pair (female)

Table 20. T3 Module Connections

NAME	DESCRIPTION
RX IN	Receive data from the network, 75 ohms ± 5%, unbalanced
TX OUT	Transmit data to the network, 75 ohms ± 5%, unbalanced

T3 Drop and Insert Option Module (P/N 1200225L1)

Each T3 Drop and Insert Option Module provides BNC connectors for both primary and secondary transmit and receive connections as defined in Table 21 using provided RG 59, 75 ohm cables (P/N 3125I054).

Connector Type BNC pair (female)

Table 21. T3 Drop and Insert Module Connections

NAME	DESCRIPTION
Primary RX IN	Primary receive data from the network, 75 ohms ± 5%, unbalanced
Primary TX OUT	Primary transmit data to the network, 75 ohms ± 5%, unbalanced
Secondary RX IN	Secondary receive data from the network, 75 ohms ± 5%, unbalanced
Secondary TX OUT	Secondary transmit data to the network, 75 ohms ± 5%, unbalanced

Dual Video Option Module (P/N 4200773Lx)

The Dual Video Option Module provides a standard RS-366 dialing interface (DB-25) and DTE Interface (provided through adapter cables). Table 22 displays the pinout for the RS-366 dialing interface and Tables Table 23 through Table 25 show pinouts for the available interfaces for the Dual Video Option Module and the system part numbers required by each interface.

Connector Type RS-366 (DB25)

Table 22. RS-366 Interface Pinout

PIN	NAME	DESCRIPTION
1	Shield	Shielded Ground Connection
2	DPR	Digit Present
3	ACR	Abandon Call and Retry
4	CRQ	Call Request
5	PND	Present Next Digit
6	PWI	Power Indication
7	SG	Signal Ground
8-12	Unused	n/a
13	DSC	Distant Station Connection
14	NB1	Digit Signal Circuit 1
15	NB2	Digit Signal Circuit 2

Table 22. RS-366 Interface Pinout (Continued)

16	NB4	Digit Signal Circuit 4
17	NB8	Digit Signal Circuit 8
18	RC	Receive Common
19	SC	Send Common
20-21	Unused	n/a
22	DLO	Data Link Occupied
23-25	Unused	n/a

Connector type V.35 Winchester
System part number 4200773L1

Table 23. V.35 Winchester Pinout

PIN	CCITT	NAME	DESCRIPTION
A	101	PG	Protective ground
B	102	SG	Signal ground
C	105	RTS	Request to send from DTE
D	106	CTS	Clear to send to DTE
E	107	DSR	Data set ready to DTE
F	109	DCD	Received line signal detector to DTE
H	—	DTR	Data terminal ready from DTE
J	—	RI	Ring indicator
R	104	RD-A	Received data to DTE
T	104	RD-B	Received data to DTE
V	115	RC-A	RX clock to DTE
X	115	RC-B	RX clock to DTE
P	103	TD-A	Transmitted data from DTE
S	103	TD-B	Transmitted data from DTE
Y	114	TC-A	TX clock to DTE
AA	114	TC-B	TX clock to DTE
U	113	ETC-A	External TX clock from DTE

Table 23. V.35 Winchester Pinout (Continued)

W	113	ETC-B	External TX clock from DTE
NN	—	TM	Test mode to DTE - (Not Supported)

Connector type EIA-530
System part number 4200773L2

Table 24. EIA-530 Interface Pinout

PIN	SIGNAL DESCRIPTION	PIN	SIGNAL DESCRIPTION
1	Shield (Ground)	13	Clear to Send (B)
2	Transmit Data (A)	14	Transmit Data (B)
3	Received Data (A)	15	Transmit Clock (A)
4	Request to Send (A)	16	Received Data (B)
5	Clear to Send (A)	17	Receive Clock (A)
6	DCE Ready (A)	18	Not Used
7	Signal Ground	19	Request to Send (B)
8	Carrier Detect (A)	20	DTE Ready (A)
9	Received Clock (B)	21	Not Used
10	Carrier Detect (B)	22	DCE Ready (B)
11	Ext. Transmit Clock (B)	23	DTE Ready (B)
12	Transmit Clock (B)	24	Ext. Transmit Clock (A)
		25	Not Used

Connector type RS-449
System part number 4200773L3

Table 25. RS-449 Interface Pinout

Pin	Signal Description	Pin	Signal Description
1	Shield (Ground)	19	Signal Ground
2	Not Used	20	Not Used
3	Not Used	21	Not Used
4	Transmit Data (A)	22	Transmit Data (B)

Table 25. RS-449 Interface Pinout (Continued)

5	Transmit Clock (A)	23	Transmit Clock (B)
6	Received Data (A)	24	Receive Data (B)
7	Request to Send (A)	25	Request to Send (B)
Pin	**Signal Description**	**Pin**	**Signal Description**
8	Receive Clock (A)	26	Receive Clock (B)
9	Clear to Send (A)	27	Clear to Send (B)
10	Local Loopback - (Not Supported)	28	Not Used
11	DCE Ready (A)	29	DCE Ready (B)
12	DTE Ready (A)	30	DTE Ready (B)
13	Carrier Detect (A)	31	Carrier Detect (B)
14	Remote Loopback - (Not Supported)	32	Not Used
15	Ring Indicator	33	Not Used
16	Not Used	34	Not Used
17	Ext. Transmit Clock (A)	35	Ext. Transmit Clock (B)
18	Test Mode - (Not Supported)	36	Not Used
		37	Not Used

NxT1 HSSI/V.35 Option Module (P/N 1200771L1)

The NxT1 HSSI/V/35 Option module uses a single 50 pin SCSI-II interface (or V.35 interface using optional adapter cable) to combine 8 T1s of data (a combination of 8 using the 4 NxT1 HSSI/V.35 Module T1 ports and other T1 ports installed in the system). Table 26 and Table 27 give the pinouts for the T1 (RJ-48C) ports and SCSI-II/V.35 interfaces.

Connector Type (USOC) RJ-48C

Table 26. T1 (RJ-48C) Pinout

PIN	NAME		DESCRIPTION
1	R	RXDATA-RING	Receive data from the network
2	T	RXDATA-TIP	Receive data from the network
3	—	UNUSED	—
4	R1	TXDATA-RING	Send data towards the network
5	T1	TXDATA-TIP	Send data towards the network
6,7,8	—	UNUSED	—

Connector Type HSSI (SCSI-50) or V.35 Winchester (using optional adapter cable)

Table 27. SCSI-II (50-pin) and V.35 Winchester Pinouts

PIN (+ side)	PIN (- side)	DIRECTION	DESCRIPTION
1	26	—	HSSI SG - Signal Ground
2	27	O	HSSI RT - Receive Timing
3	28	O	HSSI CA - DCE Available
4	29	O	HSSI RD - Receive Data
5	30	O	HSSI LC - Loopback Circuit C
6	31	O	HSSI ST - Send Timing
7	32	—	HSSI SG - Signal Ground
8	33	I	HSSI TA - DTE Available
9	34	I	HSSI TT - Terminal Timing
10	35	I	HSSI LA - Loopback Circuit A
11	36	I	HSSI SD - Send Data
12	37	I	HSSI LB - Loopback Circuit B
13	38	—	HSSI SG - Signal Ground
—	39	—	Ancillary to DCE (Reserved)
14	—	I	V.35 RTS - Request to Send
15	40	I	V.35 TT Terminal Timing
16	41	I	V.35 SD Send Data
—	42	O	V.35 DCD - Data Carrier Detect
17-18	43	—	Ancillary to DCE (Reserved)
19	44	—	HSSI SG - Signal Ground
20	45	O	V.35 ST - Send Timing
21	46	O	V.35 RT - Receive Timing
22	47	O	V.35 RD - Receive Data
23	—	O	V.35 CTS - Clear to Send
—	48	I	V.35 Ground/Present
24	49	O	HSSI TM - Test Mode
25	50	—	HSSI SG - Signal Ground

Octal FXS Option Module (P/N 1200338L1)

The Octal FXS Option Module provides eight analog voice-grade interfaces. Each interface can operate in loop-start or ground-start mode, providing talk battery, off-hook supervision, ringing, and E&M signaling conversion. Call progress tones, where necessary, are provided to the modules by the ATLAS 830.

Connector Type 8-pin modular

Table 28. Octal FXS Pinout

PIN	NAME	DESCRIPTION
1,2,3,6,7,8	UNUSED	—
4	RING	Ring to and from the analog phone interface
5	TIP	Tip to and from the analog phone interface

6. AT-A-GLANCE SPECIFICATIONS

Table 29 lists the specifications for the ATLAS 830 system.

Table 29. Specifications

Application	Feature	Specification
Operating Specifications		
	Temperature	Operation: 0°C to 45°C Storage: -40°C to 70°C
	Relative Humidity	To 95% noncondensing
TDM Applications		
	TDM bandwidth	46 Mbps Full duplex
	Dedicated map connections	766 dedicated DS0 map connections in each of the 5 maps
Switching Applications		
	ISDN signaling types	National ISDN Lucent 5E AT&T 4ESS (PRI Only) Northern DMS-100 (Nortel Custom) Euro ISDN
	T1 signaling types	Loop-Start Ground-Start E&M Wink E&M Immediate Feature Group D
	DSP Features	DTMF/MF tones support Progress tone generation 32 available DSP channels 27 simultaneous dial tones
	BRI Connections (recommended)	64 connections
	PRI Connections (recommended)	345 B channels and 15 D channels
	RBS T1 Connections (recommended)	120 DS0 connections

Table 29. Specifications (Continued)

Application	Feature	Specification
Frame Relay		
	Packet throughput	7900 pkts/sec (based on 64 byte size packets)
	Management signaling interfaces	UNI (user and network) NNI
	Management signaling types	ANSI T1.617-D (Annex D) ITU-T Q.933-A (Annex A) LMI (Group of four) Auto
	Encapsulation	RFC 1490
	PVC support	24 PVCs per packet endpoint (DS0 limited, 24 PVCs for T1). 992 is the limit of PVCs allowed in the unit.
	Congestion control	FECN / BECN Discard eligible (DE)
	Quality of service (QOS)	Prioritization on a per-PVC basis
	Testing (ADTRAN proprietary)	PVC loopback Round trip delay measurement
	SNMP support	RFC 1315
PPP		
	Connection support	35 PPP connections to the internal router (not exceeding 3200 packets per second) 100 PPP connections to the internal router (requires HDLC Module and cannot exceed 3200 packets per second)
	Authentication support	PAP CHAP EAP
	Keepalive support	On/Off
	Interface support	Numbered interfaces Un-numbered interfaces

Table 29. Specifications (Continued)

Application	Feature	Specification
IP Routing		
	Route discovery	RIP V1 RIP V2 ICMP ARP IARP UDP Relay
	SNMP support	RFCs 1315, 1213, 1406 Adtran Enterprise MIB
Voice Compression		
	Algorithm	Voice Compression Module G.723.1 or Netcoder (proprietary)
	Number of channels supported	Up to 64 compression channels
	PCM coding	µ-Law
	Fax support	9600 bps
	DTMF generation and detection	TIA 464A

NETWORK TURNUP PROCEDURE

CONTENTS

FIGURES

1. INTRODUCTION

This section discusses the installation process for the ATLAS 830.

2. TOOLS REQUIRED

The tools required for installation of the ATLAS 830 shelf are:

- #2 Phillips-head screwdriver
- Flat-head screwdriver (for installing modules)

> **WARNING** *To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.*

> 
>
> *Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.*

3. UNPACK AND INSPECT THE SYSTEM

Each ATLAS 830 is shipped in its own cardboard shipping carton. Open each carton carefully and avoid deep penetration into the carton with sharp objects.

After unpacking the unit, inspect it for possible shipping damage. If the equipment has been damaged in transit, immediately file a claim with the carrier, then contact ADTRAN Customer Service (see the contact information in the front of this manual).

Contents of ADTRAN Shipment

Your ADTRAN shipment includes the following items:

- The ATLAS 830
- The ATLAS 830 *System CD*
- AC Power cord - ADTRAN P/N 3127031 (with AC systems)
- 19” Rack mount brackets and screws

> 
>
> *Customers must supply the console cable (DB-9 male) for VT100 terminal (or terminal emulator) connection and an Ethernet cable.*

4. GROUNDING INSTRUCTIONS

The following provides grounding instruction information from the Underwriters' Laboratory UL60950 Standard for Safety of Information Technology Equipment Including Electrical Business Equipment, Third Edition, December 1, 2000.

An equipment grounding conductor that is not smaller in size than the ungrounded branch-circuit supply conductors is to be installed as part of the circuit that supplies the product or system. Bare, covered, or insulated grounding conductors are acceptable. Individually covered or insulated equipment grounding conductors shall have a continuous outer finish that is either green, or green with one or more yellow stripes. The equipment grounding conductor is to be connected to ground at the service equipment.

The attachment-plug receptacles in the vicinity of the product or system are all to be of a grounding type, and the equipment grounding conductors serving these receptacles are to be connected to earth ground at the service equipment.

A supplementary equipment grounding conductor shall be installed between the product or system and ground that is in addition to the equipment grounding conductor in the power supply cord.

The supplementary equipment grounding conductor shall not be smaller in size than the ungrounded branch-circuit supply conductors. The supplementary equipment grounding conductor shall be connected to the product at the terminal provided, and shall be connected to ground in a manner that will retain the ground connection when the product is unplugged from the receptacle. The connection to ground of the supplementary equipment grounding conductor shall be in compliance with the rules for terminating bonding jumpers at Part K or Article 250 of the National Electrical Code, ANSI/NFPA 70. Termination of the supplementary equipment grounding conductor is permitted to be made to building steel, to a metal electrical raceway system, or to any grounded item that is permanently and reliably connected to the electrical service equipment ground.

The supplemental grounding conductor shall be connected to the equipment using a number 8 ring terminal and should be fastened to the grounding lug provided on the rear panel of the equipment. The ring terminal should be installed using the appropriate crimping tool (AMP P/N 59250 T-EAD Crimping Tool or equivalent.)

5. SUPPLYING POWER TO THE UNIT

AC Powered Systems

The AC powered ATLAS 830 comes equipped with a detachable 6-foot power cord with a 3-prong plug for connecting to a grounded power receptacle. As shipped, the ATLAS 830 is set to factory default conditions. After installing the unit and any option modules, the ATLAS 830 is ready for power-up. To power-up the unit, ensure that the unit is properly connected to an appropriate power source and turn on the unit using the on/off switch on the rear panel.

- *Power to the ATLAS 830 AC system must be from a grounded 90-130/190-240 VAC, 50/60 Hz source.*
- *The power receptacle uses double-pole, neutral fusing.*
- *Maximum recommended ambient operating temperature is 45 ºC.*

DC Powered Systems

The DC powered ATLAS 830 comes equipped with a DC Power supply to furnish the voltages necessary for proper backplane operation. As shipped, the ATLAS 830 is set to factory default conditions. After installing the unit and any option modules, the ATLAS 830 is ready for power-up.

- *Power to the ATLAS 830 DC system must be from a reliably grounded -48 VDC source which is electrically isolated from the AC source.*
- *This unit shall be installed in accordance with Article 400 and 364.8 of the NEC NFPA 70.*
- *The branch circuit overcurrent protection shall be a fuse or circuit breaker rated minimum 60 VDC, maximum 10A.*
- *A readily accessible disconnect device, that is suitably approved and rated, shall be incorporated in the field wiring.*
- *Maximum recommended ambient operating temperature is 45 ºC.*

6. MOUNTING OPTIONS

The ATLAS 830 may be installed for tabletop or 19-inch rack mount. 23-inch rack mount brackets are available if needed. For a rack mount installation, the ATLAS 830 allows flush-face mount, face-forward mount, and center mount.

Be careful not to upset the stability of the equipment mounting rack when installing this product.

7. INSTALLING NETWORK AND OPTION MODULES

Figure 1 shows the option slot numbering designation as viewed from the rear of the ATLAS 830.

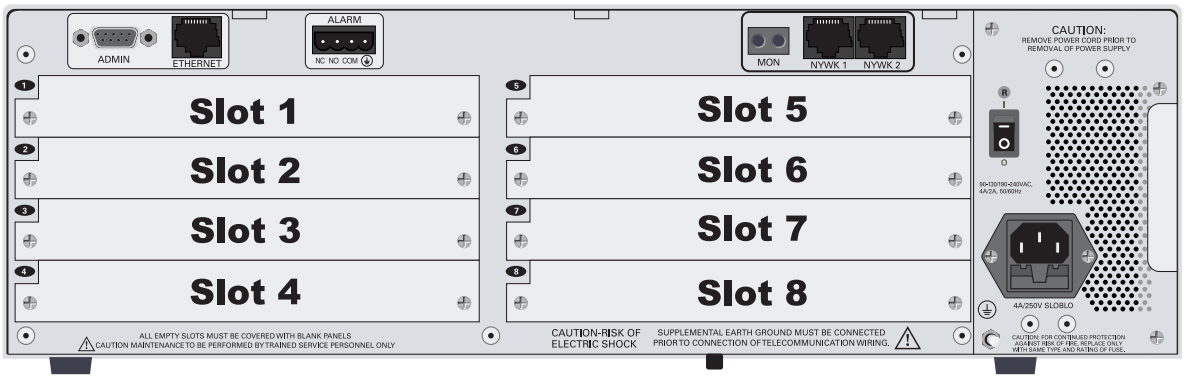


Figure 1. ATLAS 830 Slot Designation (Rear Panel)

WARNING *Option modules are intended to be serviced by qualified service personnel only.*

Instructions for Installing the ATLAS 830 Option Modules

Instructions for Installing the ATLAS 830 Option Modules	
Step	**Action**
1	Remove the cover plate from the appropriate option slot of the ATLAS 830 rear panel.
2	Slide the Option Module into the option slot until the module is firmly seated against the front of the chassis.
3	Secure the thumbscrews at both edges of the module. Tighten with a screwdriver.
4	Connect the cables to the associated device(s).
5	Complete installation of remaining modules and unit as specified in the appropriate sections of this Network Turnup Procedure.

Quad T1/PRI Option Module (P/N 1200185L3)

Shipping Contents

The ADTRAN shipment of the Quad T1/PRI Option Module includes the following items:

- Quad T1/PRI Option Module
- Quad T1/PRI Option Module Quick Start Guide
- Four cables (RJ-48C to RJ-48C), ADTRAN P/N: 3125M008
- Two crossover cable (RJ-48C to RJ-48C), ADTRAN P/N: 3125M010
- Two DB-15 to RJ-48 Adapters, ADTRAN P/N: 3196027

Quad E1/PRA Option Module (P/N 1200264L1)

Shipping Contents

The ADTRAN shipment of the Quad E1/PRA Option Module includes the following items:

- Quad E1/PRA Option Module
- Quad E1/PRA Option Module Quick Start Guide
- One DB-62 to Quad DB-15 female cable, ADTRAN P/N: 3125I061

The Quad E1/PRA Option Module may also be purchased with BNC Network Connection Interfaces (P/N 4200264L1).

Quad Nx 56/64 Option Module (P/N 1200184L1)

Shipping Contents

The ADTRAN shipment of the Quad Nx 56/64 Option Module includes the following items:

- Quad Nx 56/64 Option Module
- Quad Nx 56/64 Option Module Quick Start Guide
- Two DB-37 to V.35 converter cables, ADTRAN P/N 1200784L1

Quad USSI Option Module System (P/N 4200261Lx)

Shipping Contents

The ADTRAN shipment of the Quad USSI Option Module System includes the following items:

- Quad USSI Option Module System
- Quad USSI Option Module System Quick Start Guide

And one of the following:

- EIA-530 to DB-78 Cable (System P/N 4200261L2, Cable P/N 3125I058)
- RS-449/V.36 (System P/N 4200261L1, Cable P/N 3125I057)
- RS-232 (System P/N 4200261L4, Cable P/N 3125I063)
- CCIT X.21 V.11 (System P/N 4200261L3, Cable P/N 3125I056)

Octal Basic Rate ISDN (U-Interface) Option Module (P/N 1200186L2)

Shipping Contents

The ADTRAN shipment of the Octal Basic Rate ISDN (U-Interface) Option Module includes the following items:

- Octal Basic Rate ISDN (U-Interface) Option Module
- Octal Basic Rate ISDN (U-Interface) Option Module Quick Start Guide
- Eight RJ-45-to-RJ-11 cables, ADTRAN P/N: 3125M007

Octal Basic Rate ISDN (S/T Interface) Option Module (P/N 1200343L1)

Shipping Contents

The ADTRAN shipment of the Octal Basic Rate ISDN (S/T Interface) Option Module includes the following items:

- Octal Basic Rate ISDN (S/T Interface) Option Module
- Octal Basic Rate ISDN (S/T Interface) Option Module Quick Start Guide
- Eight RJ-45-to-RJ-11 cables, ADTRAN P/N: 3125M007

T3 Option Module (P/N 1200223L1)

Shipping Contents

The ADTRAN shipment of the T3 Option Module includes the following items:

- T3 Option Module
- T3 Option Module Quick Start Guide
- Two 6 ft. coaxial BNC cables (ADTRAN P/N 3125I054)

T3 Option Module with Drop and Insert Interface (P/N 1200225L1)

Shipping Contents

The ADTRAN shipment of the T3 Option Module with Drop and Insert Interface includes the following items:

- T3 Option Module with Drop and Insert Interface
- T3 Option Module with Drop and Insert Interface Quick Start Guide
- Four 6 ft. coaxial BNC cables (ADTRAN P/N 3125I054)

NxT1 HSSI/V.35 Option Module (P/N 1200771L1)

Shipping Contents

The ADTRAN shipment of the NxT1 HSSI/V.35 Option Module includes the following items:

- NxT1 HSSI/V.35 Option Module
- NxT1 HSSI/V.35 Option Module Quick Start Guide
- Four 15 ft. RJ-48 to RJ-48 cables (ADTRAN P/N 3125M008)

Additionally, the following optional cable is available:

SCSI-II to V.35 adapter cable is available (P/N 1200763L1) for applications requiring a V.35 interface.

Octal FXS Option Module (P/N 1200338L1)

Shipping Contents

The ADTRAN shipment of the Octal FXS Option Module includes the following items:

- Octal FXS Option Module
- Octal FXS Option Module Quick Start Guide

8,16,24,32 Channel Voice Compression Resource Modules (P/N 1200221Lx)

Shipping Contents

The ADTRAN shipment of the 8,16,24,32 Channel Voice Compression Resource Modules includes the following items:

- 8,16,24,32 Channel Voice Compression Resource Modules
- 8,16,24,32 Channel Voice Compression Resource Modules Quick Start Guide

Nx 56/64 BONDing Resource Module (P/N 1200262L1)

Shipping Contents

The ADTRAN shipment of the Nx 56/64 BONDing Resource Module includes the following items:

- Nx 56/64 BONDing Resource Module
- Nx 56/64 BONDing Resource Module Quick Start Guide

HDLC Resource Module (P/N 1200222L1)

Shipping Contents

The ADTRAN shipment of the HDLC Resource Module includes the following items:

- HDLC Resource Module
- HDLC Resource Module Quick Start Guide

Modem-16 Resource Module (P/N 1200181L1)

Shipping Contents

The ADTRAN shipment of the Modem-16 Resource Module includes the following items:

- Modem-16 Resource Module
- Modem-16 Resource Module Quick Start Guide

Async-232 Option Module (P/N 1200182L1)

Shipping Contents

The ADTRAN shipment of the Async-232 Option Module includes the following items:

- Async-232 Option Module
- Async-232 Option Module Quick Start Guide
- Two DB-78 to Octal RS-232 cables (ADTRAN P/N 3125I030)

Dual Video Option Module (P/N 4200773Lx)

Shipping Contents

The ADTRAN shipment of the Dual Video Option Module includes the following items:

- Dual Video Option Module
- Dual Video Option Module Quick Start Guide

And one of the following:

- V.35 (System P/N 4200773L1, Cable P/N 1200774L1)
- EIA-530 (System P/N 4200773L2, Cable P/N 1200774L2)
- RS-449 (System P/N 4200773L3, Cable P/N 1200774L3)

USER INTERFACE GUIDE

This section of ADTRAN's ATLAS 830 System Manual is designed for use by network administrators and others who will configure and provision the system. It contains information about navigating the VT100 user interface, configuration information, and menu descriptions.

CONTENTS

FIGURES

TABLES

1. NAVIGATING THE TERMINAL MENU

Log in to the ATLAS 830 by connecting a standard straight-through serial cable to a VT100 terminal (or PC with VT100 emulator) and the DB-9 **CRAFT** port located on the front panel of the unit or the **ADMIN** port on the rear panel of the unit. Configure the terminal settings for 9600 data rate, No parity, 8 data bits, 1 stop bit, and no flow control.

After you connect to the unit, a login screen will appear. The default password for the ATLAS 830 is (all lower case) **password**. (Refer to DLP-002, *Logging in to the System*, for detailed instructions.)

Terminal Menu Window

After you log in, all menu items and data fields are displayed in the terminal menu window (see Figure 1), through which you have complete control of the ATLAS 830.

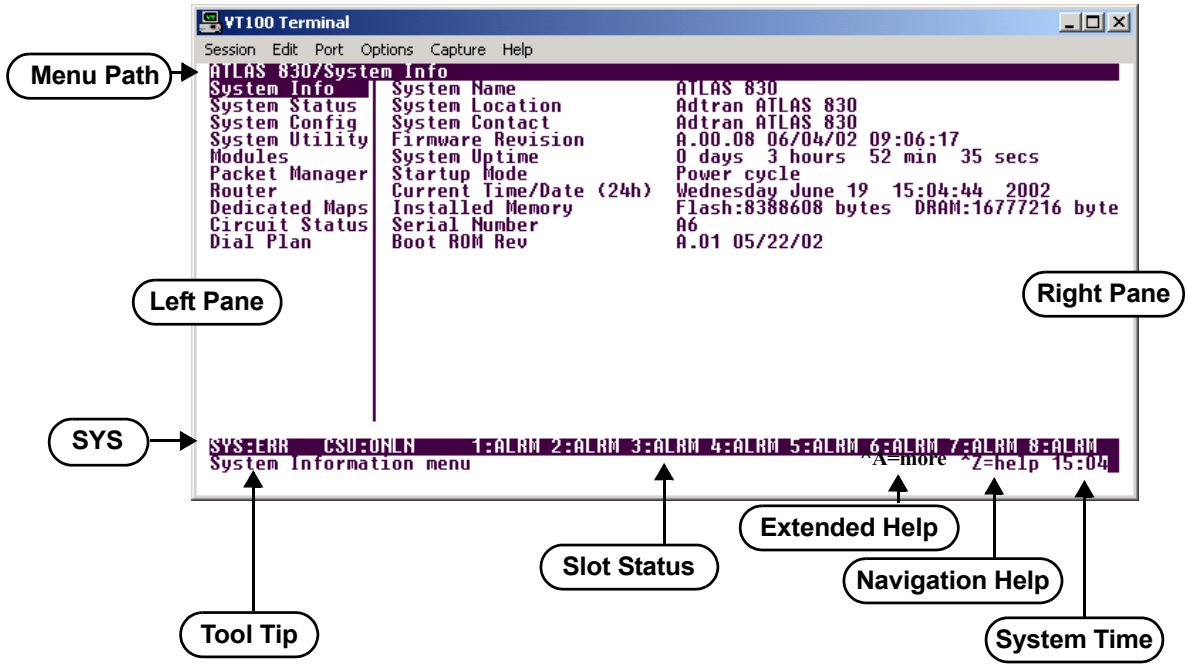


Figure 1. Top-Level Terminal Menu Window

Menu Path

The first line of the terminal menu window (the menu path) shows the session's current position (path) in the menu structure. For example, Figure 1 shows the top-level menu with the cursor on the **SYSTEM INFO** submenu; therefore, the menu path reads **ATLAS 830/SYSTEM INFO**.

Window Panes

When you first start a terminal menu session, the terminal menu window is divided into left and right panes. The left pane shows the list of available submenus, while the right pane shows the contents of the currently selected submenu.

You can view the terminal windows in two ways: with fields and submenus displaying horizontally across the right pane, or with fields and submenus displaying vertically down the right pane. Viewing submenus vertically rather than horizontally allows you to see information at a glance rather than scrolling horizontally across the window. To change the view, move your cursor to an index number and press <Enter > . Figure 2 shows this alternate view. Fields and submenu names may vary slightly in this view.

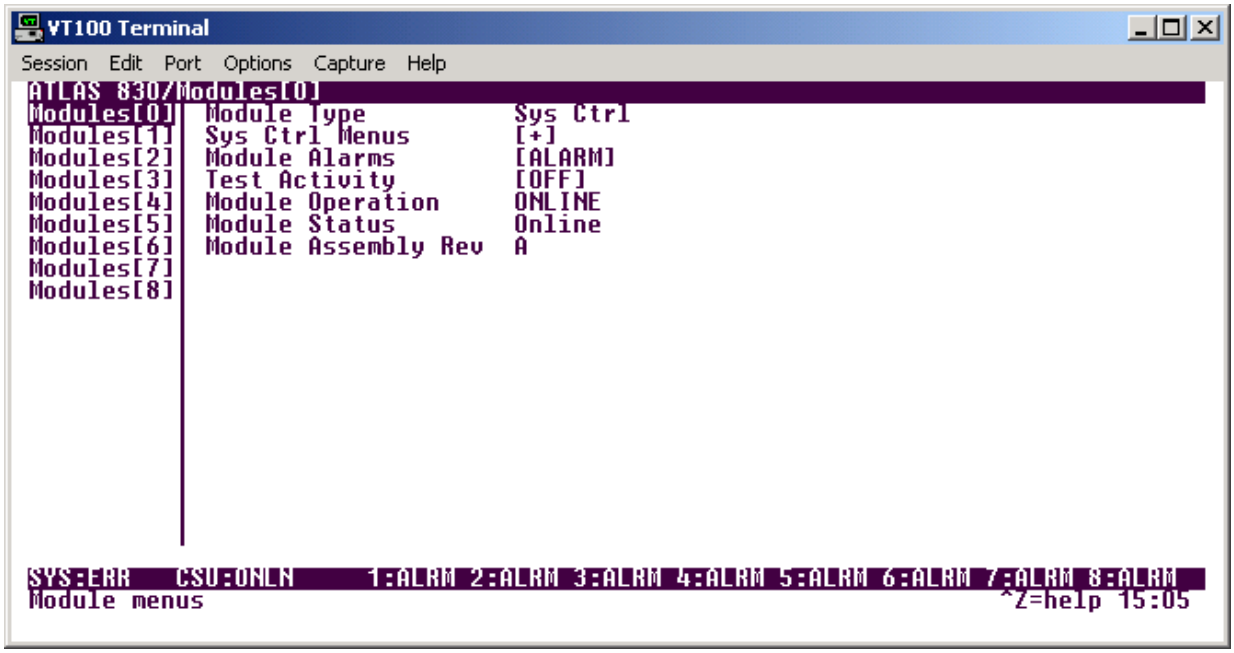


Figure 2. Alternate Menu View

Window Pane Navigation

Use the following chart to assist you in moving between and within the two window panes.

To do this...	Press this key...
Move from left pane to right pane	Tab Enter Right arrow
Move from right pane to left pane	Tab Escape Left arrow Backspace
Move within each pane	Up arrow Down arrow Left arrow Right arrow

Right Window Pane Notation

The right window pane shows the contents of the currently selected menu. These contents can include both submenu items and data fields. Some submenus contain additional submenus and some data fields contain additional data fields. The following chart explains the notation used to identify these additional items.

This notation...	Means that...
[+]	More items are available when selected
[DATA]	More items are available when selected
<+ >	An action is to be taken, such as activating a test
Highlighted menu item	You can enter data in this field
Underlined field	The field contains read-only information

Additional Terminal Menu Window Features

- SYS - displays status information about the system controller, such as ONLIN (online), STBY (standby), and NRDY (not ready).
- Tool Tip - provides a brief description of the currently selected (highlighted) command
- Slot Status - displays status information, such as OK, WARN, or ALRM about slots 1-8
- Extended Help - displays information about selected commands (CTRL+A)
- Navigation Help - lists characters used for navigating the terminal menu and session management (CTRL+Z)
- System Time - displays current time

Navigating using the Keyboard Keys

You can use various keystrokes to move through the terminal menu, to manage a terminal menu session, and to configure the system. Press <CTRL+Z > to activate a pop-up screen listing the navigation keystrokes.

Moving through the Menus

To do this...	Press this key...
Return to the home screen	H
Jump between two menu items Press <J **>** while the cursor is located on a menu item, and you jump back to the main screen. Go to another menu item, press <J **>** , and you jump back to the screen that was displayed the first time you pressed <J **>** . Press <J **>** anytime you want to jump between these items.	J
Select items	Arrows
Edit a selected menu item	Enter
Cancel an edit	Escape
Close pop-up help screen	Escape
Move between the left and right panes	Tab Arrows
Move to the top of a screen	A
Move to the bottom of a screen	Z
Ascend one menu level	Backspace

Session Management Keystrokes

To do this...	Press this key...
Log out of a session	CTRL+L
Invalidate the password entry and return to the login screen	CTRL+S

To do this...	Press this key...
Refresh the screen To save time, only the portion of the screen that has changed is refreshed. This option should only be necessary if the display picks up incorrect characters caused by disconnecting and reconnecting the terminal session.	CTRL+R
View Extended Data Display data fields too large for display window.	CTRL+V

Configuration Keystrokes

To do this...	Press this key...
Restore factory default settings. This setting restores the factory defaults based on the location of the cursor. If the cursor is on a module line (in the **MODULES** menu), then only the selected module is updated to factory defaults.	F
Copy selected items to the clipboard. The amount of information you can copy depends on the cursor location when you press <C > : If the cursor is over an editable field, only that item is copied. If the cursor is over the index number of a list, then all of the items in the row of the list are copied. For example, if the cursor is over the **SLOT #** field in the **MODULES** screen, all of the information associated with the slot is copied.	C
Paste the item stored in the clipboard, if the information is compatible. You must confirm all pastes - except those to a single editable field.	P
Increment the value of certain types of fields by one when you paste information into those fields.	>
Decrement the value of certain types of fields by one when you paste information into those fields.	<

To do this...	Press this key...
Insert a new list item. For example, add a new item to the **DEDICATED MAP** connection list by pressing <I > while the cursor is over the index number.	I
Delete a list item. For example, delete an item from the **DEDICATED MAP** connection list by pressing <D > while the index number is active.	D

Getting Help

The bottom line of the terminal menu window contains context-sensitive help information. When the cursor is positioned over a set of configuration items, a help message displays (when available) providing a description of the item. When more detailed help is available for a particular item, ^A displays at the bottom of the window. At this point, if you press <CTRL+A > , a pop-up help screen displays with information about the item.

Press <CTRL+Z > to activate a help screen that displays the available keystrokes you can use to navigate the terminal menu.

2. TERMINAL MENU AND SYSTEM CONTROL

Selecting the Appropriate Menu

The terminal menu is the access point to all other operations. Each terminal menu item has several functions and submenus that identify and provide access to specific operations and parameters. Use the chart below to help select the appropriate terminal menu.

To do this...	Go to this menu...
Review and monitor general system information for the ATLAS 830	**SYSTEM INFO**
Review and monitor system status for the ATLAS 830	**SYSTEM STATUS**
Set up the operational configuration for the ATLAS 830	**SYSTEM CONFIG**
Update settings, transfer files, perform system diagnostics, and reboot the ATLAS 830	**SYSTEM UTILITY**
Review and configure settings for each installed module, including the ATLAS 830 built-in network ports	**MODULES**
Define and configure all layer 2 connections including Frame Relay and PPP endpoints	**PACKET MANAGER**
Define, configure and monitor all ATLAS 830 Router functions	**ROUTER**
Assign dedicated connections between any two ports in the ATLAS 830	**DEDICATED MAPS**
Dial Backup functions including monitoring the status of backup links, manually forcing a backup switch, and restoring a primary connection	**CIRCUIT STATUS**
Set global ATLAS 830 switch parameters or set individual parameters for each port in the ATLAS 830 that handles a switched call	**DIAL PLAN**

Security Levels

To edit terminal menu items, you must have a password and the appropriate security level. Table 1 describes the six security levels.

Table 1. Password Security Levels

Security Level	Description
5	Read-only permission for all menu items - minimum rights
4	Read permission for all menu items and permission to use test commands
3	Access to all commands except passwords, flash download, authentication methods, and interface configurations
2	Access to all commands except passwords, flash download, and authentication methods
1	Access to all commands except passwords
0	Permission to edit every menu item, including creating and editing passwords - maximum rights

3. MENU DESCRIPTIONS

The remainder of this section describes ATLAS 830 menu and submenu options

To help you follow the terminal menu hierarchy, the following notations are used:

MENUS > SUBMENUS > SUB-SUBMENUS

SYSTEM INFO

The **SYSTEM INFO** menu provides basic information about the unit as well as data fields for editing information. Figure 3 displays the submenus and data fields that are available when you select this menu item.

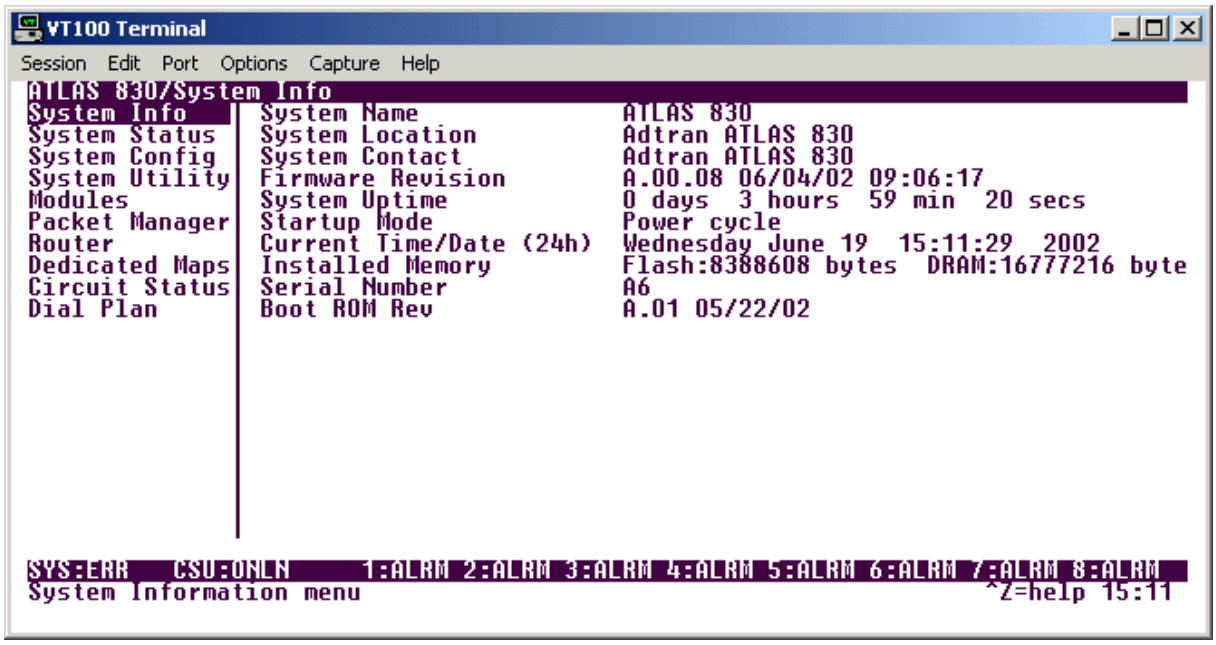


Figure 3. System Info Menu

SYSTEM INFO > SYSTEM NAME

Write security: 3; Read security: 5

Provides a user-configurable text string for the name of the ATLAS 830. This name can help you distinguish between different installations. You can enter up to 40 alphanumeric characters in this field, including spaces and special characters (such as an underbar).

SYSTEM INFO > SYSTEM LOCATION

Write security: 3; Read security: 5

Provides a user-configurable text string for the location of the ATLAS 830. This field is to help you keep track of the physical location of the unit. You can enter up to 40 alphanumeric characters in this field, including spaces and special characters (such as an underbar).

SYSTEM INFO > SYSTEM CONTACT

Write security: 3; Read security: 5

Provides a user-configurable text string for a contact name. You can use this field to enter the name, phone number, or e-mail address of a person responsible for the ATLAS 830 system. You can enter up to 40 alphanumeric characters in this field, including spaces and special characters (such as an underbar).

SYSTEM INFO > FIRMWARE REVISION

Read security: 5

Displays the current firmware revision level of the controller.

SYSTEM INFO > SYSTEM UPTIME

Read security: 5

Displays the length of time the ATLAS 830 system has been running. Each time you reset the system, this value resets to 0 days, 0 hours, 0 min and 0 secs.

SYSTEM INFO > STARTUP MODE

Read security: 5

Displays details about the last system startup. For example, rebooting the ATLAS 830 from the **SYSTEM UTILITY** menu will cause this field to read Warm Reboot.

SYSTEM INFO > CURRENT TIME/DATE (24HR)

Write security: 3; Read security: 5

Displays the current date and time, including seconds. To edit this field, place the cursor on the field and press <Enter > . Then, enter the time in a 24-hour format (such as 23:00:00 for 11:00 pm), and the date in mm-dd-yyyy format (for example, 10-30-1998). Press <Enter > when you are finished to exit the menu item.

SYSTEM INFO > INSTALLED MEMORY

Read security: 5

Displays the type and amount of memory in use (including Flash memory and DRAM).

SYSTEM INFO > SERIAL NUMBER

Read security: 5

Displays the serial number for the unit. The serial number of the ATLAS 830 will automatically display in this field.

SYSTEM INFO > BOOT ROM REV

Read security: 5

Displays the boot ROM revision.

SYSTEM STATUS

The **SYSTEM STATUS** menu provides the user with status information about the ATLAS 830 operational parameters including logged system events and timing. Figure 4 displays the submenus and data fields that are available when you select this menu item.

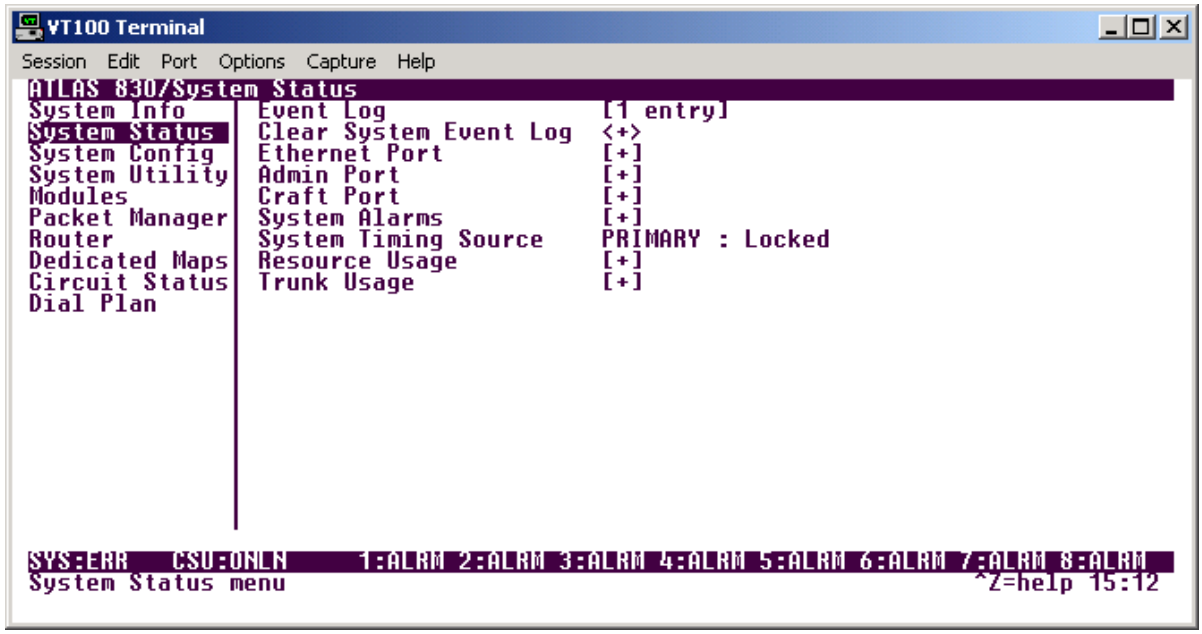


Figure 4. System Status Menu

SYSTEM STATUS > EVENT LOG

Displays the last 349 warning or failure messages sent including the day, date, and priority of the message. The most recent messages display at the top of the list. The following read-only fields are available to review:

SYSTEM STATUS > EVENT LOG > TIME

Displays the date (mm/dd) and the time (hh:mm:ss) that the event occurred.

SYSTEM STATUS > EVENT LOG > CAT

Displays the severity of the event. The possible categories are **CRITICAL**, **MAJOR**, **MINOR**, **WARNING**, **NORMAL**, and **INFO**. You can specify which types of errors you want the system to log with the System Event Logging option. See *Section 7, System Event Logging*, for details.

SYSTEM STATUS > EVENT LOG > SRC

Displays the source of the event.

SYSTEM STATUS > EVENT LOG > SLOT

Displays the slot number in which the event occurred. If this field displays (**0**), the event that occurred was on one of the two built-in network ports.

SYSTEM STATUS > EVENT LOG > PORT

Displays the port in which the event occurred.

SYSTEM STATUS > EVENT LOG > EVENT DESCRIPTION

Displays a description of the event.

SYSTEM STATUS > CLEAR SYSTEM EVENT LOG

Write security: 3; Read security: 3

Clears the event log. When you select this command, the following prompt displays:

```
Confirm (y/n)
This will clear the entire event log.
```

Select **Y** to clear the log or **N** to exit the command.

If you clear the event log, you cannot retrieve the data.

SYSTEM STATUS > ETHERNET PORT

Read security: 5

Displays status information about the Ethernet port. An asterisk (*) indicates activity for the item. The following read-only fields are available to review:

SYSTEM STATUS > ETHERNET PORT > I/F STATUS

Indicates the current status of the Ethernet port.

SYSTEM STATUS > ETHERNET PORT > TX FRAMES

Indicates the number of frames transmitted from the Ethernet port since system startup.

SYSTEM STATUS > ETHERNET PORT > RX FRAMES

Indicates the number of frames received on the Ethernet port since system startup.

SYSTEM STATUS > ETHERNET PORT > ETHERNET RATE

Indicates whether the Ethernet network is 10 or 100BaseT.

SYSTEM STATUS > ADMIN PORT

Write security: 2; Read security: 5

Displays the status of the DB-9 (female) Admin port.

SYSTEM STATUS > ADMIN PORT > SIGNAL LEADS

Displays the state of the Admin port signals (**RTS**, **CTS**, **DTR**, and **DCD**).

SYSTEM STATUS > ADMIN PORT > TX BYTES

Displays the number of bytes transmitted from the Admin port.

SYSTEM STATUS > ADMIN PORT > RX BYTES

Displays the number of bytes received by the Admin port.

SYSTEM STATUS > ADMIN PORT > OVERRUN ERRS

Displays the number of overrun errors received by the Admin port.

SYSTEM STATUS > ADMIN PORT > FRAMING ERRS

Displays the number of framing errors received by the Admin port.

SYSTEM STATUS > ADMIN PORT > CLEAR COUNTERS

Write security: 5; Read security: 5

Clears the Admin port statistics. Press **Y** to activate this command.

SYSTEM STATUS > CRAFT PORT

Write security: 2; Read security: 5

Displays the status of the DB-9 (female) Craft port.

SYSTEM STATUS > CRAFT PORT > TX BYTES

Displays the number of bytes transmitted from the Craft port.

SYSTEM STATUS > CRAFT PORT > RX BYTES

Displays the number of bytes received by the Craft port.

SYSTEM STATUS > CRAFT PORT > OVERRUN ERRS

Displays the number of overrun errors received by the Craft port.

SYSTEM STATUS > CRAFT PORT > FRAMING ERRS

Displays the number of framing errors received by the Craft port.

SYSTEM STATUS > CRAFT PORT > CLEAR COUNTERS

Write security: 5; Read security: 5

Clears the Craft port statistics. Press **Y** to activate this command.

SYSTEM STATUS > SYSTEM ALARMS

Read security: 5

Contains alarm information for the ATLAS 830 system including power and temperature alarms. The following status symbols are used:

[–]	Normal condition
[*]	Failure condition
[!]	No Information Available

SYSTEM STATUS > SYSTEM ALARMS > POWER ALARMS

Read security: 5

Indicates that one or both of the power supplies are not functional. Both the primary and auxiliary (installed in slots 7 and 8) power supplies are continuously monitored to determine failures. If one of these supplies fails, a message will be placed in the **EVENT LOG** (see *Section 7, System Event Logging*, for more details).

SYSTEM STATUS > SYSTEM ALARMS > TEMPERATURE ALARMS

Read security: 5

Indicates that the internal temperature of the power supply has exceeded normal operating limits. When the operating temperature is exceeded by any power supply a warning will be placed in the **EVENT LOG** (see *Section 7, System Event Logging*, for more details), but no other action will be taken.

SYSTEM STATUS > SYSTEM TIMING SOURCE

Read security: 5

Indicates which timing source (primary or backup) is currently being used by ATLAS 830 and whether the system is locked onto this source. If the display does not indicate locked, the ATLAS 830 does not have a valid source of timing and cannot reliably transfer data. Review the current setting for system timing source in the **SYSTEM CONFIG** menu. See *System Config > Primary Timing Source* on page 78 and *System Config > Backup Timing Source* on page 78 for details.

SYSTEM STATUS > RESOURCE USAGE

Write security: 5; Read security: 5

Provides resource usage tracking for dynamic resources throughout the system. This includes current, average, and minimum availability for both analog and digital resources.

SYSTEM STATUS > RESOURCE USAGE > DATA TABLES

Read security: 5

Displays resource usage for dynamic resources throughout the system in a table format.

SYSTEM STATUS > RESOURCE USAGE > DATA TABLES > RESOURCE TYPE

Displays types of dynamically allocated resources being tracked throughout the system. Examples are **ANALOG** (analog modem resource), **SW DIGITAL** (digital call resource), and **PKT VOICE** (packet voice compression resource). Choices are **ADPCM VOICE, ANALOG, NI DIGITAL, PKT VOICE,** and **SW DIGITAL**.

SYSTEM STATUS > RESOURCE USAGE > DATA TABLES > CURRENT

Shows the number of resources available (not in use) and the total number of resources. If a resource is taken offline, it is not included in the total.

SYSTEM STATUS > RESOURCE USAGE > DATA TABLES > AVERAGE

Shows the average number of resources available since the statistics were last reset.

SYSTEM STATUS > RESOURCE USAGE > DATA TABLES > MIN

Shows the fewest number of resources available since the last reset.

SYSTEM STATUS > RESOURCE USAGE > DATA TABLES > 0 (ZERO) AVAIL

Provides a count of the number of times the quantity of available resources reached 0.

SYSTEM STATUS > RESOURCE USAGE > DATA TABLES > HR DATA

Displays the **AVERAGE**, **MINIMUM**, and **0 AVAILABLE** data broken down in hour increments for a 24-hour period.

SYSTEM STATUS > RESOURCE USAGE > DATA TABLES > RESET

Write security: 4; Read security: 5

Activates the reset of all accumulated availability statistics for the selected resource.

SYSTEM STATUS > RESOURCE USAGE > CONFIG

Write security: 3; Read security: 5

Configures the statistics displayed under data tables.

SYSTEM STATUS > RESOURCE USAGE > CONFIG > DISPLAY FORMAT

Write security: 3; Read security: 5

Sets the display format for all **RESOURCE USAGE** statistics to either raw data or percentages.

SYSTEM STATUS > RESOURCE USAGE > CONFIG > RESET MODE

Write security: 3; Read security: 5

Sets the reset mode for the **RESOURCE USAGE** statistics to one of the following:

DAILY	performs reset daily at 12:00 AM
WEEKLY	performs reset on Saturday night, 12:00 AM
MANUAL	disables automatic reset of the resource usage statistics

SYSTEM STATUS > TRUNK USAGE

Write security: 5; Read security: 5

Indicates trunk use: (**NET TERM PRI**, **NET TERM RBS**; **USER TERM PRI**, **USER TERM RB**S).

SYSTEM STATUS > TRUNK USAGE > DATA TABLES

Read security: 5

Display for collected resource usage data.

SYSTEM STATUS > TRUNK USAGE > DATA TABLES > TRUNK TYPE

Displays types of trunks in the system including the following:

NET RBS	T1 (Robbed Bit Signaling) trunks configured in the **DIAL PLAN** as **NETWORK TERM**.
NET PRI	Primary Rate ISDN circuits configured in the **DIAL PLAN** as **NETWORK TERM**.
USER RBS	T1 (Robbed Bit Signaling) trunks configured in the **DIAL PLAN** as **USER TERM**.
USER PRI	Primary Rate ISDN circuits configured in the **DIAL PLAN** as **USER TERM**.

SYSTEM STATUS > TRUNK USAGE > DATA TABLES > CURRENT

Shows the number of resources available (not in use) and the total number of resources. If a resource is taken offline, it is not included in the total.

SYSTEM STATUS > TRUNK USAGE > DATA TABLES > AVERAGE

Shows the average number of resources available since the statistics were last reset.

SYSTEM STATUS > TRUNK USAGE > DATA TABLES > MIN

Shows the fewest number of resources available since the last reset.

SYSTEM STATUS > TRUNK USAGE > DATA TABLES > 0 (ZERO) AVAIL

Provides a count of the number of times the quantity of available resources reached 0.

SYSTEM STATUS > TRUNK USAGE > DATA TABLES > SLT/PRT

Displays the usage data (**CURRENT**, **AVERAGE**, **MIN**, **0 AVAIL**, and **HR DATA**) broken down by slots and ports.

SYSTEM STATUS > TRUNK USAGE > DATA TABLES > RESET

Write security: 4; Read security: 5

Activates the reset of all accumulated availability statistics.

SYSTEM STATUS > TRUNK USAGE > CONFIG

Write security: 5; Read security: 5

Configures the statistics displayed under data tables.

SYSTEM STATUS > TRUNK USAGE > CONFIG > DISPLAY FORMAT

Write security: 5; Read security: 5

Sets the display format for all **TRUNK USAGE** statistics to either raw data or percentages.

SYSTEM STATUS > TRUNK USAGE > CONFIG > RESET MODE

Write security: 3; Read security: 5

Sets the reset mode for the **TRUNK USAGE** statistics to one of the following:

DAILY	performs reset daily at 12:00 AM
WEEKLY	performs reset on Saturday night, 12:00 AM
MANUAL	disables automatic reset of the trunk usage statistics

SYSTEM CONFIG

The **SYSTEM CONFIG** menu allows you to set up the ATLAS 830 operational configuration. Figure 5 shows the items included in this menu.

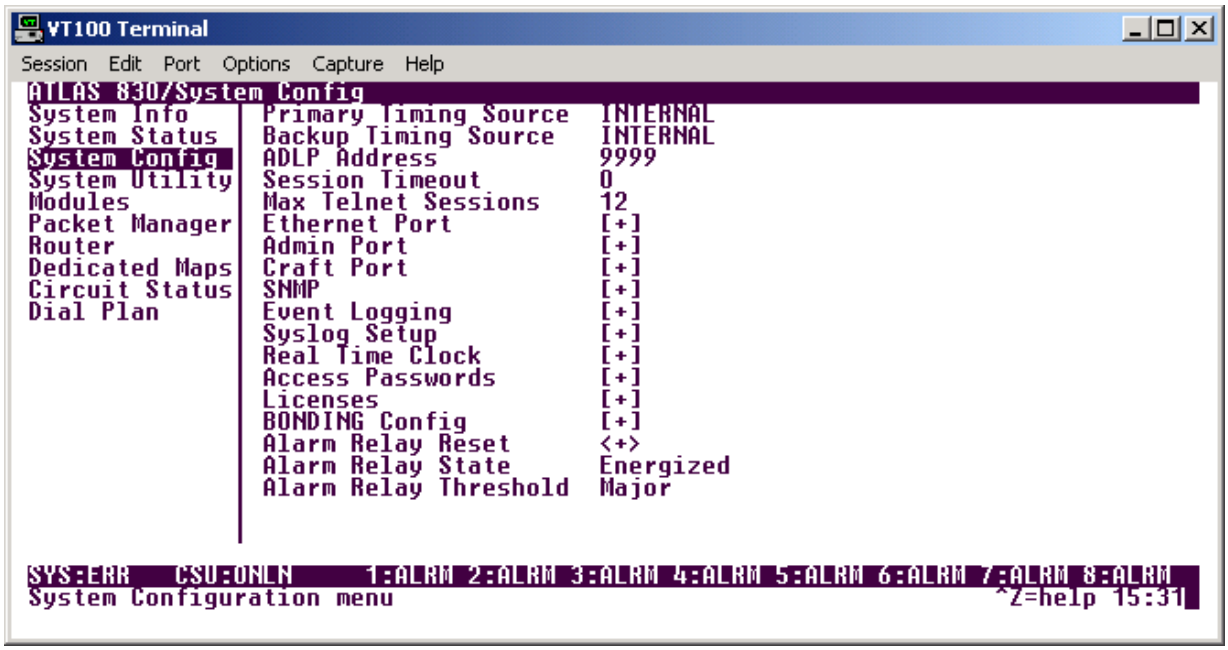


Figure 5. System Config Menu

SYSTEM CONFIG > PRIMARY TIMING SOURCE

Write security: 1; Read security: 5

Selects the primary timing source. You can select either **INTERNAL** or any port available on the system that is capable of providing timing. Please refer to the specific module information to determine if a port can provide timing for the system.

SYSTEM CONFIG > BACKUP TIMING SOURCE

Write security: 1; Read security: 5

Selects the secondary timing source. You can select either **INTERNAL** or any port available on the system that is capable of providing timing. Please refer to the specific module information to determine if a port can provide timing for the system. ATLAS 830 uses the backup timing source if the primary timing source goes into alarm. The **BACKUP TIMING SOURCE** should be different from the **PRIMARY TIMING SOURCE** for the most reliable operation.

SYSTEM CONFIG > ADLP ADDRESS

Write security: 2; Read security: 5

Shows the system ADTRAN Data Link Layer Protocol (ADLP) address for connecting remote devices to ADTRAN management software. The allowable range is between 2 and 65520. Enter a value not used by any other ADTRAN units controlled by the management software.

SYSTEM CONFIG > SESSION TIMEOUT

Write security: 3; Read security: 5

Defines the number of seconds the terminal session must remain idle before the session times out (valid range 0 to 65535). You can enter zero to deactivate this option (the session will never time out).

SYSTEM CONFIG > MAX TELNET SESSIONS

Write security: 3; Read security: 5

Defines the maximum number of Telnet sessions that can be active at the same time. Enter a number between 0 and 12 in this field.

If you enter zero in this field, you will not be able to use Telnet. Only enter zero if you want to completely lock out Telnet access.

SYSTEM CONFIG > ETHERNET PORT

Write security: 2; Read security: 5

Provides a way to configure various settings for the Ethernet port. The following options are available for review and editing:

SYSTEM CONFIG > ETHERNET PORT > PORT NAME

Defines the name of the Ethernet port. You can leave this field blank.

SYSTEM CONFIG > ETHERNET PORT > IP ADDRESS

Lists the address assigned to the base Ethernet port. This address is in dotted decimal notation (four decimal numbers, each in the range of 0 to 255, separated by periods). This value is set to 10.0.0.1 by default. The IP address is used for the 10/100BaseT Ethernet interface. Obtain the correct IP address from your LAN administrator.

SYSTEM CONFIG > ETHERNET PORT > DEFAULT GATEWAY

Defines or changes the default gateway. Enter the default gateway address by entering a decimal number into the appropriate field and then pressing <Enter > to move to the next field. You will need a default gateway if the LAN contains multiple segments. This address is in dotted decimal notation (four decimal numbers, each in the range of 0 to 255, separated by periods). This value is set to 0.0.0.0 by default. Contact your LAN administrator for the appropriate address.

SYSTEM CONFIG > ETHERNET PORT > SUBNET MASK

Defines which part of a destination IP address contains the network number. This address is in dotted decimal notation (four decimal numbers, each in the range of 0 to 255, separated by periods). This value is set to 255.255.255.0 by default. This part of the destination IP address is used along with the ATLAS 830 IP address to determine which nodes must be reached through the default IP gateway.

SYSTEM CONFIG > ETHERNET PORT > MAC ADDRESS

Displays the system Ethernet Media Access Control (MAC) address. This field is read-only.

SYSTEM CONFIG > ETHERNET PORT > ETHERNET SPEED

Defines the rate at which the ethernet port operates. Choose from **10 MBPS** or **AUTO 10/100**. When the unit is set for Auto 10/100, the ATLAS 830 auto detects the data rate of the LAN and sets itself to that rate, either 10 or 100 Mbps.

SYSTEM CONFIG > ADMIN PORT

Write security: 2; Read security: 5

Accepts input for configuring the Admin port located on the rear of the unit.

SYSTEM CONFIG > ADMIN PORT > PORT NAME

Defines the name of the Admin port. You can leave this field blank.

SYSTEM CONFIG > ADMIN PORT > PORT TYPE

Specifies whether you use **DIRECT** or **DIAL** mode. **DIRECT** mode is used when connecting to a VT100 terminal, and **DIAL** mode is used for modem access.

SYSTEM CONFIG > ADMIN PORT > PORT SPEED

Specifies the baud rate of the port. Select either 2400, 9600, 19200, or 38400. If you are using **DIAL** for **PORT TYPE**, ensure that the **PORT SPEED** setting matches the modem baud rate.

SYSTEM CONFIG > ADMIN PORT > MODEM INITIALIZATION STRING

Specifies the initialization string for a modem. Refer to your modem documentation for acceptable initialization strings. The default value will set most modems to the appropriate configuration for the ATLAS 830.

SYSTEM CONFIG > ADMIN PORT > INITIALIZE MODEM

Write security: 4; Read security: 5

Sends the modem initialization string to the modem. When you select this command, the following message displays: **PLEASE VERIFY A MODEM IS CONNECTED TO THE ADMIN PORT BEFORE CONTINUING. CONFIRM (Y/N)**. Ensure that a modem is connected before selecting **Y**.

SYSTEM CONFIG > ADMIN PORT > FLOW CONTROL

This option sets the flow control for the Admin port. You may configure the Admin port flow control for **NONE** or **HARDWARE**.

SYSTEM CONFIG > CRAFT PORT

Write security: 2; Read security: 5

Accepts input for configuring the Craft port located on the front of the unit.

SYSTEM CONFIG > CRAFT PORT > PORT NAME

Defines the name of the Craft port. You can leave this field blank.

SYSTEM CONFIG > CRAFT PORT > PORT SPEED

Specifies the baud rate of the port. Select either **2400, 9600, 19200,** or **38400** to match the VT100 terminal (or emulator) settings.

SYSTEM CONFIG > SNMP

Write security: 3; Read security: 5

Provides a way to configure SNMP access for the ATLAS 830. The following options are available for review and editing:

SYSTEM CONFIG > SNMP > SNMP ACCESS

Write security: 3; Read security: 5

Defines whether SNMP access to the ATLAS 830 is enabled or disabled. Select the appropriate option.

SYSTEM CONFIG > SNMP > SNMP COMMUNITIES

Write security: 3; Read security: 5

Defines SNMP manager(s) characteristics as follows:

SYSTEM CONFIG > SNMP > SNMP COMMUNITIES > IP ADDRESS

Specifies the IP address of the network manager.

SYSTEM CONFIG > SNMP > SNMP COMMUNITIES > PRIVILEGES

Defines the **GET** (read-only) and **GET/SET** (read and write) privileges.

SYSTEM CONFIG > SNMP > SNMP COMMUNITIES > GET NAME

Defines the community name for **GET** access. This value must match the **GET** name defined on the network management station. **PUBLIC** is the default name.

SYSTEM CONFIG > SNMP > SNMP COMMUNITIES > SET NAME

Defines the community name for **SET** access. This value must match either the **GET** or **SET** name defined on the network management station. **PUBLIC** is the default name.

SYSTEM CONFIG > SNMP > TRAP TRANSMISSION

Write security: 3; Read security: 5

Enables and disables SNMP trap transmission.

SYSTEM CONFIG > SNMP > AUTHEN TRAP TRANSMISSION

Write security: 3; Read security: 5

Enables and disables the authentication failure trap.

SYSTEM CONFIG > SNMP > TRAPS DESTINATION

Write security: 3; Read security: 5

Defines the destination for SNMP traps as follows:

SYSTEM CONFIG > SNMP > TRAPS DESTINATION > IP ADDRESS

Identifies the IP address for the network manager (NM) to sends traps.

SYSTEM CONFIG > SNMP > TRAPS DESTINATION > COMMUNITY

Defines the community name for trap destinations. This name must match the community name defined on the NM.

SYSTEM CONFIG > SNMP > TRAPS DESTINATION > TRAP FILTERING

Sets the minimum severity level required for a system event to generate an SNMP trap. If a trap event occurs with a security level equal to or more severe than the trap type's current threshold setting, the event is sent as an SNMP trap. (Refer to the ADTRAN Technical Support web page (www.adtran.com) for a listing of all MIBs containing traps and their security levels.) The following threshold levels for the available selections: **DISABLED**, **CRITICAL**, **MAJOR**, **MINOR**, **WARNING**, **NORMAL**, and **INFO**.

SYSTEM CONFIG > SNMP > TRAPS DESTINATION > STATION TYPE

To deliver the SNMP trap packet with the **COMMUNITY NAME** unchanged, define the **STATION TYPE** as **NORMAL**. If you are using T-Watch PRO, define the **STATION TYPE** as **T-WATCH MGMT** and append the **COMMUNITY NAME** with ".ADLP ADDRESS." Within the SNMP trap packet, this field is automatically updated before it is sent to the management station.

SYSTEM CONFIG > SNMP > DS1 CURRENT PERF THRESHOLDS

Write security: 3; Read security: 5

Defines performance threshold values for DS1 Line and Path statistics recorded in a 15-minute interval. Refer to the ADTRAN Enterprise MIB and the DS1 Extension MIB (available on the ADTRAN website at www.adtran.com) for more MIB-specific information. If a statistic value exceeds its threshold value, then the corresponding Alert Trap will be sent if the alert event is armed and Alert Traps are enabled. These thresholds apply to all DS1 interfaces in the system.

SYSTEM CONFIG > SNMP > DS1 CURRENT PERF THRESHOLDS > CURRENT ES THRSH

The DS1 performance monitor Threshold Value for the Current 15 minute Errored Seconds (ES) parameter. The default value is 65 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 CURRENT PERF THRESHOLDS > CURRENT SES THRSH

The DS1 performance monitor Threshold Value for the Current 15 minute Severely Errored Seconds (SES) parameter. The default value is 10 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 CURRENT PERF THRESHOLDS > CURRENT SEFS THRSH

The DS1 performance monitor Threshold Value for the Current 15 minute Severely Errored Framing Seconds (SEFS) parameter. The default value is 2 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 CURRENT PERF THRESHOLDS > CURRENT UAS THRSH

The DS1 performance monitor Threshold Value for the Current 15 minute Unavailable Seconds (UAS) parameter. The default value is 10 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 CURRENT PERF THRESHOLDS > CURRENT CSS THRSH

The DS1 performance monitor Threshold Value for the Current 15 minute Controlled Slip Seconds (CSS) parameter. The default value is 1 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 CURRENT PERF THRESHOLDS > CURRENT PCV THRSH (D4)

The DS1 performance monitor Threshold Value for the Current 15 minute Path Code Violations (PCV) parameter, when the Line Type is Super Frame (AT&T D4 format) DS1. The default value is 72 framing errors for an approximate BER level of
10E-5.

SYSTEM CONFIG > SNMP > DS1 CURRENT PERF THRESHOLDS > CURRENT PCV THRSH (ESF)

The DS1 performance monitor Threshold Value for the Current 15 minute Path Code Violations (PCV) parameter, when the Line Type is Extended Super Frame DS1. The default value is 13,296 CRC errors for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 CURRENT PERF THRESHOLDS > CURRENT LES THRSH

The DS1 performance monitor Threshold Value for the Current 15 minute Line Errored Seconds (LES) parameter. The default value is 65 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 CURRENT PERF THRESHOLDS > CURRENT LCV THRSH

The DS1 performance monitor Threshold Value for the Current 15 minute Line Code Violations (LCV) parameter. The default value is 13,340 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 TOTAL PERF THRESHOLDS

Write security: 3; Read security: 5

Defines performance threshold values for DS1 Line and Path statistics. Refer to the ADTRAN Enterprise MIB and DS1 Extension MIB (available on the ADTRAN website at www.adtran.com) for more MIB specific information. If a statistic value exceeds its threshold value, then the corresponding Alert Trap will be sent if the alert event is armed and Alert Traps are enabled. These thresholds apply to all DS1 interfaces in the system.

SYSTEM CONFIG > SNMP > DS1 TOTAL PERF THRESHOLDS > TOTAL ES THRSH

The DS1 performance monitor Threshold Value for the Total Errored Seconds (ES) parameter. The default value is 648 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 TOTAL PERF THRESHOLDS > TOTAL SES THRSH

The DS1 performance monitor Threshold Value for the Total Severely Errored Seconds (SES) parameter. The default value is 100 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 TOTAL PERF THRESHOLDS > TOTAL SEFS THRSH

The DS1 performance monitor Threshold Value for the Total Severely Errored Framing Seconds (SEFS) parameter. The default value is 17 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 TOTAL PERF THRESHOLDS > TOTAL UAS THRSH

The DS1 performance monitor Threshold Value for the Total Unavailable Seconds (UAS) parameter. The default value is 10 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 TOTAL PERF THRESHOLDS > TOTAL CSS THRSH

The DS1 performance monitor Threshold Value for the Total Controlled Slip Seconds (CSS) parameter. The default value is 4 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 TOTAL PERF THRESHOLDS > TOTAL PCV THRSH (D4)

The DS1 performance monitor Threshold Value for the Total Path Code Violations (PCV) parameter, when the Line Type is Super Frame (AT&T D4 format) DS1. The default value is 691 framing errors for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 TOTAL PERF THRESHOLDS > TOTAL PCV THRSH (ESF)

The DS1 performance monitor Threshold Value for the Total Path Code Violations (PCV) parameter, when the Line Type is Extended Super Frame DS1. The default value is 132,960 CRC errors for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 TOTAL PERF THRESHOLDS > TOTAL LES THRSH

The DS1 performance monitor Threshold Value for the Total Line Errored Seconds (LES) parameter. The default value is 648 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > DS1 TOTAL PERF THRESHOLDS > TOTAL LCV THRSH

The DS1 performance monitor Threshold Value for the Total Line Code Violations (LCV) parameter. The default value is 133,400 for an approximate BER level of 10E-5.

SYSTEM CONFIG > SNMP > ASP ENDPOINT COMMUNITIES

Write security: 0; Read security: 0

Configures the ADLP list used when accepting incoming traps from remote ADTRAN TSU 100 Series or ISU 512 units. For a trap to be recognized and sent to the network management station listed in the **TRAPS DESTINATION** field, the remote unit must be listed in the **ASP ENDPOINT COMMUNITIES** list. The **ADLP ADDRESS** and **ADLP PASSWORD** parameters must be configured.

SYSTEM CONFIG > SNMP > ASP ENDPOINT COMMUNITIES > ADLP ADDRESS

Enter the ADLP address (Unit ID) of the remote unit. Only traps containing an ADLP address listed here will be accepted.

SYSTEM CONFIG > SNMP > ASP ENDPOINT COMMUNITIES > ADLP PASSWORD

Enter the ADLP password (Unit Password) of the remote unit. The password will be verified before traps will be accepted from the remote unit.

SYSTEM CONFIG > SNMP > SNMP/ASP PROXY

Write security: 0; Read security: 0

Enables or disables Get_Request capabilities for remote units. When enabled, this feature allows SNMP requests to be sent from the Network Management Station through the ATLAS 830 to the selected remote unit. Remote units must be ADTRAN TSU 100 Series or ISU 512 products. All remote units must be listed in the **ASP ENDPOINT COMMUNITIES** list.

SYSTEM CONFIG > SNMP > SNMP/ASP POLLING

Write security: 0; Read security: 0

Enables or disables trap polling through the ATLAS 830 to remote ADTRAN TSU 100 Series or ISU 512 units. When enabled, this feature allows the ATLAS 830 to forward any traps received from remote units to the Network Management Station listed in the **TRAPS DESTINATION** field. The remote unit must be listed in the **ASP ENDPOINT COMMUNITIES** for the traps to be forwarded.

SYSTEM CONFIG > EVENT LOGGING

Write security: 3; Read security: 5

Sets the system event severity level threshold for each of the ATLAS 830 system event types. When a system event occurs, the event is logged if the event's severity level is equal to or more severe than the event type's current threshold setting. See *Section 7, System Event Logging*, for detailed information on the system events.

SYSTEM CONFIG > SYSLOG SETUP

Write security: 3; Read security: 3

Configures the ATLAS 830 Syslog client for use with a Syslog server (supplied with ADTRAN Utilities or available on most UNIX platforms).

SYSTEM CONFIG > SYSLOG SETUP > TRANSMISSION

Write security: 3; Read security: 3

Enables or disables the transmission of log events to the external Syslog server

SYSTEM CONFIG > SYSLOG SETUP > HOST IP ADDRESS

Write security: 3; Read security: 3

Lists the IP address of the external server that is running the Syslog host daemon.

SYSTEM CONFIG > SYSLOG SETUP > HOST FACILITY

Write security: 3; Read security: 3

Specifies the facility destination of log events. Facilities are located on the host and are managed by the Syslog host daemon running on either a UNIX machine or a PC. For details on the ADTRAN syslog server host facilities, please refer to *Section 8, ADTRAN Utilities*.

SYSTEM CONFIG > REAL TIME CLOCK

Write security: 3; Read security: 5

Provides access to the two options listed below. You can review and edit these options.

SYSTEM CONFIG > REAL TIME CLOCK > CURRENT TIME/DATE

Displays the current date and time, including seconds. To edit this field, enter the time in 24-hour format (such as 23:00:00 for 11:00 pm), and enter the date in mm-dd-yyyy format (for example, 09-23-1998).

SYSTEM CONFIG > REAL TIME CLOCK > AUTO DAYLIGHT SAVINGS

When enabled, automatically updates the time and date when Daylight Savings Time starts and when Standard Time ends.

SYSTEM CONFIG > ACCESS PASSWORDS

Write security: 0; Read security: 0

Provides a way to edit passwords and to add new users and passwords. All menu items are protected by passwords of varying security levels. By assigning different passwords to different security levels, the ATLAS 830 system administrator can control which users can change various menu items. You can assign multiple passwords at the same access level. This way, different users with the same access privileges can have different passwords. Each of the six password security levels are described in Table 1 on page 68.

SYSTEM CONFIG > ACCESS PASSWORDS > LABEL

Defines a username.

SYSTEM CONFIG > ACCESS PASSWORDS > PASSWORD

Allows you to change the password (the default password is “password”). The current password displays as a series of asterisks (********). The password can contain up to a combination of 12 case-sensitive alphanumeric characters, spaces, or special characters.

SYSTEM CONFIG > ACCESS PASSWORDS > ACCESS RIGHTS

Defines the password level for the corresponding label. You can select from six different password levels (see Table 1 on page 68).

SYSTEM CONFIG > ACCESS PASSWORDS > ACTIVE

Displays the number of users for each label that are currently logged into the system.

SYSTEM CONFIG > LICENSES

Write security: 0; Read security: 0

(Not currently used.)

Provides menus to enable the optional ATLAS 830 feature upgrades.

FEATURE	Names the ATLAS 830 feature upgrade.
LICENSE KEY	Displays the license key of the feature upgrade.
SERIAL NUMBER	Displays the serial number of the feature upgrade.
LIC CNT	Displays the number of instances of the feature that the license provides. This field may not be applicable for a given feature -- if it is not, this field is blank.
STATUS	Reflects the status, **PERMANENT** or **TEMPORARY**, of the feature upgrade license key.

SYSTEM CONFIG > BONDING CONFIG

Write security: 3; Read security: 5

Displays the configuration submenus available for the BONDing Module. This configuration is shared among all BONDing Modules.

SYSTEM CONFIG > BONDING CONFIG > TXINIT TIMER

Specifies the length of time the originating endpoint attempts to detect the BONDING negotiation pattern from the answering endpoint before deciding the BONDING call has failed.

SYSTEM CONFIG > BONDING CONFIG > TXFA TIMER

Specifies the length of time both endpoints attempt to detect the BONDING frame pattern when a call is connected before deciding the BONDING call has failed. When interoperating with other manufacturers' BONDING equipment, it may be necessary to change this time so that it matches **TXADD01**.

SYSTEM CONFIG > BONDING CONFIG > TXADD01 TIMER

Specifies the length of time both endpoints wait for additional calls to be connected at the end of negotiation before deciding that the BONDING call has failed. The factory default setting is sufficient for most calls to connect, although when dialing overseas it may be necessary to lengthen this timer to allow for slower call routing.

SYSTEM CONFIG > BONDING CONFIG > TXDEQ TIMER

Specifies the length of time both endpoints attempt to equalize the network delay between the bearer channels before deciding the BONDING call has failed.

SYSTEM CONFIG > BONDING CONFIG > TANULL TIMER

Specifies the length of time the answering endpoint attempts to detect the BONDING negotiation pattern from the originating endpoint before deciding the BONDING call has failed. It may be necessary to shorten this timer if the DTE equipment using the BONDING module also has timer constraints for completing non-BONDING parameter negotiation.

SYSTEM CONFIG > BONDING CONFIG > TCID TIMER

Specifies the length of time both endpoints attempt to negotiate an agreeable value for bearer channels and channel capacities before deciding the BONDING call has failed.

SYSTEM CONFIG > BONDING CONFIG > CALL STAGGER

Specifies the amount of delay between placing calls for outgoing BONDING sessions. The following call stagger values are available:

NO STAGGER	There is no delay between the call dialing of a BONDING session.
500 MS	Wait approximately ½ second between the call dialing of a BONDING session.
1 SEC.	Wait approximately 1 second between the call dialing of a BONDING session.
2 SEC.	Wait approximately 2 seconds between the call dialing of a BONDING session.

SYSTEM CONFIG > ALARM RELAY RESET

Write security: 3; Read security: 5

Clears the Alarm Relay located on the rear panel of the ATLAS 830. Activating the software Alarm Relay Reset functions the same as manually pressing the ACO Switch located on the ATLAS 830 front panel.

SYSTEM CONFIG > ALARM RELAY STATE

Write security: 3; Read security: 5

Configures the alarm relay response during an active alarm. The following sections are available:

ENERGIZED	In an alarm condition, the Normally Open (NO) relay is closed and the Normally Closed (NC) relay is opened.
DE-ENERGIZED	In an alarm condition, the NO relay is opened and the NC relay is closed.

SYSTEM CONFIG > ALARM RELAY THRESHOLD

Write security: 3; Read security: 5

Defines the event log category for the message associated with the alarm. For more details on Event Log categories refer to *Section 7, System Event Logging*.

SYSTEM UTILITY

Use the **SYSTEM UTILITY** menu to view and set the system parameters shown in Figure 6.

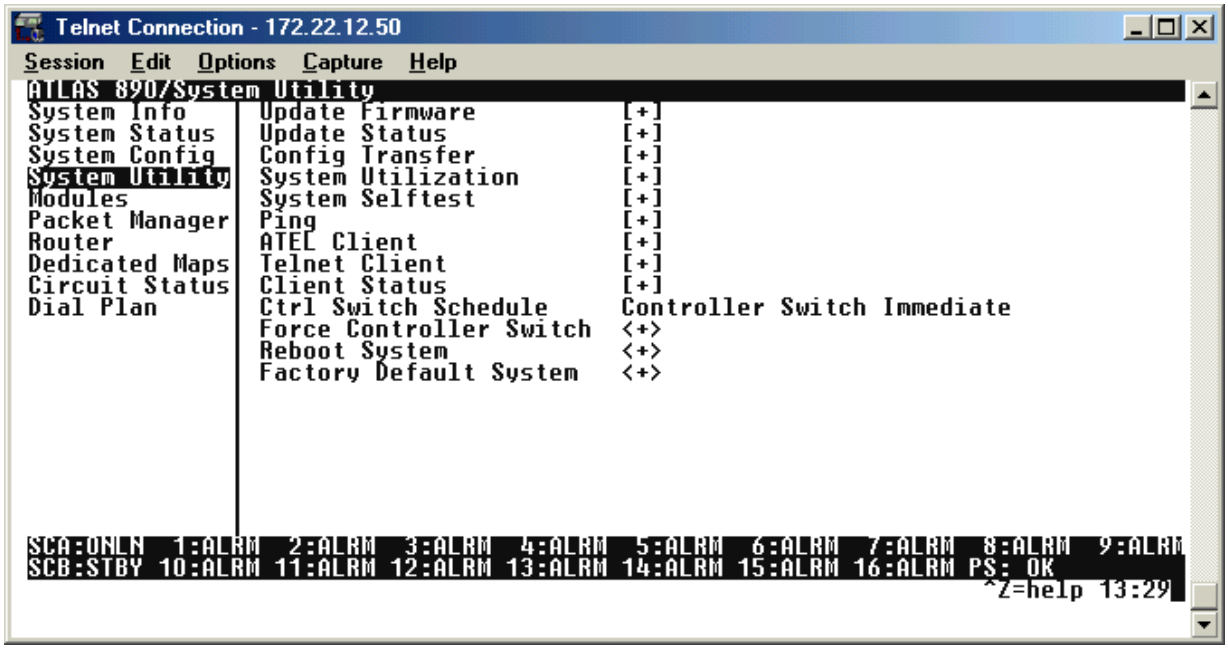


Figure 6. System Utility Menu

SYSTEM UTILITY > UPDATE FIRMWARE

Write security: 1; Read security: 5

Updates firmware when ATLAS 830 enhancements are released. Two transfer methods are available for use in updating any modules that contain Flash memory—including the ATLAS 830 system controller. The first transfer method uses the ATLAS 830 serial Admin port of the system controller and XMODEM protocol. The second transfer method uses the ATLAS 830 built-in Ethernet port of the system controller and Trivial File Transfer Protocol (TFTP). For more details on updating firmware, please refer to DLP-006 and DLP-007.

SYSTEM UTILITY > UPDATE FIRMWARE > MODULE SLOT

Write security: 1; Read security: 5

Displays the slot you selected for firmware updating. When this option first appears, **NONE SELECTED** displays. When you move the cursor to this field and press <Enter > , a dialog box opens, allowing you to select **SLOT 0 (**ATLAS 830 system controller**)**, **SLOT 1** through **SLOT 8** (if an upgradeable module is installed), or **ALL MODULES OF A TYPE**.

SYSTEM UTILITY > UPDATE FIRMWARE > MODULE TYPE

Write security: 1; Read security: 5

Reflects the module type selected in **MODULE SLOT**. The selections only include upgradable modules.

SYSTEM UTILITY > UPDATE FIRMWARE > TRANSFER METHOD

Write security: 1; Read security: 5

Lists the two transfer methods for updating firmware after selecting a module slot: **XMODEM** and **TFTP**. **XMODEM** transfers files by connecting to a communications program that supports XMODEM uploads to the terminal interface. **TFTP** transfers files by specifying an appropriate server address and filename.

SYSTEM UTILITY > UPDATE FIRMWARE > TFTP SERVER IP ADDRESS

Write security: 1; Read security: 5

(Available for TFTP transfers only). Configures the IP address of the TFTP Server on which the update file resides. The ATLAS 830 uses this field to locate the network server on which the update file resides.

SYSTEM UTILITY > UPDATE FIRMWARE > TFTP SERVER FILENAME

Write security: 1; Read security: 5

(Available for TFTP transfers only). Identifies the name of the update file to retrieve from the TFTP Server. Enter the full path name and filename for the file.

SYSTEM UTILITY > UPDATE FIRMWARE > RESTART SCHEDULE

Write security: 1; Read security: 5

Indicates when to restart the updated module to invoke the new software, after selecting a module slot. The two options include **RESTART IMMEDIATELY AFTER UPDATE** and **RESTART AT SPECIFIED DATE AND TIME**.

SYSTEM UTILITY > UPDATE FIRMWARE > RESTART SCHEDULE > RESTART IMMEDIATELY AFTER UPDATE

Write security: 1; Read security: 5

Automatically restarts the module or unit (when **SLOT 0** is selected) immediately after the update is complete.

SYSTEM UTILITY > UPDATE FIRMWARE > RESTART SCHEDULE > RESTART AT SPECIFIED DATE AND TIME

Write security: 1; Read security: 5

Lets you specify a date and time to automatically restart the updated module or unit (when **SLOT 0** is selected). When you select this option, a new field called **RESTART DATE AND TIME** displays below the current field.

RESTART DATE AND TIME

Write security: 1; Read security: 5

Defines the date and time to restart the system after updating. Enter the time using a 24-hour format (i.e., 23:25:30 for 11PM, 25 minutes, 30 seconds). Enter the date in mm-dd-yyyy format (i.e.,11-08-2000).

SYSTEM UTILITY > UPDATE FIRMWARE > CURRENT UPDATE STATUS

Read security: 5

Indicates progress or problems encountered during the current update process. The field displays **IDLE** if no update is in progress or when the update is successfully completed. At the end of a successful update, the contents of this field are copied into **PREVIOUS UPDATE STATUS**.

If you are updating several modules at the same time (if **MODULE SLOT** is set to **ALL MODULES OF A TYPE**), this option displays [+], indicating this field contains submenu items. The following submenus display:

SYSTEM UTILITY > UPDATE FIRMWARE > CURRENT UPDATE STATUS > SLT

Indicates the slot number.

SYSTEM UTILITY > UPDATE FIRMWARE > CURRENT UPDATE STATUS > TYPE

Defines the type of module for each slot.

SYSTEM UTILITY > UPDATE FIRMWARE > CURRENT UPDATE STATUS > CURRENT STATUS

Indicates the status of the current update.

SYSTEM UTILITY > UPDATE FIRMWARE > CURRENT UPDATE STATUS > PREVIOUS STATUS

Indicates the status of the previous update.

SYSTEM UTILITY > UPDATE FIRMWARE > CURRENT UPDATE STATUS > PREVIOUS TIME

Indicates the time of the previous update.

During the TFTP upload process, various status messages are provided in the **CURRENT UPDATE STATUS** field. For a detailed listing of these messages, please refer to DLP-006.

SYSTEM UTILITY > UPDATE FIRMWARE > PREVIOUS UPDATE STATUS

Read security: 5

Displays the status of the previous update, after selecting a module slot. If a firmware update has not been attempted for a particular slot, this field reads **HAS NOT BEEN ATTEMPTED**. Following a successful update, the field reads **MODULE UPDATE COMPLETE**. If an update was unsuccessful, the appropriate error message displays.

SYSTEM UTILITY > UPDATE FIRMWARE > BEGIN FIRMWARE UPDATE

Write security: 1; Read security: 5

Begins updating the firmware for the selected modules. To start this action, enter **Y** to begin or enter **N** to cancel. You can also cancel the operation after the update has begun. For XMODEM updates, cancel the process via the terminal emulation software (consult your documentation for the information on how to do this). For TFTP updates, you can cancel the process by selecting **CANCEL UPDATE** from this field.

SYSTEM UTILITY > UPDATE STATUS

Read security: 5

Displays the status of the current firmware update. These fields are identical to those defined above in **CURRENT UPDATE STATUS**.

SYSTEM UTILITY > CONFIG TRANSFER

Write security: 3; Read security: 5

(Available with TFTP transfers only.) Sends a file containing the ATLAS 830 configuration to a file on a TFTP server using the TFTP protocol through the 10/100BaseT Ethernet port. **CONFIG TRANSFER** also lets you save the ATLAS 830 configuration as a backup file, so you can use the same configuration with multiple ATLAS 830 units. In addition, **CONFIG TRANSFER** can retrieve a configuration file from a TFTP server.

To support these transfers, ADTRAN delivers a TFTP program with the ATLAS 830 called *TFTP Server*. You can configure any PC running Microsoft Windows with this software, and store a configuration file.

Only one configuration transfer session (upload or download) can be active at a time. The TCP/IP parameters are not saved or overwritten as part of an ATLAS 830 unit's transferred configuration; therefore, identical configurations can be sent to multiple units. For complete details on configuration transfers to/from the ATLAS 830, please refer to DLP-008.

SYSTEM UTILITY > CONFIG TRANSFER > TRANSFER METHOD

Write security: 3; Read security: 5

Displays the method used to transfer the configuration file to or from a server. Currently, TFTP is required.

SYSTEM UTILITY > CONFIG TRANSFER > TFTP SERVER IP ADDRESS

Write security: 3; Read security: 5

Specifies the IP address of the TFTP server. Get this address information from your System Administrator.

SYSTEM UTILITY > CONFIG TRANSFER > TFTP SERVER FILENAME

Write security: 3; Read security: 5

Defines the name of the configuration file that you transfer to or retrieve from the TFTP server. The default name is at830.cfg, but it is editable.

SYSTEM UTILITY > CONFIG TRANSFER > CURRENT TRANSFER STATUS

Read security: 5

Indicates the current status of the transfer.

SYSTEM UTILITY > CONFIG TRANSFER > PREVIOUS TRANSFER STATUS

Read security: 5

Indicates the status of the previous transfer.

SYSTEM UTILITY > CONFIG TRANSFER > LOAD AND USE CONFIG

Write security: 3; Read security: 5

Retrieves the configuration file specified in the **TFTP SERVER FILENAME** field from the server. To start this command, enter **Y.** To cancel this command, enter **N**.

If you execute this command, the ATLAS 830 retrieves the configuration file, reboots, then restarts using the new configuration.

SYSTEM UTILITY > CONFIG TRANSFER > SAVE CONFIG REMOTELY

Write security: 3; Read security: 5

Saves the configuration file specified in **TFTP SERVER FILENAME** to the server identified in **TFTP SERVER IP ADDRESS**. To start this command, enter Y. To cancel this command, enter N.

SYSTEM UTILITY > SYSTEM UTILIZATION

Write security: 0; Read security: 0

Displays statistics related to the ATLAS 830 internal operating system. Please check with ADTRAN Technical Support before attempting to use this menu.

SYSTEM UTILITY > SYSTEM SELFTEST

Write security: 3; Read security: 5

Initiates a system self-test. The self-test consists of memory tests and data integrity tests for each installed module.

Self-tests disrupt data flow.

SYSTEM UTILITY > SYSTEM SELFTEST > SELFTEST

Write security: 3; Read security: 5

Activates the self-test. To confirm self-test activation, press Y; to cancel the self-test press N.

SYSTEM UTILITY > SYSTEM SELFTEST > SELECTED TESTS

Write security: 3; Read security: 5

Allows the user to select a system-wide test or an individual card test. Choose from **ALL TESTS**, **SLOT: 0 SYS CTRL**, or any other installed option/network module.

SYSTEM UTILITY > SYSTEM SELFTEST > CURRENT TEST STATUS

Write security: 3; Read security: 5

Displays which part of self-test is currently active. See *System Utility > System Selftest > View Selftest Log* on page 95 for details on individual tests.

SYSTEM UTILITY > SYSTEM SELFTEST > CURRENT SLOT/PORT

Write security: 3; Read security: 5

Displays which slot and port is currently being tested.

SYSTEM UTILITY > SYSTEM SELFTEST > VIEW SELFTEST LOG

Read security: 5

Displays time-stamped log of the tests conducted and the Pass/Fail results. Self-tests verify data integrity and processor control to each port. Each port is looped back and a data pattern is sent and tested.

The result of the self-test on each installed port is listed with Pass/Fail results. Figure 7 depicts a typical test log. The fields included in the log are described below the figure.

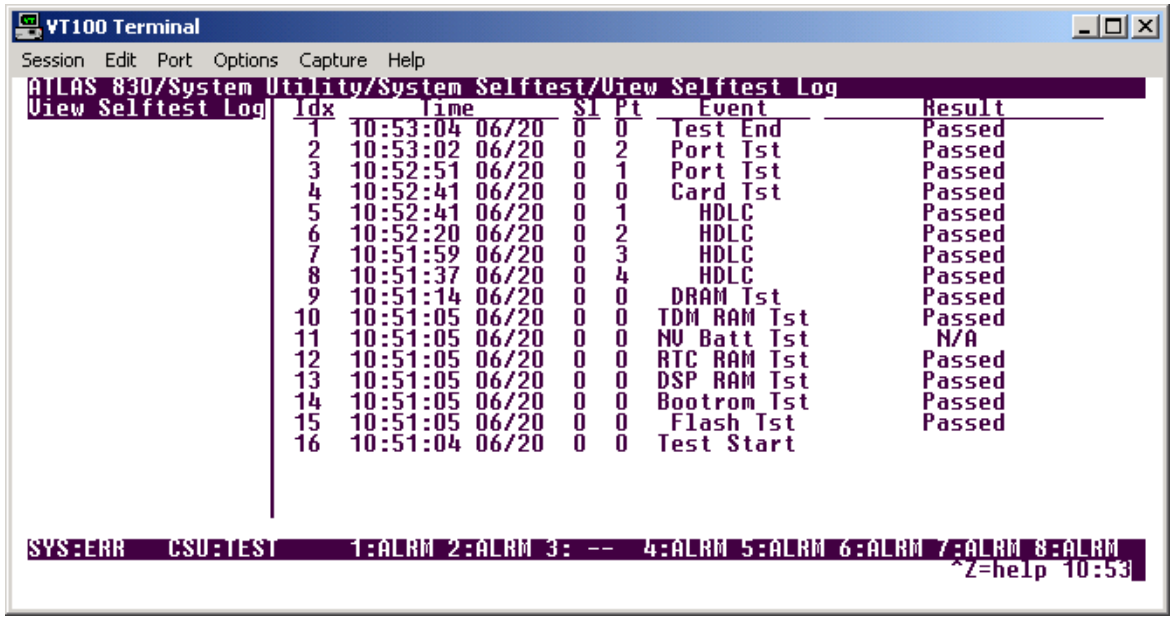


Figure 7. View Selftest Log

The self-test log includes the following fields:

IDX Index number of the log.

TIME Time and date of the log entry.

SL ATLAS 830 slot number.

PT ATLAS 830 port number.

EVENT Event description.

RESULT Show **PASS**/**FAIL** results.

The tests associated with the system controller are shown in Figure 8.

THIS EVENT...	LOGS THIS RESULT...
Flash	Flash memory checksum verified
BootRom	Boot ROM checksum verified
DSP RAM	Memory associated with the Digital Signal Processor
RTC RAM	Memory associated with the real time clock
NV Batt	Tests the battery associated with non-volatile memory
TDM RAM	Memory associated with mapping TDM bandwidth
DRAM	Dynamic RAM used for program execution
HDLC	The High-Level Data Link Controllers
Card Tst	Tests the data path for each slot in the system with an installed option module.
Port Tst (0.1, 0.2)	Built-in T1/PRI ports located on the rear panel.

Figure 8. ATLAS 830 System Controller Self-Test Log

SYSTEM UTILITY > SYSTEM SELFTEST > CLEAR SELFTEST LOG

Write security: 3; Read security: 5

Clears the self-test log.

SYSTEM UTILITY > PING

Write security: 5; Read security: 5

Allows you to send pings (ICMP echo requests) to devices accessible via the Ethernet interface.

NOTE *Only one ping session can be active at a time.*

SYSTEM UTILITY > PING > IP ADDRESS

Write security: 5; Read security: 5

Specifies the IP address to ping.

SYSTEM UTILITY > PING > COUNT

Write security: 5; Read security: 5

Specifies the number of pings to send. The default value is 4, and the maximum value is 99.

SYSTEM UTILITY > PING > SIZE (BYTES)

Write security: 5; Read security: 5

Specifies the size in bytes of the data portion of the ping request. The default value is 64 bytes, and the maximum size is 1024 bytes.

SYSTEM UTILITY > PING > TIMEOUT (MS)

Write security: 5; Read security: 5

Specifies the time in milliseconds to wait for the ping reply before timing out. The default timeout is 3 seconds (3000), and the maximum timeout value is 10 seconds (10,000).

SYSTEM UTILITY > PING > ROUND TRIP MIN

Read security: 5

Displays the minimum round trip time of the ping request/reply of the current set of pings.

SYSTEM UTILITY > PING > ROUND TRIP AVG

Read security: 5

Displays the average round trip time of the ping request/reply of the current set of pings.

SYSTEM UTILITY > PING > ROUND TRIP MAX

Read security: 5

Displays the maximum round trip time of the ping request/reply of the current set of pings.

SYSTEM UTILITY > PING > TX STATS

Read security: 5

Displays the number of ping requests transmitted (*n* **TXED**), the number of ping replies received (*n* **RXED**), and the number of ping requests that were lost (*n* **LOST**).

SYSTEM UTILITY > PING > RESET STATS

Write security: 5; Read security: 5

Resets all ping statistics to zero. If the ping client is active, this menu will stop it.

SYSTEM UTILITY > PING > START/STOP

Write security: 5; Read security: 5

If the ping client is currently idle, this menu sends pings to the specified address. If the ping client is active, the menu either starts or stops sending pings.

SYSTEM UTILITY > ATEL CLIENT

Write security: 5; Read security: 5

Allows a user to remotely configure ADTRAN TSUs using ADLP over the inband management channel on a V.35 port. This feature only allows for remote sessions through the ATLAS 830 to the TSUs, not vice versa.

SYSTEM UTILITY > ATEL CLIENT > ATEL ADDRESS

Write security: 5; Read security: 5

Defines the ADLP address (Unit ID) assigned to the remote unit you are trying to connect to. The valid range is 2 to 65520.

SYSTEM UTILITY > ATEL CLIENT > CONNECT

Write security: 5; Read security: 5

Activator used to start an ATEL client session to the remote unit configured in the **ATEL ADDRESS** field.

SYSTEM UTILITY > TELNET CLIENT

Write security: 5; Read security: 5

Allows a user to open a Telnet session to any device listed in the ATLAS 830 route table.

SYSTEM UTILITY > TELNET CLIENT > ADDRESS

Write security: 5; Read security: 5

Defines the IP address assigned to the remote unit you are trying to connect to.

SYSTEM UTILITY > TELNET CLIENT > ESCAPE CHAR

Write security: 5; Read security: 5

Defines the Telnet client escape character. Typing the combination characters will close the active telnet session to the remote unit specified in the **ADDRESS** field.

Option	Keystroke
^]	<Ctrl > +]
**^ **	<Ctrl > + \
^ [	<Ctrl > + [
^ ^	<Ctrl > + <Shift > + 6
^ _	<Ctrl > + <Shift > + -

SYSTEM UTILITY > TELNET CLIENT > PORT

Write security: 5; Read security: 5

Defines the IP port used in the remote login session. Default (for Telnet) is **23**.

SYSTEM UTILITY > TELNET CLIENT > CONNECT

Write security: 5; Read security: 5

Activator used to start a Telnet session to the remote unit configured in the **ADDRESS** field.

SYSTEM UTILITY > CLIENT STATUS

Write security: 5; Read security: 5

Displays status from current Telnet client sessions.

SYSTEM UTILITY > CLIENT STATUS > USER NAME

Displays the username (from access passwords list) that has an active Telnet client session.

SYSTEM UTILITY > CLIENT STATUS > SESSION ID

Displays the remote units IP address followed by the IP port of an active Telnet client session (in the format **IP.IP.IP.IP:PORT**).

SYSTEM UTILITY > REBOOT SYSTEM

Write security: 0; Read security: 0

Reboots the ATLAS 830 system. When you select this command, the following message displays:

**** WARNING ** This will reboot the entire system and service will be interrupted!**

Press Y to reboot the system or N to cancel the command.

SYSTEM UTILITY > FACTORY DEFAULT SYSTEM

Write security: 0; Read security: 0

Resets the entire system to the factory default settings. To reset the system, press Y. To cancel this command, press N. When you select this command, the following message displays:

WARNING *This will delete all configuration settings. ADTRAN recommends making a backup copy of the configuration before defaulting the system.*

MODULES

Write security: 3; Read security: 5

The **MODULES** menu provides status information and menu options that allow you to configure and control the installed option modules, as well as the network ports (see Figure 9).

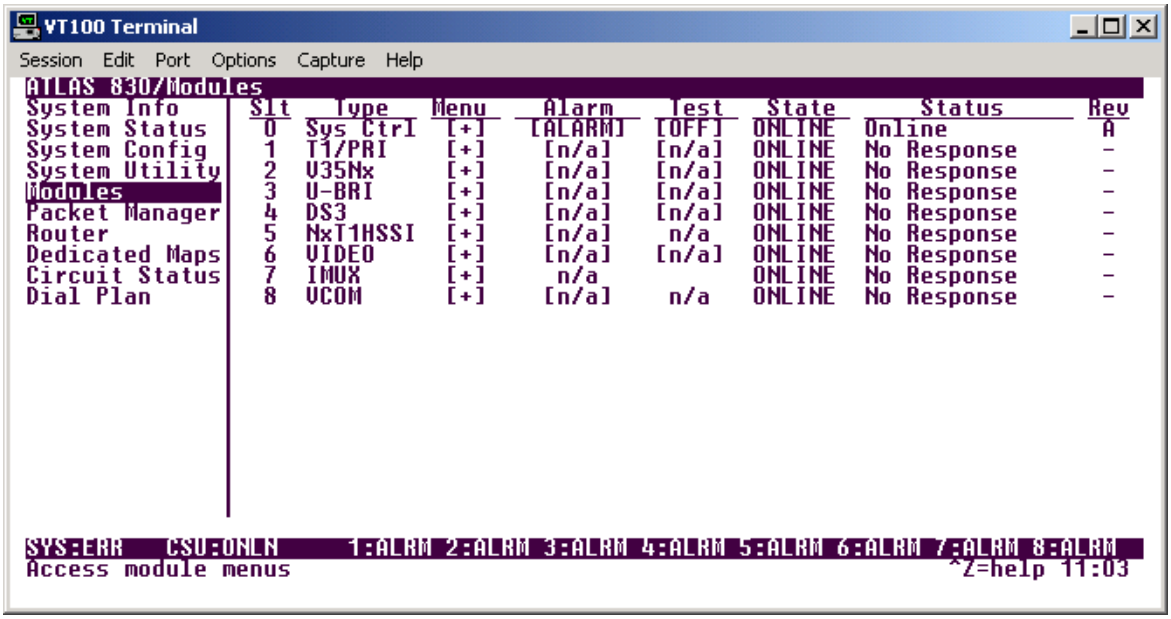


Figure 9. Modules Menu

NOTE

If you install a module in a slot, then want to install a different type of module in the slot, you must set this field to **EMPTY** *before selecting another module type.*

NOTE

If a module is installed, the module type automatically shows the name of the installed module, and it cannot be set to any other option.

MODULES > SLT

Read security: 5

The ATLAS 830 displays the eight module slots and the system controller slot (which includes the two built-in T1/PRI ports located on the rear panel.

CAUTION

Inserting modules into inappropriate slots will result in damage to the ATLAS 830 system.

Auxiliary power supplies are for use in Slots 7 and 8 only.

MODULES > TYPE

Write security: 3; Read security: 5

Displays the type of module actually installed in the slot or the type of module you plan to install in the slot. The ATLAS 830 controller automatically detects the type of module installed in each slot, and the **TYPE** field automatically defaults to the installed module type. You can also use this field to preconfigure a unit before actually installing modules by specifying the module that you want to install in each slot.

To use this option, navigate to the field you want to edit and press <Enter > . For empty slots, a list of all the available module types displays. Select the one you want and it displays in the **TYPE** field. If this field is already configured with a module, you can only set this field to **EMPTY**. To change from one module type to another, you must set the field to **EMPTY** first.

MODULES > MENU

Read security: 5

Displays additional status and configuration menus for the ATLAS 830 controller or selected module. To access the submenus for this item, use the arrow keys to scroll to the **MENU** column for the module you want to edit, and press <Enter > . For detailed information on each submenu item for a particular module, refer to the modules menus discussion for the appropriate option or resource module.

MODULES > ALARM

Read security: 5

Displays whether there is an alarm condition on the ATLAS 830 controller or selected module. Press <Enter > to access the **ALARM** menu. For detailed information on each submenu item for a particular module, refer to the following sections for the appropriate option or resource module alarm menu discussions.

MODULES > TEST

Read security: 5

Displays whether the ATLAS 830 controller or selected module is executing a test. Press <Enter > to access the **TEST** menu. This option will allow you to setup and initiate tests. You may also access this menu through the **MENU** submenu on this screen. For detailed information on each submenu item for a particular module, refer to the following sections for the appropriate option or resource module test menu discussions.

MODULES > STATE

Read security: 5

Displays whether the ATLAS 830 controller or selected module is online or offline. Even though a module is physically installed, it must be marked **ONLINE** for it to be considered an available resource. This parameter allows an installed module to be marked **OFFLINE**, which may be useful in system troubleshooting. If you choose **OFFLINE**, the module will not be in alarm condition, but will display **OFFLINE**. While in **OFFLINE,** the **STATUS** LED will flash green. A module will automatically change to the **ONLINE** state when installed.

MODULES > STATUS

Read security: 5

Displays status information on the installed modules as follows:

ONLINE	The module is enabled and is responding to the system controller's status polls. This is the normal response of the system.
NO RESPONSE	The module is enabled but is not responding to the system controller's status polls. This response indicates a problem in the system or that the module is not properly installed.
EMPTY	The system controller has not detected the presence of a module in the system, nor has a module been manually enabled for this option slot.
OFFLINE	The module is installed but has been taken offline by a user. The module is still responding to controller polls.
OFFLINE/NO RESPONSE	The module is installed but has been taken offline by a user. The module is not responding to controller polls.
NOT SUPPORTED	The module is not supported by the current system configuration.

MODULES > REV

Read security: 5

Displays the hardware revision of the ATLAS 830 and other installed modules.

MODULES MENU (QUAD T1/PRI OPTION MODULE)

This section provides detailed information on the **MODULES** menu and submenus for the Quad T1/PRI Option Module. The ATLAS 830 system controller automatically detects the presence of the Quad T1/PRI Option Module when it is installed in the system (listed as **T1/PRI**). To see the menus for the Quad T1/PRI Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the Quad T1/PRI Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (T1/PRI) > INFO

Read security: 5

Displays general information about the Quad T1/PRI Option Module as follows:

MODULES (T1/PRI) > INFO > PART NUMBER

Read security: 5

Displays the part number of the Quad T1/PRI Option Module.

MODULES (T1/PRI) > INFO > SERIAL NUMBER

Read security: 5

Displays the module's serial number.

MODULES (T1/PRI) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the module.

MODULES (T1/PRI) > INFO > PLL STATUS

Read security: 5

Indicates whether the module phase lock loop is locked to its specific source.

MODULES (T1/PRI) > ALARM STATUS

Read security: 5

Displays the current T1 alarm status.

MODULES (T1/PRI) > ALARM STATUS > PRT

Read security: 5

Indicates the port number.

MODULES (T1/PRI) > ALARM STATUS > ALARMS

Read security: 5

Displays an alarm condition on the ATLAS 830 unit. Press <Enter > to access this menu item.

LOS	Indicates a loss of signal detected on port interface.
RED	Indicates inability to frame data received on the port. Alternately referred to as Out of Frame (OOF).
YELLOW	Receiving remote alarm (RAI) on port.
BLUE	Receiving unframed all ones from the port Alarm Indicator Signal (AIS).
DS0 ALARM	Displays per-DS0 alarm status; that is, at least one DS0 channel is in alarm if an asterisk (*) appears. These alarms usually indicate the failure to receive the protocol that has been configured for the DS0.
RX LEVEL (RECEIVE LEVEL)	Indicates the strength of the signal (in dB) received on the port.

MODULES (T1/PRI) > DS0 STATUS

Read security: 5

The DS0 status indicates usage on a DS0 basis. These options are read-only:

-	Unallocated
*****	Inactive
+	Signaling mismatch
A	Active B Channel
D	Active D Channel
M	Maintenance
N	Dedicated (nailed)
O	Off hook - originate (RBS)
R	Ringing (RBS); Restart (ISDN)
W	Waiting dial tone

MODULES (T1/PRI) > DS0 ALARMS

Read security: 5

Displays per-DS0 alarm status. These alarms usually indicate the failure to receive the protocol that has been configured for the DS0.

-	No Alarm DS0
D	D Channel Alarm (ISDN)
F	Frame Alarm (packet)
T	TBOP Alarm (packet)
P	PPP Alarm (packet)

MODULES (T1/PRI) > SIG STATUS

Read security: 5

Read-only field that indicates signaling of all 24 DS0s. The A/B bits for Rx (receive) and Tx (transmit) DS0s are shown. Dashes display for those DS0s where robbed bit signaling (RBS) is not being transferred by the ATLAS 830.

MODULES (T1/PRI) > PERFORMANCE CURRENT

Write security:3; Read security: 5

The performance fields (either current, 15-minute total, or 24-hour total) provide status on key performance measures as specified in ANSI T1.403 and AT&T TR54016 for the T1/PRI port. Except for **CLR**, these fields are all read-only. The monitored parameters include the following:

MODULES (T1/PRI) > PERFORMANCE CURRENT > PRT

Displays the port number.

MODULES (T1/PRI) > PERFORMANCE CURRENT > CLR

Clears performance information for the selected port.

MODULES (T1/PRI) > PERFORMANCE CURRENT > ES

Errored Second (ES) is a second with one or more error events OR one or more Out Of Frame events OR one or more Controlled Slips.

MODULES (T1/PRI) > PERFORMANCE CURRENT > BES

Bursty Errored Second (BES) is a second with more than one, but less than 320 error events.

MODULES (T1/PRI) > PERFORMANCE CURRENT > SES

Severely Errored Second (SES) is a second with 320 or more error events OR one or more Out Of Frame events.

MODULES (T1/PRI) > PERFORMANCE CURRENT > SEFS

Severely Errored Frame Second is a second that contains four consecutive errored framing patterns.

MODULES (T1/PRI) > PERFORMANCE CURRENT > LOFC

Loss of Frame Count is a count of seconds in which a valid framing pattern could not be obtained.

MODULES (T1/PRI) > PERFORMANCE CURRENT > CSS

Controlled Slip Second.

MODULES (T1/PRI) > PERFORMANCE CURRENT > UAS

Unavailable Second

MODULES (T1/PRI) > PERFORMANCE CURRENT > LCV

Line Code Violation.

MODULES (T1/PRI) > PERFORMANCE CURRENT > PCV

Path Code Violation.

MODULES (T1/PRI) > PERFORMANCE CURRENT > LES

Line Errored Second.

MODULES (T1/PRI) > PERFORMANCE 15MIN

Write security:3; Read security: 5

Stores the performance data for the previous 15-minute window. Refer to *Modules (T1/PRI) > Performance Current* for a detailed description of these fields.

MODULES (T1/PRI) > PERFORMANCE 24HR

Write security:3; Read security: 5

Stores the performance data for the previous 24-hour window. Refer to *Modules (T1/PRI) > Performance Current* for a detailed description of these fields.

MODULES (T1/PRI) > CONFIGURATION

Write security:3; Read security: 5

All of the following configurable parameters apply to whether the port is connected to a Primary Rate ISDN circuit or a channelized T1 circuit.

MODULES (T1/PRI) > CONFIGURATION > PRT

Read security: 5

Displays the port number.

MODULES (T1/PRI) > CONFIGURATION > PORT NAME

Write security: 3; Read security: 5

Accepts any alpha-numeric name up to 16 characters long, to uniquely identify each port on the ATLAS 830.

MODULES (T1/PRI) > CONFIGURATION > FRAME

Write security: 2; Read security: 5

This field must be set to match the frame format of the circuit to which it is connected, available from the network supplier. Choose either **D4** or **ESF**.

MODULES (T1/PRI) > CONFIGURATION > CODE

Write security: 2; Read security: 5

Set this field to match the line code of the circuit to which it is connected (this information is available from the network supplier). Choose either **AMI** (Alternate Mark Inversion) or **B8ZS** (Bipolar Eight Zero Substitution).

MODULES (T1/PRI) > CONFIGURATION > TX YEL

Write security: 3; Read security: 5

Controls the transmission of yellow alarms. Choose either **ON** or **OFF**.

MODULES (T1/PRI) > CONFIGURATION > TX PRM

Write security: 3; Read security: 5

Controls the sending of performance report messaging (PRM) data on the facility data link (FDL). The PRM data continues to be collected even if **XMIT PRM** is turned off (possible only with ESF format). Choose either **ON** or **OFF**.

MODULES (T1/PRI) > CONFIGURATION > LBO

Write security: 2; Read security: 5

Selects the Line Build Out (LBO) for the network interface. When connecting an ATLAS 830 port to a DSX-1 interface, this parameter is typically set to match the distance (in feet) between the ATLAS 830 and the device with which it is connecting. When you select this item, a list of choices displays (**0 dB, -7.5 dB, -15 dB, -22 dB, 266 FT, 399 FT, 533 FT, 655 FT**). Select the appropriate option.

MODULES (T1/PRI) > CONFIGURATION > LB ACCEPT

Write security: 3; Read security: 5

Sets unit to accept or reject the in-band loop up and loop down codes as defined in ANSI T1.403. This is a line loopback. Choose either **ACCEPT** or **IGNORE**.

MODULES (T1/PRI) > CONFIGURATION > PULSE DENSITY

Write security: 3; Read security: 5

Choose either **ON** or **OFF**. When **ON**, Pulse Density Enforcer causes the ATLAS 830 to monitor for ones (1s) density violations and insert a one (1) when needed to maintain ones at 12.5%. This data insertion will cause data errors.

MODULES (T1/PRI) > CONFIGURATION > ADLP

Write security: ADTRAN Use Only; Read security: 5

The ADTRAN Data Link Protocol (ADLP) provides a communications link between ADTRAN equipment over point-to-point or multidrop connections that can be used for configuration and monitoring remote ADTRAN devices. Choose **ENABLE** to activate the ADLP over the FDL for the DS1 interface.

MODULES (T1/PRI) > TEST

Write security: 5; Read security: 5

These options initiate different types of tests and display test results.

MODULES (T1/PRI) > TEST > PRT

Read security: 5

Displays the port number.

MODULES (T1/PRI) > TEST > LOC LB

Write security: 4; Read security: 5

Causes loopback on near-end (local) port (see Figure 10). The following options are available:

LINE	Metallic loopback
PAYLD	Payload loopback - framing and clocking are regenerated

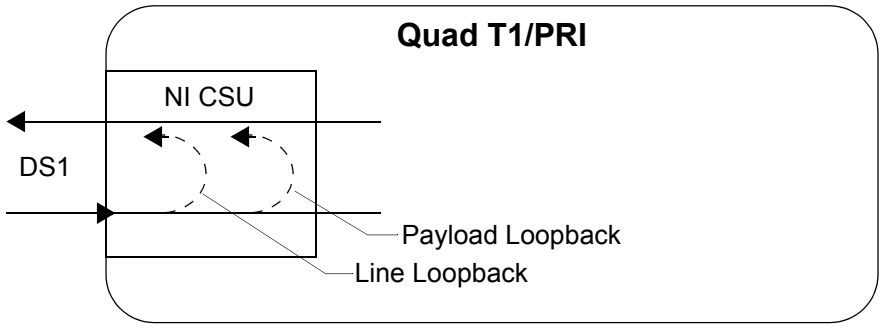


Figure 10. Loopback Test Diagram

MODULES (T1/PRI) > TEST > REMOTE LB

Write security: 4; Read security: 5

Sends loopback code to remote CSU. The following options are available:

Selection	Framing	Description
AT&T INBAND LINE	ESF/D4	Full 1.544 Mbps loopback of the signal received from the network (metallic loopback).
ANSI FDL LINE	ESF	Full 1.544 Mbps loopback of the signal received from the network. Initiated through loopback activation transmission over the facility data link (FDL).
ANSI FDL PYLD	ESF	1.536 Mbps loopback of the payload data received from the network maintaining bit-sequence integrity for the information bits by synchronizing (regenerating) the timing. Initiated through loopback activation transmission over the facility datalink (FDL).
INBAND NIU	ESF/D4	Full 1.544 Mbps loopback of the signal received from the network after passing through the T1 framer of the remote unit.

MODULES (T1/PRI) > TEST > PATTERN

Write security: 4; Read security: 5

Test pattern to be transmitted out the port. The following options are available:

ALL ONES	Framed ones
ALL ZEROS	Framed zeros
QRSS	Pseudo-random pattern with suppression of excess zeros

MODULES (T1/PRI) > TEST > QRSS/RLB RESULTS

Write security: 3; Read security: 5

Displays current status of T1 tests including information regarding loopbacks and test patterns. When displaying test pattern status, the display string is composed of pattern sync status and errored seconds.

NONE	No sync.
LOS	Sync has been lost.
SYNC	Pattern is synchronized.
ES	Number of seconds with at least one bit error.

MODULES (T1/PRI) > TEST > CLR

Write security: 3; Read security: 3

Clears error counters on test pattern results menu.

MODULES (T1/PRI) > TEST > INJ

Write security: 3; Read security: 3

Injects errors into transmitted test pattern.

MODULES MENU (QUAD E1/PRA OPTION MODULE)

This section provides detailed information on the **MODULES** menu and submenus for the Quad E1/PRA Option Module. The ATLAS 830 system controller automatically detects the presence of the Quad E1/PRA Option Module when it is installed in the system (listed as **E1/PRA**). To see the menus for the Quad E1/PRA Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices.

MODULES (E1/PRA) > INFO

Read security: 5

Displays general information about the Quad E1/PRA Option Module.

MODULES (E1/PRA) > INFO > PART NUMBER

Read security: 5

Displays the part number of the Quad E1/PRA Option Module.

MODULES (E1/PRA) > INFO > SERIAL NUMBER

Read security: 5

Displays the module's serial number.

MODULES (E1/PRA) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the module.

MODULES (E1/PRA) > INFO > E1 FRAMER REVISION

Read security: 5

Displays the E1 framer hardware revision.

MODULES (E1/PRA) > ALARM STATUS

Read security: 5

Displays any active alarms, as follows:

PRT

Indicates the port number. The Quad E1/PRA Option Module is a single-port device.

ALARMS

Displays the alarm type, as listed below.

LOS	(Loss of Signal) No signal detected on port interface.
LOF	(Loss of Framing) The receiver is unable to synchronize to the FAS framing pattern of the received signal.
LOMF	(Loss of Multi-frame) The receiver is unable to synchronize to the TS15 multi-frame pattern of the received signal.
CRC4	(Loss of CRC-4 Framing) The receiver is unable to synchronize to the CRC-4 frame pattern of the received signal.

LOS	(Loss of Signal) No signal detected on port interface.
AIS	(Alarm Indication Signal) An upstream failure has been detected and all ones are being received.
REM	(Remote Frame Alarm) Loss of frame alarm being received from far end.
REMMF	(Remote Multi-Frame Alarm) Loss of multi-frame alarm being received from far end.

MODULES (E1/PRA) > TS0 ALARMS

Read security: 5

Displays per-TS0 alarm status. These alarms usually indicate the failure to receive the protocol that has been configured for the TS0.

-	No Alarm TS0
D	D Channel Alarm (ISDN)
F	Frame Alarm (packet)
T	TBOP Alarm (packet)
P	PPP Alarm (packet)

MODULES (E1/PRA) > TS0 STATUS

Read security: 5

The TS0 status indicates usage on a TS0 basis for each port. These options are read-only:

•	Idle
–	Inactive
A	Active call on this TS0
D	Active D Channel TS0
M	Maintenance TS0
N	Dedicated (nailed) TS0
O	Off hook detected
R	Ringing detected
S	Signaling

MODULES (E1/PRA) > SIG STATUS (PORT 1-4)

Read security: 5

Displays the state of the A/B/C/D signaling bits for the Quad E1/PRA Option Module. Dashes indicate TS0s where signaling is not being transferred by the ATLAS 830.

MODULES (E1/PRA) > PERFORMANCE CURRENT

Write security:5; Read security: 5

The performance fields (either current, 15-minute total, or 24-hour total) provide status on key performance measures as specified in G.821 and RFC 1406 for the E1/PRA port.

MODULES (E1/PRA) > PERFORMANCE CURRENT > PRT

Displays the port number.

MODULES (E1/PRA) > PERFORMANCE CURRENT > CLR

Clears performance information for the selected port.

MODULES (E1/PRA) > PERFORMANCE CURRENT > ES

Errored Second (ES) is a second with one or more error events OR one or more Out Of Frame events OR one or more Controlled Slips.

MODULES (E1/PRA) > PERFORMANCE CURRENT > BES

Bursty Errored Second (BES) is a second with more than one, but less than 320 error events.

MODULES (E1/PRA) > PERFORMANCE CURRENT > SES

Severely Errored Second (SES) is a second with 320 or more error events OR one or more Out Of Frame events.

MODULES (E1/PRA) > PERFORMANCE CURRENT > UAS

Unavailable Second.

MODULES (E1/PRA) > PERFORMANCE CURRENT > CSS

Controlled Slip Second.

MODULES (E1/PRA) > PERFORMANCE CURRENT > SEFS

Severely Errored Frame Second is a second that contains four consecutive errored framing patterns.

MODULES (E1/PRA) > PERFORMANCE CURRENT > DM

Degraded Minutes is the number of minutes with a bit error rate of 10^{-6} or greater.

MODULES (E1/PRA) > PERFORMANCE CURRENT > LCV

Line Code Violation.

MODULES (E1/PRA) > PERFORMANCE CURRENT > PCV

Path Code Violation.

MODULES (E1/PRA) > PERFORMANCE CURRENT > LES

Line Errored Second.

MODULES (E1/PRA) > PERFORMANCE CURRENT > LOFC

Loss of Frame Count is a count of seconds in which a valid framing pattern could not be obtained.

MODULES ((E1/PRA) > PERFORMANCE 15MIN

Write security:5; Read security: 5

Stores the performance data for the previous 15-minute window. Refer to *Modules (E1/PRA) > Performance Current* for a detailed description of these fields.

MODULES (E1/PRA) > PERFORMANCE 24HR

Write security:5; Read security: 5

Stores the performance data for the previous 24-hour window. Refer to *Modules (E1/PRA) > Performance Current* for a detailed description of these fields.

MODULES (E1/PRA) > CONFIGURATION

Write security:5; Read security: 5

All of the following configurable parameters apply whether the port is connected to a Primary Rate Access circuit or a channelized E1 circuit.

MODULES (E1/PRA) > CONFIGURATION > PRT

Write security:3; Read security: 5

Displays the port number.

MODULES (E1/PRA) > CONFIGURATION > NAME

Write security: 3; Read security: 5

Accepts any alpha-numeric name up to 16 characters long, to uniquely identify each port on the Quad E1/PRA Option Module.

MODULES (E1/PRA) > CONFIGURATION > FAS2

Write security: 3; Read security: 5

If enabled, the network interface receiver requires the NFAS word (TS0 0 in odd frames) and the FAS word (TS0 0 in even frames) for frame sync. When disabled, only the FAS word is needed for frame sync.

MODULES (E1/PRA) > CONFIGURATION > TS16 MF

Write security: 3; Read security: 5

If enabled, the receiver requires MFAS word in TS16 to achieve sync (CAS signaling). The transmitter outputs MFAS word in TS16 (CCS signaling).

MODULES (E1/PRA) > CONFIGURATION > CRC-4

Write security: 3; Read security: 5

Transmits the CRC-4 checksum bits in the outgoing E1 data stream, when enabled. Also, checks the received signal for errors.

MODULES (E1/PRA) > CONFIGURATION > AUTO ALARM

Write security: 3; Read security: 5

Transmits a remote alarm when framing is lost (when Red Alarm Generation is on), and transmits an AIS alarm when all ones are received (when RCM AIS Generation is on).

MODULES (E1/PRA) > CONFIGURATION > CODE

Write security: 3; Read security: 5

Allows selection of line coding. HDB3 is normally the only coding method used on public networks. AMI may be selected for testing purposes.

MODULES (E1/PRA) > CONFIGURATION > TS0 SPARE

Write security: 3; Read security: 5

TS0 bits Sa4 through Sa8 in frames not containing the Frame Alignment Signal may be used in specific applications, but should be set to 1s when crossing an international border. Enter decimal number whose 5 LSB are to be used for all Sa4.Sa8 bits. Refer to CCITT G.704 for more information.

MODULES (E1/PRA) > CONFIGURATION > TS16 SPARE

Write security: 3; Read security: 5

TS16 in CAS frame 0 contains 3 spare bits: 0000XYXX where ‘X’ marks a spare bit and ‘Y’ marks an alarm indications to the remote end. Enter a decimal number whose masked 4 LSB are inserted into TS0 in CAS frame 0. Refer to CCITT G.704 for more information.

MODULES (E1/PRA) > CONFIGURATION > INTL BIT

Write security: 3; Read security: 5

Bit 0 in all non-CRC4 frames are reserved for international use. They may be used nationally if the path does not cross an international border. If not specifically used, the bits should be set to ‘1’ on paths crossing a border. Enter the international bit value of 0 or 1. Refer to CCITT G.704 for more information.

MODULES (E1/PRA) > TEST

Write security: 5; Read security: 5

These options initiate different types of tests and display test results.

MODULES (E1/PRA) > TEST > PRT

Write security: 4; Read security: 5

Displays the port number.

MODULES (E1/PRA) > TEST > LOC LB

Write security: 4; Read security: 5

Causes loopback on near-end (local) port (see Figure 11). The following options are available:

NONE	No loopback active
LINE	Metallic loopback

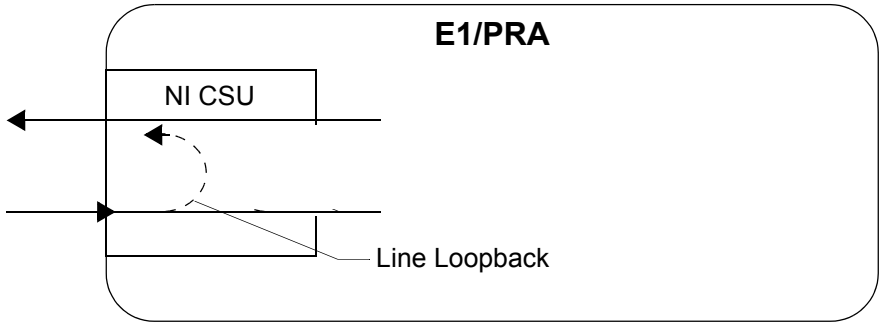


Figure 11. E1/PRA Network Loopback Test Diagram

MODULES (E1/PRA) > TEST > PATTERN

Write security: 4; Read security: 5

Test pattern to be transmitted out the port. The following options are available:

ALL ONES	Framed ones
ALL ZEROS	Framed zeros
QRSS	Pseudo-random pattern with suppression of excess zeros

MODULES (E1/PRA) > TEST > QRSS RESULTS

Write security: 4; Read security: 5

Test pattern results that indicate sync and errors of received data pattern.

MODULES (E1/PRA) > TEST > CLR

Write security: 4; Read security: 5

Clears test results on **QRSS RESULTS** field.

MODULES (E1/PRA) > TEST > INJ

Write security: 4; Read security: 5

Injects errors into transmitted test pattern. Return receipt of the errors is displayed in the **QRSS RESULTS** field.

MODULES MENU (QUAD NX56/64 OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the Quad Nx 56/64 Option Module when it is installed in the system (listed as **V35Nx**). To see the menus for the Quad Nx 56/64 Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the Quad Nx 56/64 Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (V.35NX) > INFO

Read security: 5

Provides information about the module part number, serial number and assembly revision.

MODULES (V.35NX) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module.

MODULES (V.35NX) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module.

MODULES (V.35NX) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the installed module.

MODULES (V.35NX) > ALARM STATUS

Read security: 5

Displays the current alarm status.

MODULES (V.35NX) > ALARM STATUS > PRT

Read security: 5

Indicates the port number.

MODULES (V.35NX) > ALARM STATUS > ALARMS

Read security: 5

Displays an alarm condition on the ATLAS 830 unit.

SLIP	A rate mismatch exists between the DTE clock and the network-side clock (as set by DS0 assignment).
PLL	The Nx port is not able to lock onto the clock provided by the network interface.
ZERO	The DTE is sending an excessive number of consecutive zeroes to the network interface.
NO EXT CLK	The DTE is not providing an external transmit clock. This alarm displays only if the Nx port is configured to get its transmit clock from the DTE.
PKT EP ALM	A packet endpoint has detected missing or incorrect framing.

MODULES (V.35NX) > DTE STATUS

Read security: 5

Shows the status of key DTE interface signals. An asterisk (*) indicates the presence of a signal and a hyphen (-) indicates no signal present.

MODULES (V.35NX) > DTE STATUS > PRT

Operating port number.

MODULES (V.35NX) > DTE STATUS > DTE STATUS

The following signals are monitored (these options are read-only).

RTS	Request to send from DTE.
CTS	Clear to send to DTE.
DTR	Data terminal ready from DTE.
DSR	Data set ready to DTE.
DCD	Data carrier detect to DTE.
RI	Ring indicate to DTE.
TD	Transmit data from the DTE.
RD	Receive data toward the DTE.
EC	External clock present.

MODULES (V.35NX) > DATA RATE

Read security: 5

Displays the data rate at which each Nx port is currently operating. A port's data rate is determined by the number of DS0s assigned to it and the rate per DS0 associated with the active maps.

MODULES (V.35NX) > DATA RATE > PORT

Operating port number.

MODULES (V.35NX) > DATA RATE > RATE

This read-only field displays the data rate for the selected port.

MODULES (V.35NX) > INBAND STATS

Read security: 5

Provides information on the following inband channel statistics.

MODULES (V.35NX) > INBAND STATS > PORT

Operating port number.

MODULES (V.35NX) > INBAND STATS > RX FRAMES

The number of frames received on the operating port since system startup.

MODULES (V.35NX) > INBAND STATS > TX FRAMES

The number of frames transmitted from the operating port since system startup.

MODULES (V.35NX) > INBAND STATS > RX BYTES

The number of bytes received from the operating port since system startup.

MODULES (V.35NX) > INBAND STATS > TX BYTES

The number of bytes transmitted to the operating port since system startup.

MODULES (V.35NX) > INBAND STATS > TX ACCEPT

The number of transmitted frames accepted by the far end.

MODULES (V.35NX) > INBAND STATS > FLOW BUDGET

The number of times the Inband Flow Budget buffer is exceeded.

MODULES (V.35NX) > INBAND STATS > POLL SKIPS

The number of times the Inband Poll is skipped due to box congestion.

MODULES (V.35NX) > INBAND STATS > RX OVERFLOW

The number of times the Inband Rx buffer is overflowed.

MODULES (V.35NX) > INBAND STATS > TX RESET

The number of times the transmitter is reset.

MODULES (V.35NX) > INBAND STATS > LINK VERIFY

The number of Link Verify frames received from the far end.

MODULES (V.35NX) > INBAND STATS > REMOTE FAIL

The number of communication failures with the far end.

MODULES (V.35NX) > INBAND STATS > LINK VERIFY ACK

The number of Link Verify Acknowledge frames received from the far end.

MODULES (V.35NX) > INBAND STATS > RESET STATS

Clears inband statistic results.

MODULES (V.35NX) > PLL/FIFO

Read security: 5

Displays the Phase Lock Loop (PLL) and FIFO status.

MODULES (V.35NX) > PLL/FIFO > PORT

Indicates the operating port.

MODULES (V.35NX) > PLL/FIFO > PLL/FIFO

Displays the state of the PLL and FIFO systems.

LOCK	PLL is locked (This is required to transfer data.)
RXE	Receive data FIFO empty.
RXF	Receive data FIFO full.
TXE	Transmit data FIFO empty.
TXF	Transmit data FIFO full.

MODULES (V.35NX) > CONFIGURATION

Write security: 3; Read security: 5

All of the following configurable parameters apply to the individual V.35 ports.

MODULES (V.35NX) > CONFIGURATION > PRT

Read security: 5

Displays the port number.

MODULES (V.35NX) > CONFIGURATION > NAME

Write security: 3; Read security: 5

Accepts any alpha-numeric name up to 17 characters long, to uniquely identify each port on the Quad V.35 Option Module.

MODULES (V.35NX) > CONFIGURATION > CLK +/-

Write security: 3; Read security: 5

Controls the clock used by the ATLAS 830 to accept the transmit (TX) data from the DTE. This is usually set to **NORMAL**. If the interface cable is long, causing a phase shift in the data, the clock can be set to **INVERTED**. This switches the phase of the clock, which compensates for a long cable.

MODULES (V.35NX) > CONFIGURATION > DATA

Write security: 3; Read security: 5

Controls the inverting of the DTE data. This inversion can be useful when operating with a high-level data link control (HDLC) protocol (often used as a means to ensure 1s density). Select either **NORMAL** or **INVERTED**. Data inversion configuration must match at both ends of the circuit.

MODULES (V.35NX) > CONFIGURATION > CTS

Write security: 3; Read security: 5

Determines the behavior of the Clear To Send (CTS) signal. If set to **NORMAL**, **CTS** will follow the value of Request To Send (RTS). If set to **FORCED ON**, **CTS** will always be asserted.

MODULES (V.35NX) > CONFIGURATION > DCD

Write security: 3; Read security: 5

Determines the behavior of the Data Carrier Detect (**DCD**) signal, also called RLSD on V.35 interfaces. If set to **NORMAL**, **DCD** will generally be asserted when the interface is capable of passing data. If set to **FORCED ON**, **DCD** will always be asserted. If set to **REMOTE RTS**, the value of **DCD** will track the value of the remote unit's RTS signal. Note that this feature requires the Inband control channel to be **ENABLED**.

MODULES (V.35NX) > CONFIGURATION > DSR

Write security: 3; Read security: 5

Determines the behavior of the Data Set Ready (**DSR**) signal. If set to **NORMAL**, **DSR** will generally be asserted when the interface is capable of passing data. If set to **FORCED ON**, **DSR** will always be asserted. If set to **REMOTE DTR**, the value of **DSR** will track the value of the remote unit's DTR signal. This remote feature requires the Inband control channel to be **ENABLED**.

MODULES (V.35NX) > CONFIGURATION > DTR

Write security: 3; Read security: 5

Determines whether the ATLAS 830 treats a connection as permanent (**IGNORE**) or connects only when Data Terminal Ready (**DTR**) is active (**CONNECT ON DTR**). Select either **IGNORE** or **CONNECT ON DTR**.

MODULES (V.35NX) > CONFIGURATION > 0 INH

Write security: 3; Read security: 5

When the port detects an uninterrupted string of 0s being transmitted for more than one second, setting this parameter to **ON** will cause the ATLAS 830 to send 1s toward the network.

MODULES (V.35NX) > CONFIGURATION > INBAND

Write security: 3; Read security: 5

Creates an inband management channel by robbing 8 kbps bandwidth from the port's allocated bandwidth. This channel can be used for management for ADTRAN products that are not co-located with the ATLAS. Consult the manual for ADTRAN T1 equipment for details on using this feature.

MODULES (V.35NX) > CONFIGURATION > SEND LEADS

Write security: 3; Read security: 5

Sends the state of the DTE leads to the remote unit whenever any of the leads change state. If any leads on the remote unit are set to track a remote signal, this option must be enabled. The DTE lead states are conveyed using the Inband control channel, which must be enabled.

SIGNAL	RTS	V.54 LOOPBACK	511 TEST ON	SELF TEST ACTIVE	NETWORK TEST ACTIVE	NO DS0 MAPPED	NETWORK ALARM
CTS	Follows	Off	Off	Off	Off	Off	Off
DCD	—	—	—	Off	Off	Off	Off
DSR	—	Off	Off	Off	Off	Off	—
— = Do not care							
Force On = On under all conditions							

MODULES (V.35NX) > DIAL

Write security: 3; Read security: 5

Dials an Nx port that is configured to ignore DTR.

MODULES (V.35NX) > DIAL > PRT

Read security: 5

Displays the port number.

MODULES (V.35NX) > DIAL > MODE

Write security: 3; Read security: 5

Configures the dialing mode. The following options are available:

PERSISTENT	Redial whenever the call is cleared or if the call fails.
ONE TIME	Attempt the call only once.

MODULES (V.35NX) > DIAL > DIAL

Write security: 0; Read security: 0

Signals the Nx port to dial/clear the call.

MODULES (V.35NX) > DIAL > SRC ID

Write security: 3; Read security: 5

Indicates the **SOURCE ID** of the number to be dialed. Configure this field in the Nx **INTERFACE CONFIGURATION** section of the **DIAL PLAN**.

MODULES (V.35NX) > DIAL > NUMBER

Write security: 3; Read security: 5

Indicates the number to be dialed. Configure this field in the Nx **INTERFACE CONFIGURATION** section of the **DIAL PLAN**.

MODULES (V.35NX) > TEST

Write security: 4; Read security: 5

These options initiate different types of tests and display test results.

MODULES (V.35NX) > TEST > PORT

Indicates operating port.

MODULES (V.35NX) > TEST > LOOPBACK

Write security: 4; Read security: 5

Test pattern to be transmitted out the port. The following options are available:

NO LOOPBACK	No active loopback.
LOCAL LOOPBACK	Activates both a local loopback (back toward the DTE) and a port loopback (toward the network).
REMOTE LOOPBACK	V.54 loopback code to be sent to the far end, and if the device at the far end supports V.54, the device activates a loopback on detection of the V.54 code.

MODULES (V.35NX) > TEST > LOOPBACK STATUS

Read security: 5

This read-only option indicates a port's current loopback status by displaying any of the following status messages:

NO LOOPBACK ACTIVE

LOOPING UP REMOTE UNIT

REMOTE UNIT LOOPED BACK

LOOPING DOWN REMOTE UNIT

REMOTE LOOP-UP FAILED

PORT LOOPED FROM REMOTE SOURCE

PORT LOOPBACK ACTIVE

MODULES (V.35NX) > TEST > 511

Write security: 4; Read security: 5

Controls the activation of the 511 test pattern generator and detector.

MODULES (V.35NX) > TEST > 511 RESULT

Read security: 5

Displays the results of the 511 test. This option is read-only. Clear these results by pressing <Enter > when **CLR** is selected.

NONE	Pattern is not synchronized.
LOS	At one point the pattern was synchronized, but is currently not synchronized.
SYNC	Pattern is synchronized.
ES	Number of seconds with at least one bit error.

MODULES (V.35NX) > TEST > INJECT

Write security: 4; Read security: 4

Injects errors into transmitted test pattern.

MODULES (V.35NX) > TEST > CLR

Write security: 4; Read security: 4

Clears error counters on test pattern results menu.

MODULES MENU (USSI OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the Quad USSI Option Module when it is installed in the system (listed as **USSI**). To see the menus for the Quad USSI Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the Quad USSI Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (USSI) > INFO

Read security: 5

Provides information about the module part number, serial number and assembly revision.

MODULES (USSI) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module.

MODULES (USSI) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module.

MODULES (USSI) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the installed module.

MODULES (USSI) > ALARM STATUS

Read security: 5

Displays the current alarm status.

MODULES (USSI) > ALARM STATUS > PRT

Read security: 5

Indicates the port number.

MODULES (USSI) > ALARM STATUS > ALARMS

Read security: 5

Displays an alarm condition on the ATLAS 830 unit.

SLIP	A rate mismatch exists between the DTE clock and the network-side clock (as set by DS0 assignment).
PLL	The USSI port is not able to lock onto the clock provided by the network interface.
ZERO	The DTE is sending an excessive number of consecutive zeroes to the network interface.
NO EXT CLK	The DTE is not providing an external transmit clock. This alarm displays only if the USSI port is configured to get its transmit clock from the DTE.
PKT EP ALM	A packet endpoint has detected missing or incorrect framing.

MODULES (USSI) > DTE STATUS

Read security: 5

Shows the status of key DTE interface signals. An asterisk (*) indicates the presence of a signal and a hyphen (-) indicates no signal present.

MODULES (USSI) > DTE STATUS > PRT

Operating port number.

MODULES (USSI) > DTE STATUS > DTE STATUS

The following signals are monitored (these options are read-only):

RTS	Request to send from DTE.
CTS	Clear to send to DTE.
DTR	Data terminal ready from DTE.
DSR	Data set ready to DTE.
DCD	Data carrier detect to DTE.
RI	Ring indicate to DTE.
TD	Transmit data from the DTE.
RD	Receive data toward the DTE.
EC	External clock present.

MODULES (USSI) > DATA RATE

Read security: 5

Displays the data rate at which each USSI port is currently operating. A port's data rate is determined by the number of DS0s assigned to it and the rate per DS0 associated with the active maps.

MODULES (USSI) > DATA RATE > PORT

Displays operating port.

MODULES (USSI) > DATA RATE > RATE

Displays the data rate of the selected port.

MODULES (USSI) > INBAND STATS

Read security: 5

Provides information on the inband channel statistics.

MODULES (USSI) > INBAND STATS > PORT

Operating port number.

MODULES (USSI) > INBAND STATS > RX FRAMES

The number of frames received on the operating port since system startup.

MODULES (USSI) > INBAND STATS > TX FRAMES

The number of frames transmitted from the operating port since system startup.

MODULES (USSI) > INBAND STATS > RX BYTES

The number of bytes received from the operating port since system startup.

MODULES (USSI) > INBAND STATS > TX BYTES

The number of bytes transmitted to the operating port since system startup.

MODULES (USSI) > INBAND STATS > TX ACCEPT

The number of transmitted frames accepted by the far end.

MODULES (USSI) > INBAND STATS > FLOW BUDGET

The number of times the Inband Flow Budget buffer is exceeded.

MODULES (USSI) > INBAND STATS > POLL SKIPS

The number of times the Inband Poll is skipped due to box congestion.

MODULES (USSI) > INBAND STATS > RX OVERFLOW

The number of times the Inband Rx buffer is overflowed.

MODULES (USSI) > INBAND STATS > TX RESET

The number of times the transmitter is reset.

MODULES (USSI) > INBAND STATS > LINK VERIFY

The number of Link Verify frames received from the far end.

MODULES (USSI) > INBAND STATS > REMOTE FAIL

The number of communication failures with the far end.

MODULES (USSI) > INBAND STATS > LINK VERIFY ACK

The number of Link Verify Acknowledge frames received from the far end.

MODULES (USSI) > INBAND STATS > RESET STATS

Clears inband statistic results.

MODULES (USSI) > PLL/FIFO

Read security: 5

Displays the Phase Lock Loop (PLL) and FIFO status.

MODULES (USSI) > PLL/FIFO > PORT

Indicates the operating port.

MODULES (USSI) > PLL/FIFO > PLL/FIFO

Displays the state of the PLL and FIFO systems.

LOCK	PLL is locked (This is required to transfer data.)
RXE	Receive data FIFO empty.
RXF	Receive data FIFO full.
TXE	Transmit data FIFO empty.
TXF	Transmit data FIFO full.

MODULES (USSI) > CONFIGURATION

Write security: 3; Read security: 5

All of the following configurable parameters apply to the individual USSI ports.

MODULES (USSI) > CONFIGURATION > PRT

Read security: 5

Displays the port number.

MODULES (USSI) > CONFIGURATION > NAME

Write security: 3; Read security: 5

Accepts any alpha-numeric name up to 16 characters long, to uniquely identify each port on the Quad USSI Option Module.

MODULES (USSI) > CONFIGURATION > CLK +/-

Write security: 3; Read security: 5

Controls the clock used by the ATLAS 830 to accept the transmit (TX) data from the DTE. This is usually set to **NORMAL**. If the interface cable is long, causing a phase shift in the data, the clock can be set to **INVERTED**. This switches the phase of the clock, which compensates for a long cable.

MODULES (USSI) > CONFIGURATION > DATA

Write security: 3; Read security: 5

Controls the inverting of the DTE data. This inversion can be useful when operating with a high-level data link control (HDLC) protocol (often used as a means to ensure 1s density). Select either **NORMAL** or **INVERTED**. Data inversion configuration must match at both ends of the circuit.

MODULES (USSI) > CONFIGURATION > CTS

Write security: 3; Read security: 5

Determines the behavior of the Clear To Send (**CTS**) signal. If set to **NORMAL, CTS** will follow the value of Request To Send (**RTS**). If set to **FORCED ON, CTS** will always be asserted.

MODULES (USSI) > CONFIGURATION > DCD

Write security: 3; Read security: 5

Determines the behavior of the Data Carrier Detect (DCD) signal, also called RLSD on some interfaces. If set to **NORMAL, DCD** will generally be asserted when the interface is capable of passing data (consult the ATLAS 830 User Manual for exact conditions.) If set to **FORCED ON, DCD** will always be asserted. If set to **REMOTE RTS**, the value of **DCD** will track the value of the remote unit's RTS signal. Note that this feature requires the Inband control channel to be **ENABLED**.

MODULES (USSI) > CONFIGURATION > DSR

Write security: 3; Read security: 5

Determines the behavior of the Data Set Ready (DSR) signal. If set to **NORMAL, DSR** will generally be asserted when the interface is capable of passing data. If set to **FORCED ON, DSR** will always be asserted. If set to **REMOTE DTR**, the value of DSR will track the value of the remote unit's DTR signal. This remote feature requires the Inband control channel to be **ENABLED**.

MODULES (USSI) > CONFIGURATION > DTR

Write security: 3; Read security: 5

Determines whether the ATLAS 830 treats a connection as permanent (**IGNORE**) or connects only when Data Terminal Ready (**DTR**) is active (**CONNECT ON DTR**). Select either **IGNORE** or **CONNECT ON DTR**.

MODULES (USSI) > CONFIGURATION > 0 INH

Write security: 3; Read security: 5

When the port detects an uninterrupted string of 0s being transmitted for more than one second, setting this parameter to **ON** will cause the ATLAS 830 to send 1s toward the network.

MODULES (USSI) > CONFIGURATION > INBAND

Write security: 3; Read security: 5

Creates an inband management channel by robbing 8 kbps bandwidth from the port's allocated bandwidth. This channel can be used for management for ADTRAN products that are not co-located with the ATLAS. Consult the manual for ADTRAN T1 equipment for details on using this feature.

MODULES (USSI) > CONFIGURATION > SEND LEADS

Write security: 3; Read security: 5

Sends the state of the DTE leads to the remote unit whenever any of the leads change state. If any leads on the remote unit are set to track a remote signal, this option must be enabled. The DTE lead states are conveyed using the Inband control channel, which must be enabled.

SIGNAL	RTS	V.54 LOOPBACK	511 TEST ON	SELF TEST ACTIVE	NETWORK TEST ACTIVE	NO DS0 MAPPED	NETWORK ALARM
CTS	Follows	Off	Off	Off	Off	Off	Off
DCD	—	—	—	Off	Off	Off	Off
DSR	—	Off	Off	Off	Off	Off	—
— = Do not care							
Force On = On under all conditions							

MODULES (USSI) > DIAL

Write security: 3; Read security: 5

Dials a USSI port that is configured to ignore DTR.

MODULES (USSI) > DIAL > PRT

Read security: 5

Displays the port number.

MODULES (USSI) > DIAL > MODE

Write security: 3; Read security: 5

Configures the dialing mode. The following options are available:

PERSISTENT	Redial whenever the call is cleared or if the call fails.
ONE TIME	Attempt the call only once.

MODULES (USSI) > DIAL > DIAL

Write security: 0; Read security: 0

Signals the USSI port to dial/clear the call.

MODULES (USSI) > DIAL > SRC ID

Write security: 3; Read security: 5

Indicates the **SOURCE ID** of the number to be dialed. Configure this field in the USSI **INTERFACE CONFIGURATION** section of the **DIAL PLAN**.

MODULES (USSI) > DIAL > NUMBER

Write security: 3; Read security: 5

Indicates the number to be dialed. Configure this field in the USSI **INTERFACE CONFIGURATION** section of the **DIAL PLAN**.

MODULES (USSI) > TEST

Write security: 4; Read security: 5

These options initiate different types of tests and display test results.

MODULES (USSI) > TEST > PORT

Write security: 5; Read security: 5

Displays the port number.

MODULES (USSI) > TEST > LOOPBACK

Write security: 4; Read security: 5

Test pattern to be transmitted out the port. The following options are available:

NO LOOPBACK	No active loopback.
LOCAL LOOPBACK	Activates both a local loopback (back toward the DTE) and a port loopback (toward the network).
REMOTE LOOPBACK	V.54 loopback code to be sent to the far end, and if the device at the far end supports V.54, the device activates a loopback on detection of the V.54 code.

MODULES (USSI) > TEST > LOOPBACK STATUS

Read security: 5

This read-only option indicates a port's current loopback status by displaying any of the following status messages:

NO LOOPBACK ACTIVE

LOOPING UP REMOTE UNIT

REMOTE UNIT LOOPED BACK

LOOPING DOWN REMOTE UNIT

REMOTE LOOP-UP FAILED

PORT LOOPED FROM REMOTE SOURCE

PORT LOOPBACK ACTIVE

MODULES (USSI) > TEST > 511

Write security: 4; Read security: 5

Controls the activation of the 511 test pattern generator and detector.

MODULES (USSI) > TEST > 511 RESULT

Read security: 5

Displays the results of the 511 test. This option is read-only. Clear these results by pressing <Enter > when **CLR** is selected.

NONE	Pattern is not synchronized.
LOS	At one point the pattern was synchronized, but is currently not synchronized.
SYNC	Pattern is synchronized.
ES	Number of seconds with at least one bit error.

MODULES (USSI) > TEST > INJECT

Write security: 4; Read security: 4

Injects errors into transmitted test pattern.

MODULES (USSI) > TEST > CLR

Write security: 4; Read security: 4

Clears error counters on test pattern results menu.

MODULES (USSI) > DTE INTERFACE

Write security: 5; Read security: 5

Configures the Quad USSI Module for the appropriate interface type. Select the parameters matching the interface cable being used.

MODULES (USSI) > DTE INTERFACE > PRT

Read security: 5

Displays the port number.

MODULES (USSI) > DTE INTERFACE > DTE INTERFACE MODE

Write security: 3; Read security: 5

Configures the Quad USSI Module interface type. The following options are available:

AUTO	The ATLAS 830 will automatically detect the interface type. The cable must be connected before the interface can be determined.
EIA-530\RS-449\V.36	Configures the interface for EIA-530, RS-449, or V.36 use.
X.21/V.11	Configures the interface for X.21 or V.11 use.
RS-232	Configures the interface for RS-232 use.

MODULES (USSI) > DTE INTERFACE > CURRENT DTE TYPE

Read security: 5

Displays the current configuration of the Quad USSI Module DTE Interface.

MODULES MENU (OCTAL BRI U OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the Octal BRI Option Module when it is installed in the system (listed as **U-BRI**). To see the menus for the Octal BRI Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the Octal BRI Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (OCTAL BRI U) > INFO

Read security: 5

Provides information about the module part number, serial number and assembly revision.

MODULES (OCTAL BRI U) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module.

MODULES (OCTAL BRI U) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module.

MODULES (OCTAL BRI U) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the installed module.

MODULES (OCTAL BRI U) > ALARMS

Read security: 5

Displays the alarm status for the selected Octal BRI Option Module.

MODULES (OCTAL BRI U) > ALARMS > PRT

Read security: 5

Indicates the port number.

MODULES (OCTAL BRI U) > ALARMS > ALARMS

Read security: 5

Displays the current alarm status of each BRI U interface.

L1 DOWN	A layer one alarm is indicated by an asterisk (*) when the BRI U physical layer is not active. An L1 alarm is present when problems are detected with the endpoint or a cabling problem.

MODULES (OCTAL BRI U) > ALARMS > CHANNEL

Read security: 5

Displays the alarm status of each 2B+D channel. A hyphen (–) indicates no active channel alarm and D indicates an active D channel alarm.

MODULES (OCTAL BRI U) > CHANNEL USAGE

Read security: 5

Displays the status of each of the BRI U interfaces.

MODULES (OCTAL BRI U) > CHANNEL USAGE > PRT

Read security: 5

Indicates the port number.

MODULES (OCTAL BRI U) > CHANNEL USAGE > CHA

Read security: 5

(Channel) Displays the status of individual channels. The following symbols may display:

-	Unallocated channel
.	Inactive channel
A	Active B channel
D	Active D channel

MODULES (OCTAL BRI U) > PERFORMANCE CURRENT

Write security: 3; Read security: 5

The performance field provides status on key performance measures for each of the four Octal BRI U ports. These fields are all read-only.

MODULES (OCTAL BRI U) > PERFORMANCE CURRENT > PRT

Displays the port number.

MODULES (OCTAL BRI U) > PERFORMANCE CURRENT > RESET

Resets the NEBE and FEBE statistics.

MODULES (OCTAL BRI U) > PERFORMANCE CURRENT > NEBE

Near-end block errors.

MODULES (OCTAL BRI U) > PERFORMANCE CURRENT > FEBE

Far-end block errors.

MODULES (OCTAL BRI U) > CONFIGURATION

Write security: 3; Read security: 5

All of the following configurable parameters apply to the individual BRI U interfaces.

MODULES (OCTAL BRI U) > CONFIGURATION > PRT

Read security: 5

Displays the port number.

MODULES (OCTAL BRI U) > CONFIGURATION > PORT NAME

Write security: 3; Read security: 5

Accepts any alpha-numeric name up to 16 characters long, to uniquely identify each port on the Octal BRI Option Module.

MODULES (OCTAL BRI U) > TEST

Write security: 5; Read security: 5

These options initiate different types of tests and display test results.

MODULES (OCTAL BRI U) > TEST > PRT

Write security: 5; Read security: 5

Displays the port number.

MODULES (OCTAL BRI U) > TEST > LOCAL LOOPBACK

Write security: 4; Read security: 5

Activates a local loopback toward the U interface. The following options are available:

NONE	No active loopback.
LOOPBACK B1	Loops the first B channel of the interface.
LOOPBACK B2	Loops the second B channel of the interface.
LOOPBACK B1 + B2	Loops both B channels of the interface.
LOOPBACK 2B+D	Loops the entire physical interface.

MODULES (OCTAL BRI U) > TEST > REMOTE LOOPBACK

Write security: 4; Read security: 5

Activates a loopback towards the controller. The following options are available:

NONE	No active loopback.
LOOPBACK B1	Loops the first B channel of the interface.
LOOPBACK B2	Loops the second B channel of the interface.
LOOPBACK 2B+D	Loops the entire physical interface.

MODULES MENU (OCTAL BRI S/T OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the Octal BRI S/T Option Module when it is installed in the system (listed as **ST-BRI**). To see the menus for the Octal BRI S/T Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the Octal BRI S/T Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (OCTAL BRI S/T) > INFO

Write security: 5; Read security: 5

Provides information about the module part number, serial number and assembly revision.

MODULES (OCTAL BRI S/T) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module. (Read-only.)

MODULES (OCTAL BRI S/T) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module. (Read-only.)

MODULES (OCTAL BRI S/T) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the installed module. (Read-only.)

MODULES (OCTAL BRI S/T) > ALARMS

Write security: 5; Read security: 5

Displays the alarm status for the selected Octal BRI S/T Option Module.

MODULES (OCTAL BRI S/T) > ALARMS > PRT

Write security: 5; Read security: 5

Indicates the port number.

MODULES (OCTAL BRI S/T) > ALARMS > ALARMS

Write security: 5; Read security: 5

Displays the current alarm status of each Octal BRI S/T interface.

L1 DOWN	A layer one alarm is indicated by an asterisk (*) when the Octal BRI S/T physical layer is not active. An L1 alarm is present when problems are detected with the endpoint or a cabling problem.

MODULES (OCTAL BRI S/T) > ALARMS > CHANNEL

Write security: 5; Read security: 5

Displays the alarm status of the D-channel alarm. A hyphen (–) indicates no active channel alarm and D indicates an active D channel alarm.

MODULES (OCTAL BRI S/T) > CHANNEL USAGE

Read security: 5

Displays the channel status of each of the eight Octal Octal BRI S/T module ports.

MODULES (OCTAL BRI S/T) > CHANNEL USAGE > PRT

Write security: 5; Read security: 5

Indicates the port number.

MODULES (OCTAL BRI S/T) > CHANNEL USAGE > CHA

Write security: 5; Read security: 5

(Channel) Displays the status of individual channels. The following symbols may display:

-	Unallocated channel
.	Inactive channel
A	Active B channel
D	Active D channel

MODULES (OCTAL BRI S/T) > CONFIGURATION

Write security: 5; Read security: 5

Allows the user to personally identify each port with an appropriate name.

MODULES (OCTAL BRI S/T) > CONFIGURATION > PRT

Write security: 5; Read security: 5

Displays the port number.

MODULES (OCTAL BRI S/T) > CONFIGURATION > PORT NAME

Write security: 3; Read security: 5

Accepts any alpha-numeric name up to 16 characters long, to uniquely identify each port on the Octal BRI S/T Option Module.

MODULES (OCTAL BRI S/T) > TEST

Write security: 5; Read security: 5

These options initiate different types of tests and display test results.

MODULES (OCTAL BRI S/T) > TEST > PRT

Write security: 5; Read security: 5

Identifies the port number.

MODULES (OCTAL BRI S/T) > TEST > LOCAL LOOPBACK

Write security: 4; Read security: 5

Activates a local loopback toward the S/T interface. The following options are available:

NONE	No active loopback.
LOOPBACK B1	Loops the first B channel of the interface.
LOOPBACK B2	Loops the second B channel of the interface.
LOOPBACK B1 + B2	Loops both B channels of the interface.
LOOPBACK 2B+D	Loops the entire physical interface.

MODULES (OCTAL BRI S/T) > TEST > REMOTE LOOPBACK

Write security: 4; Read security: 5

Activates a loopback towards the controller. The following options are available:

NONE	No active loopback.
LOOPBACK B1	Loops the first B channel of the interface.
LOOPBACK B2	Loops the second B channel of the interface.
LOOPBACK 2B+D	Loops the entire physical interface.

MODULES MENU (DS3 OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the T3 Option Module when it is installed in the system (listed as **DS3**). To see the menus for the T3 Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the T3 Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (DS3) > DS3 INFO

Read security: 5

Displays general information about the Option Module.

MODULES (DS3) > DS3 INFO > PART NUMBER

Read security: 5

Displays the part number of the Option Module.

MODULES (DS3) > DS3 INFO > SERIAL NUMBER

Read security: 5

Displays the module's serial number.

MODULES (DS3) > DS3 INFO > BOARD REVISION

Read security: 5

Displays the board revision of the module.

MODULES (DS3) > DS3 INFO > DS1 FRAMER REVISION

Read security: 5

Displays the revision of the DS1 framer on the installed module.

MODULES (DS3) > DS3 INFO > M13 REV

Read security: 5

Displays the revision of the M13 mux on the installed module.

MODULES (DS3) > DS3 ALARM STATUS

Read security: 5

Displays the current alarm status of the T3 interface.

MODULES (DS3) > DS3 ALARM STATUS > PRT

Read security: 5

Indicates the port number.

MODULES (DS3) > DS3 ALARM STATUS > ALARMS

Read security: 5

Displays the alarm status for the T3 circuit. An asterisk (*) indicates the presence of an alarm and a dash (-) indicates no alarm. The following alarms are monitored:

LOS	Loss of Signal. There is no T3 signal detected on the port interface.
RED	Loss of Frame or Red Alarm. Received T3 cannot be frame-synchronized. A Red Alarm is indicated when the T3 has been out of frame for 2.5 seconds.
BLUE	Alarm Indication Signal or Blue Alarm. Receiving alarm indication signal in the T3 payload from far end equipment indicating a problem upstream.
YELLOW	Remote Alarm Indication or Yellow Alarm. Receiving RAI signal from far-end equipment indicating that the far-end equipment is in red alarm.

MODULES (DS3) > ALARM STATUS > DS3 ALARM STATUS > FE ALARMS

Read security: 5

Displays received alarms from the far-end equipment.

MODULES (DS3) > DS3 ALARM STATUS > RX FRAMING

Indicates whether Rx framing is being used on the T3 circuit. An asterisk (*) indicates the presence of Rx framing and a dash (-) indicates no Rx framing present.

MODULES (DS3) > DS3 PERFORMANCE CURRENT

Write security:3; Read security: 5

The performance fields (either current, 15-minute total, or 24-hour total) provide status on key performance measures as specified in ANSI T1.231-1993 for DS3 interfaces.

MODULES (DS3) > DS3 PERFORMANCE CURRENT > PRT

Displays the port number.

MODULES (DS3) > DS3 PERFORMANCE CURRENT > CLR

Clears performance information for the selected port.

MODULES (DS3) > DS3 PERFORMANCE CURRENT > ES_L

(Errored Seconds - Line) Count of seconds containing excessive zeros, LOS, or BPVs, not due to line code substitutions.

MODULES (DS3) > DS3 PERFORMANCE CURRENT > SES_L

(Severely Errored Seconds - Line) Count of seconds containing excessive zeros, LOS, or BPVs, not due to line code substitutions above a predetermined threshold.

MODULES (DS3) > DS3 PERFORMANCE CURRENT > LOSS_L

(Loss of Signal Second - Line) Count of seconds of LOS condition.

MODULES (DS3) > DS3 PERFORMANCE CURRENT > CV_P

(Code Violation - Path) For the M13 applications, an accumulation of P-bit parity errors. For the C-bit parity application, an accumulation of CP-bit parity errors.

MODULES (DS3) > DS3 PERFORMANCE CURRENT > ES_P

(Errored Second - Path) An accumulation of seconds during which any one of the following conditions exist: parity errors, severely errored frame, or AIS signal received.

MODULES (DS3) > DS3 PERFORMANCE CURRENT > SAS_P

(SEF/AIS Second) An accumulation of seconds during which severely errored frame or AIS signal is received.

MODULES (DS3) > DS3 PERFORMANCE CURRENT > SES_P

(Severely Errored Seconds - Path) An accumulation of seconds during which parity errors, severely errored frames, or AIS signal is received.

MODULES (DS3) > DS3 PERFORMANCE CURRENT > UAS_P

(Unavailable Seconds - Path) An accumulation of one-second intervals during which the DS3 path is unavailable; i.e., 10 contiguous SES_Ps.

MODULES (DS3) > DS3 PERFORMANCE 15MIN

Write security:3; Read security: 5

Stores the performance data for the previous 15-minute window. Refer to *Modules (DS3) > DS3 Performance Current* for a detailed description of these fields.

MODULES (DS3) > DS3 PERFORMANCE 24HR

Write security:3; Read security: 5

Stores the performance data for the previous 24-hour window. Refer to *Modules (DS3) > DS3 Performance Current* for a detailed description of these fields.

MODULES (DS3) > DS3 CONFIGURATION

Write security:3; Read security: 5

Includes all of the configurable parameters pertaining to the T3 interface.

MODULES (DS3) > DS3 CONFIGURATION > PRT

Read security: 5

Displays the port number.

MODULES (DS3) > DS3 CONFIGURATION > PORT NAME

Write security: 3; Read security: 5

Enter any text up to 16 characters to uniquely identify the T3 port on the DS3 Option Module.

MODULES (DS3) > DS3 CONFIGURATION > FRAME

Write security: 3; Read security: 5

Configures the framing format for the T3 circuit. Selections are **M13** or **C-BIT**.

MODULES (DS3) > DS3 CONFIGURATION > TX CLOCK

Write security: 3; Read security: 5

Selects the source of the T3 transmit clock. The following options are available:

RECOVERED	The ATLAS 830 will derive transmit T3 timing from the receive T3.
INTERNAL	The ATLAS 830 will derive transmit T3 timing from the internal ±20 PPM crystal source.

Every T3 connection should have one **RECOVERED** *and one* **INTERNAL** *transmit clock. Failure to configure this will result in T3 clock slips.*

MODULES (DS3) > DS3 CONFIGURATION > LBO

Write security: 3; Read security: 5

Selects the line build out for the T3 transmitter. The following options are available:

SHORT	0 to 100 feet of cable
LONG	100 to 450 feet of cable

MODULES (DS3) > DS3 TEST

Write security: 3; Read security: 5

Executes loops and indicates test status.

MODULES (DS3) > DS3 TEST > PRT

Read security: 5

Indicates the T3 port under test.

MODULES (DS3) > DS3 TEST > LOOPBACK

Write security: 3; Read security: 5

This field indicates the present loopback selected. The following options will display:

NONE	No loopback in effect
LINE	T3 line loopback active

MODULES (DS3) > DS3 TEST > REMOTE LB

Write security: 3; Read security: 5

This field indicates if loopbacks initiated from remote sources are in effect and may be used to execute remote loopbacks on the far-end T3 equipment. The following options are available:

NONE	No remote loopbacks are activated
DS3 LINE	T3 line loopback active
DS1 #1 ... DS1 #28	Remote individual T1 line loopback is activated
DS1 ALL LINE	Remote T1 line loopbacks for all 28 T1s is activated

MODULES (DS3) > DS3 TEST > REMOTE STATUS

Write security: 3; Read security: 5

This field indicates the progress of remote loopbacks. The following options will display:

LINE LOOPBACK ACTIVE	Remote line loopback is active.
NO LOOPS ACTIVE	Remote line loopbacks are inactive.

MODULES (DS3) > DS1 ALARM STATUS

Write security: 3; Read security: 5

Indicates T1 alarm status.

MODULES (DS3) > DS1 ALARM STATUS > PRT

Read security: 5

Indicates the number of the T1 circuit (1-28).

MODULES (DS3) > DS1 ALARM STATUS > ALARMS

Read security: 5

Displays the alarm status for each of the 28 T1 circuits. An asterisk (*) indicates the presence of an alarm and a dash (-) indicates no alarm. The following alarms are monitored:

RED	Loss of Frame or Red Alarm. Received T1 cannot be frame-synchronized. A Red Alarm is indicated when the T1 has been out of frame for 2.5 seconds.
YELLOW	Remote Alarm Indication or Yellow Alarm. Receiving RAI signal from far-end equipment indicating that the far-end equipment is in red alarm.
BLUE	Alarm Indication Signal or Blue Alarm. Receiving alarm indication signal in the T1 payload from far end equipment indicating a problem upstream.
DS0 ALARM	Displays per-DS0 alarm status; that is, at least one DS0 channel is in alarm if an asterisk (*) appears. These alarms usually indicate the failure to receive the protocol that has been configured for the DS0.

MODULES (DS3) > DS1 DS0 ALARM

Read security: 5

Displays per-DS0 alarm status for each T1 in the T3 circuit. These alarms usually indicate the failure to receive the protocol that has been configured for the DS0.

-	No Alarm DS0
D	D Channel Alarm (ISDN)
F	Frame Alarm (packet)
T	TBOP Alarm (packet)
P	PPP Alarm (packet)

MODULES (DS3) > DS1 SIG STATUS

Read security: 5

Read-only field that indicates signaling of all 24 DS0s for each T1 in the T3 circuit. The A/B bits for Rx (receive) and Tx (transmit) DS0s are shown when the T1s are configured for D4 framing. When the T1s are configured for ESF framing, ABCD bits are shown for each DS0. Dashes display for those DS0s where robbed bit signaling (RBS) is not being transferred by the ATLAS 830.

MODULES (DS3) > DS1 PERFORMANCE CURRENT

Write security:3; Read security: 5

The performance fields (either current, 15-minute total, or 24-hour total) provide status on key performance measures as specified in ANSI T1.403 and AT&T TR54016 for the T1/PRI port. Except for **CLR**, these fields are all read-only.

MODULES (DS3) > DS1 PERFORMANCE CURRENT > PRT

Displays the T1 number (1-28).

MODULES (DS3) > DS1 PERFORMANCE CURRENT > CLR

Clears performance information for the selected T1.

MODULES (DS3) > DS1 PERFORMANCE CURRENT > ES

Errored Second (ES) is a second with one or more error events OR one or more Out Of Frame events OR one or more Controlled Slips.

MODULES (DS3) > DS1 PERFORMANCE CURRENT > BES

Bursty Errored Second (BES) is a second with more than one, but less than 320 error events.

MODULES (DS3) > DS1 PERFORMANCE CURRENT > SES

Severely Errored Second (SES) is a second with 320 or more error events OR one or more Out Of Frame events.

MODULES (DS3) > DS1 PERFORMANCE CURRENT > SEFS

Severely Errored Frame Second is a second that contains four consecutive errored framing patterns.

MODULES (DS3) > DS1 PERFORMANCE CURRENT > LOFC

Loss of Frame Count is a count of seconds in which a valid framing pattern could not be obtained.

MODULES (DS3) > DS1 PERFORMANCE CURRENT > CSS

Controlled Slip Second.

MODULES (DS3) > DS1 PERFORMANCE CURRENT > UAS

Unavailable Second

MODULES (DS3) > DS1 PERFORMANCE CURRENT > PCV

Path Code Violation.

MODULES (DS3) > DS1 PERFORMANCE 15MIN

Write security:3; Read security: 5

Stores the performance data for the previous 15-minute window. Refer to *Modules (DS3) > DS1 Performance Current* for a detailed description of these fields.

MODULES (DS3) > DS1 PERFORMANCE 24HR

Write security:3; Read security: 5

Stores the performance data for the previous 24-hour window. Refer to *Modules (DS3) > DS1 Performance Current* for a detailed description of these fields.

MODULES (DS3) > DS1 CONFIGURATION

Write security:3; Read security: 5

All of the following configurable parameters apply to whether the port is connected to a Primary Rate ISDN circuit or a channelized T1 circuit.

MODULES (DS3) > DS1 CONFIGURATION > PRT

Read security: 5

Displays the T1 number.

MODULES (DS3) > DS1 CONFIGURATION > PORT NAME

Write security: 3; Read security: 5

Accepts any alpha-numeric name up to 16 characters long, to uniquely identify each T1 in the T3 circuit.

MODULES (DS3) > DS1 CONFIGURATION > FRAME

Write security: 2; Read security: 5

This field must be set to match the frame format of the circuit to which it is connected, available from the network supplier. Choose either **D4** or **ESF**.

MODULES (DS3) > DS1CONFIGURATION > TX YEL

Write security: 3; Read security: 5

Controls the transmission of yellow alarms. Choose either **ON** or **OFF**.

MODULES (DS3) > DS1 CONFIGURATION > TX PRM

Write security: 3; Read security: 5

Controls the sending of performance report messaging (PRM) data on the facility data link (FDL). The PRM data continues to be collected even if **XMIT PRM** is turned off (possible only with ESF format). Choose either **ON** or **OFF**.

MODULES (DS3) > DS1 CONFIGURATION > LB ACCEPT

Write security: 3; Read security: 5

Sets unit to accept or reject the in-band loop up and loop down codes as defined in ANSI T1.403. This is a line loopback. Choose either **ACCEPT** or **IGNORE**.

MODULES (DS3) > DS1 TEST

Write security: 3; Read security: 5

These options initiate different types of tests and display test results.

MODULES (DS3) > DS1 TEST > PRT

Read security: 5

Displays the T1 number.

MODULES (DS3) > DS1 TEST > LOC LB

Write security: 4; Read security: 5

Causes loopback on near-end (local) port. See Figure 12 on page 147. The following options are available:

NONE	No loopback is active.
LINE	Loopback without regenerating framing.
PAYLD	Payload loopback - framing and clocking are regenerated.

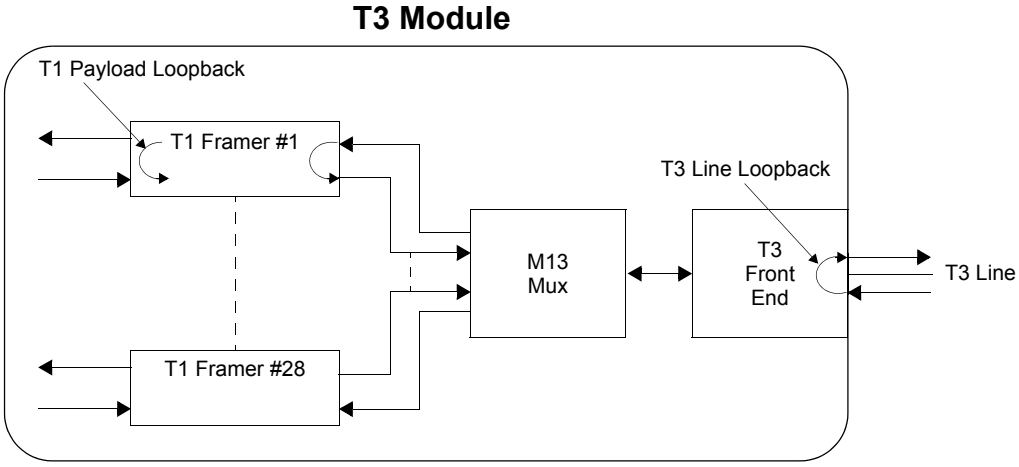


Figure 12. Network Loopback Tests

MODULES (DS3) > DS1 TEST > REMOTE LB

Write security: 4; Read security: 5

Sends loopback code to remote CSU. The following options are available:

AT&T INBAND LINE	Works in ESF and D4 mode
ANSI FDL LINE	Requires ESF mode
ANSI FDL PAYLOAD	Requires ESF mode
INBAND NIU	Works in ESF and D4 mode

MODULES (DS3) > DS1 TEST > PATTERN

Write security: 4; Read security: 5

Test pattern to be transmitted out the port. The following options are available:

NONE	No test pattern transmitted
ALL ONES	Framed ones
ALL ZEROS	Framed zeros
QRSS	Pseudo-random pattern with suppression of excess zeros

MODULES (DS3) > DS1 TEST > QRSS/RLB RESULTS

Write security: 4; Read security: 5

Displays current status of T1 tests including information regarding loopbacks and test patterns. When

displaying test pattern status, the display string is composed of pattern sync status and errored seconds.

NONE	No sync.
LOS	Sync has been lost.
SYNC	Pattern is synchronized.
ES	Number of seconds with at least one bit error.

MODULES (DS3) > DS1 TEST > CLR

Write security: 3; Read security: 5

Clears error counters on test pattern results menu.

MODULES (DS3) > DS1 TEST > INJ

Write security: 3; Read security: 5

Injects errors into transmitted test pattern.

MODULES MENU (T3 D&I OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the T3 with Drop and Insert Option Module when it is installed in the system (listed as **DS3 D&I**). To see the menus for the T3 with Drop and Insert Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the T3 with Drop and Insert Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (DS3 D&I) > DS3 INFO

Read security: 5

Displays general information about the Option Module.

MODULES (DS3 D&I) > DS3 INFO > PART NUMBER

Read security: 5

Displays the part number of the Option Module.

MODULES (DS3 D&I) > DS3 INFO > SERIAL NUMBER

Read security: 5

Displays the module's serial number.

MODULES (DS3 D&I) > DS3 INFO > BOARD REVISION

Read security: 5

Displays the board revision of the module.

MODULES (DS3 D&I) > DS3 INFO > DS1S DROPPED

Read security: 5

Displays the number of T1 circuits configured for use in the ATLAS 830 system and not passed through to the drop and insert interface.

MODULES (DS3 D&I) > DS3 INFO > DS1 FRAMER REVISION

Read security: 5

Displays the revision of the DS1 framer on the installed module.

MODULES (DS3 D&I) > DS3 INFO > M13 REV

Read security: 5

Displays the revision of the M13 mux on the installed module.

MODULES (DS3 D&I) > MUX CONFIGURATION

Write security: 3; Read security: 5

Allows users to define which T1s should be dropped for use in the ATLAS 830 system or passed on to the drop and insert interface. T1s are dropped in pairs.

MODULES (DS3 D&I) > MUX CONFIGURATION > DS1 DISPOSITION

Read security: 5

This field has 28 letters, each corresponding (from left to right) to T1s 1-28 delivered on the T3 primary interface. The following letters will display:

D	Dropped (available for use in the ATLAS 830 system)
P	Pass through to the drop and insert (secondary) T3 interface

MODULES (DS3 D&I) > MUX CONFIGURATION > DS1S DROPPED

Read security: 5

This field shows the number of T1s from the T3 circuit (in the primary interface) that are available for use in the ATLAS 830 system.

MODULES (DS3 D&I) > MUX CONFIGURATION > DS1S PASSED THRU

Read security: 5

This field shows the number of T1s from the T3 circuit (in the primary interface) that are being passed out the drop and insert (secondary) interface to other equipment.

MODULES (DS3 D&I) > MUX CONFIGURATION > DS1 PAIR 1-2 THROUGH DS1 PAIR 27-28

Write security: 3; Read security: 5

These fields indicate which pairs of T1s of the T3 circuit connected to the primary interface are selected to be dropped or passed through to the secondary interface.

MODULES (DS3 D&I) > DS3 ALARM STATUS

Read security: 5

Displays the current alarm status of the primary and secondary T3 interfaces.

MODULES (DS3 D&I) > DS3 ALARM STATUS > PRT

Read security: 5

Indicates the port number.

MODULES (DS3 D&I) > DS3 ALARM STATUS > ALARMS

Read security: 5

Displays the alarm status for the T3 circuit. An asterisk (*) indicates the presence of an alarm and a dash (-) indicates no alarm. The following alarms are monitored:

LOS	Loss of Signal. There is no T3 signal detected on the port interface.
RED	Loss of Frame or Red Alarm. Received T3 cannot be frame-synchronized. A Red Alarm is indicated when the T3 has been out of frame for 2.5 seconds.
BLUE	Alarm Indication Signal or Blue Alarm. Receiving alarm indication signal in the T3 payload from far end equipment indicating a problem upstream.
YELLOW	Remote Alarm Indication or Yellow Alarm. Receiving RAI signal from far-end equipment indicating that the far-end equipment is in red alarm.

MODULES (DS3 D&I) > DS3 ALARM STATUS > FE ALARMS

Read security: 5

Displays received alarms from the far-end equipment.

MODULES (DS3 D&I) > DS3 ALARM STATUS > RX FRAMING

Indicates whether Rx framing is being used on the T3 circuit. An asterisk (*) indicates the presence of Rx framing and a dash (-) indicates no Rx framing present.

MODULES (DS3 D&I) > DS3 PERFORMANCE CURRENT

Write security:3; Read security: 5

The performance fields (either current, 15-minute total, or 24-hour total) provide status on key performance measures as specified in ANSI T1.231-1993 for DS3 interfaces.

MODULES (DS3 D&I) > DS3 PERFORMANCE CURRENT > PRT

Displays the port number.

MODULES (DS3 D&I) > DS3 PERFORMANCE CURRENT > CLR

Clears performance information for the selected port.

MODULES (DS3 D&I) > DS3 PERFORMANCE CURRENT > ES_L

(Errored Seconds - Line) Count of seconds containing excessive zeros, LOS, or BPVs, not due to line code substitutions.

MODULES (DS3 D&I) > DS3 PERFORMANCE CURRENT > SES_L

(Severely Errored Seconds - Line) Count of seconds containing excessive zeros, LOS, or BPVs, not due to line code substitutions above a predetermined threshold.

MODULES (DS3 D&I) > DS3 PERFORMANCE CURRENT > LOSS_L

(Loss of Signal Second - Line) Count of seconds of LOS condition.

MODULES (DS3 D&I) > DS3 PERFORMANCE CURRENT > CV_P

(Code Violation - Path) For the M13 applications, an accumulation of P-bit parity errors. For the C-bit parity application, an accumulation of CP-bit parity errors.

MODULES (DS3 D&I) > DS3 PERFORMANCE CURRENT > ES_P

(Errored Second - Path) An accumulation of seconds during which any one of the following conditions exist: parity errors, severely errored frame, or AIS signal received.

MODULES (DS3 D&I) > DS3 PERFORMANCE CURRENT > SAS_P

(SEF/AIS Second) An accumulation of seconds during which severely errored frame or AIS signal is received.

MODULES (DS3 D&I) > DS3 PERFORMANCE CURRENT > SES_P

(Severely Errored Seconds - Path) An accumulation of seconds during which parity errors, severely errored frames, or AIS signal is received.

MODULES (DS3 D&I) > DS3 PERFORMANCE CURRENT > UAS_P

(Unavailable Seconds - Path) An accumulation of one-second intervals during which the DS3 path is unavailable; i.e., 10 contiguous SES_Ps.

MODULES (DS3 D&I) > DS3 PERFORMANCE 15MIN

Write security:3; Read security: 5

Stores the performance data for the previous 15-minute window. Refer to *Modules (DS3 D&I) > DS3 Performance Current* for a detailed description of these fields.

MODULES (DS3 D&I) > DS3 PERFORMANCE 24HR

Write security:3; Read security: 5

Stores the performance data for the previous 24-hour window. Refer to *Modules (DS3 D&I) > DS3 Performance Current* for a detailed description of these fields.

MODULES (DS3 D&I) > DS3 CONFIGURATION

Write security:3; Read security: 5

Includes all of the configurable parameters pertaining to the primary and secondary T3 interfaces.

MODULES (DS3 D&I) > DS3 CONFIGURATION > PRT

Read security: 5

Displays the port number.

MODULES (DS3 D&I) > DS3 CONFIGURATION > PORT NAME

Write security: 3; Read security: 5

Enter any text up to 16 characters to uniquely identify the T3 port on the DS3 D&I Option Module.

MODULES (DS3 D&I) > DS3 CONFIGURATION > FRAME

Write security: 2; Read security: 5

Configures the framing format for the T3 circuit. Selections are **M13** or **C-BIT**.

MODULES (DS3 D&I) > DS3 CONFIGURATION > TX CLOCK

Write security: 3; Read security: 5

Selects the source of the T3 transmit clock. The following options are available:

RECOVERED	The ATLAS 830 will derive transmit T3 timing from the receive T3.
INTERNAL	The ATLAS 830 will derive transmit T3 timing from the internal ±20 PPM crystal source.

Every T3 connection should have one **RECOVERED** *and one* **INTERNAL** *transmit clock. Failure to configure this will result in T3 clock slips.*

MODULES (DS3 D&I) > DS3 CONFIGURATION > LBO

Write security: 3; Read security: 5

Selects the line build out for the T3 transmitter. The following options are available:

SHORT	0 to 100 feet of cable
LONG	100 to 450 feet of cable

MODULES (DS3 D&I) > DS3 TEST

Write security: 3; Read security: 5

Executes loops and indicates test status.

MODULES (DS3 D&I) > DS3 TEST > PRT

Read security: 5

Indicates the T3 port under test.

MODULES (DS3 D&I) > DS3 TEST > LOOPBACK

Write security: 3; Read security: 5

This field indicates the present loopback selected. The following options will display:

NONE	No loopback in effect
LINE	T3 line loopback active

MODULES (DS3 D&I) > DS3 TEST > REMOTE LB

Write security: 3; Read security: 5

This field indicates if loopbacks initiated from remote sources are in effect and may be used to execute remote loopbacks on the far-end T3 equipment. The following options are available:

NONE	No remote loopbacks are activated
DS3 LINE	T3 line loopback active
DS1 #1 ... DS1 #28	Remote individual T1 line loopback is activated
DS1 ALL LINE	Remote T1 line loopbacks for all 28 T1s is activated

MODULES (DS3 D&I) > DS3 TEST > REMOTE STATUS

Write security: 3; Read security: 5

This field indicates the progress of remote loopbacks. The following options will display:

LINE LOOPBACK ACTIVE	Remote line loopback is active.
NO LOOPS ACTIVE	Remote line loopbacks are inactive.

MODULES (DS3 D&I) > DS1 ALARM STATUS

Write security: 3; Read security: 5

Indicates T1 alarm status.

MODULES (DS3 D&I) > DS1 ALARM STATUS > PRT

Read security: 5

Indicates the number of the T1 circuit (1-28).

MODULES (DS3 D&I) > DS1 ALARM STATUS > ALARMS

Read security: 5

Displays the alarm status for each of the 28 T1 circuits. An asterisk (*) indicates the presence of an alarm and a dash (-) indicates no alarm. The following alarms are monitored:

RED	Loss of Frame or Red Alarm. Received T1 cannot be frame-synchronized. A Red Alarm is indicated when the T1 has been out of frame for 2.5 seconds.
YELLOW	Remote Alarm Indication or Yellow Alarm. Receiving RAI signal from far-end equipment indicating that the far-end equipment is in red alarm.
BLUE	Alarm Indication Signal or Blue Alarm. Receiving alarm indication signal in the T1 payload from far end equipment indicating a problem upstream.
DS0 ALARM	D Channel alarm is only meaningful if T1 is defined as a PRI. (PRI configuration of a T1 circuit in a T3 bundle requires using one of the HDLC resources provided on the system controller module or an HDLC Option Module.)

MODULES (DS3 D&I) > DS1 DS0 STATUS

Read security: 5

Indicates usage on a DS0 basis for each T1 in the T3 circuit. These options are read-only:

-	Unallocated
*****	Inactive
+	Signaling mismatch
A	Active B Channel
D	Active D Channel
M	Maintenance
N	Dedicated (nailed)
O	Off hook - originate (RBS)
R	Ringing (RBS); Restart (ISDN)
W	Waiting dial tone

MODULES (DS3 D&I) > DS1 DS0 ALARM

Read security: 5

Displays per-DS0 alarm status for each T1 in the T3 circuit. These alarms usually indicate the failure to receive the protocol that has been configured for the DS0.

-	No Alarm DS0
D	D Channel Alarm (ISDN)
F	Frame Alarm (packet)
T	TBOP Alarm (packet)
P	PPP Alarm (packet)

MODULES (DS3 D&I) > DS1 SIG STATUS

Read security: 5

Read-only field that indicates signaling of all 24 DS0s for each T1 in the T3 circuit. The A/B bits for Rx (receive) and Tx (transmit) DS0s are shown when the T1s are configured for D4 framing. When the T1s are configured for ESF framing, ABCD bits are shown for each DS0. Dashes display for those DS0s where robbed bit signaling (RBS) is not being transferred by the ATLAS 830.

MODULES (DS3 D&I) > DS1 PERFORMANCE CURRENT

Write security:3; Read security: 5

The performance fields (either current, 15-minute total, or 24-hour total) provide status on key performance measures as specified in ANSI T1.403 and AT&T TR54016 for each T1 in the T3 circuit. Except for **CLR**, these fields are all read-only.

MODULES (DS3 D&I) > DS1 PERFORMANCE CURRENT > PRT

Displays the T1 number (1-28).

MODULES (DS3 D&I) > DS1 PERFORMANCE CURRENT > CLR

Clears performance information for the selected T1.

MODULES (DS3 D&I) > DS1 PERFORMANCE CURRENT > ES

Errored Second (ES) is a second with one or more error events OR one or more Out Of Frame events OR one or more Controlled Slips.

MODULES (DS3 D&I) > DS1 PERFORMANCE CURRENT > BES

Bursty Errored Second (BES) is a second with more than one, but less than 320 error events.

MODULES (DS3 D&I) > DS1 PERFORMANCE CURRENT > SES

Severely Errored Second (SES) is a second with 320 or more error events OR one or more Out Of Frame events.

MODULES (DS3 D&I) > DS1 PERFORMANCE CURRENT > SEFS

Severely Errored Frame Second is a second that contains four consecutive errored framing patterns.

MODULES (DS3 D&I) > DS1 PERFORMANCE CURRENT > LOFC

Loss of Frame Count is a count of seconds in which a valid framing pattern could not be obtained.

MODULES (DS3 D&I) > DS1 PERFORMANCE CURRENT > CSS

Controlled Slip Second.

MODULES (DS3 D&I) > DS1 PERFORMANCE CURRENT > UAS

Unavailable Second

MODULES (DS3 D&I) > DS1 PERFORMANCE CURRENT > PCV

Path Code Violation.

MODULES (DS3 D&I) > DS1 PERFORMANCE 15MIN

Write security:3; Read security: 5

Stores the performance data for the previous 15-minute window. Refer to *Modules (DS3 D&I) > DS1 Performance Current* for a detailed description of these fields.

MODULES (DS3 D&I) > DS1 PERFORMANCE 24HR

Write security:3; Read security: 5

Stores the performance data for the previous 24-hour window. Refer to *Modules (DS3 D&I) > DS1 Performance Current* for a detailed description of these fields.

MODULES (DS3 D&I) > DS1 CONFIGURATION

Write security:3; Read security: 5

All of the following configurable parameters apply to whether the port is connected to a Primary Rate ISDN circuit or a channelized T1 circuit.

MODULES (DS3 D&I) > DS1 CONFIGURATION > PRT

Read security: 5

Displays the T1 number.

MODULES (DS3 D&I) > DS1 CONFIGURATION > PORT NAME

Write security: 3; Read security: 5

Accepts any alpha-numeric name up to 16 characters long, to uniquely identify each T1 in the T3 circuit.

MODULES (DS3 D&I) > DS1 CONFIGURATION > FRAME

Write security: 2; Read security: 5

This field must be set to match the frame format of the circuit to which it is connected, available from the network supplier. Choose either **D4** or **ESF**.

MODULES (DS3 D&I) > DS1 CONFIGURATION > TX YEL

Write security: 3; Read security: 5

Controls the transmission of yellow alarms. Choose either **ON** or **OFF**.

MODULES (DS3 D&I) > DS1 CONFIGURATION > TX PRM

Write security: 3; Read security: 5

Controls the sending of performance report messaging (PRM) data on the facility data link (FDL). The PRM data continues to be collected even if **XMIT PRM** is turned off (possible only with ESF format). Choose either **ON** or **OFF**.

MODULES (DS3 D&I) > DS1 CONFIGURATION > LB ACCEPT

Write security: 3; Read security: 5

Sets unit to accept or reject the in-band loop up and loop down codes as defined in ANSI T1.403. This is a line loopback. Choose either **ACCEPT** or **IGNORE**.

MODULES (DS3 D&I) > DS1 TEST

Write security: 3; Read security: 5

These options initiate different types of tests and display test results.

MODULES (DS3 D&I) > DS1 TEST > PRT

Read security: 5

Displays the T1 number.

MODULES (DS3 D&I) > DS1 TEST > LOC LB

Write security: 4; Read security: 5

Causes loopback on near-end (local) port. See Figure 12 on page 147. The following options are available:

NONE	No loopback active
LINE	Loopback without regenerating framing
PAYLD	Payload loopback - framing and clocking are regenerated

MODULES (DS3 D&I) > DS1 TEST > REMOTE LB

Write security: 4; Read security: 5

Sends loopback code to remote CSU. The following options are available:

AT&T INBAND LINE	Works in ESF and D4 mode
ANSI FDL LINE	Requires ESF mode
ANSI FDL PAYLOAD	Requires ESF mode
INBAND NIU	Works in ESF and D4 mode

MODULES (DS3 D&I) > DS1 TEST > PATTERN

Write security: 4; Read security: 5

Test pattern to be transmitted out the port. The following options are available:

NONE	No pattern transmitted
ALL ONES	Framed ones
ALL ZEROS	Framed zeros
QRSS	Pseudo-random pattern with suppression of excess zeros

MODULES (DS3 D&I) > DS1 TEST > QRSS/RLB RESULTS

Write security: 4; Read security: 5

Displays current status of T1 tests including information regarding loopbacks and test patterns. When displaying test pattern status, the display string is composed of pattern sync status and errored seconds.

NONE	No sync
LOS	Sync has been lost
SYNC	Pattern is synchronized
ES	Number of seconds with at least one bit error

MODULES (DS3 D&I) > DS1 TEST > CLR

Write security: 3; Read security: 3

Clears error counters on test pattern results menu.

MODULES (DS3 D&I) > DS1 TEST > INJ

Write security: 3; Read security: 3

Injects errors into transmitted test pattern.

MODULES MENU (VIDEO OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the Video Option Module when it is installed in the system. To see the menus for the Video Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the Video Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (VIDEO) > INFO

Write security: 5; Read security: 5

Provides information about the module part number, serial number, and board revision.

MODULES (VIDEO) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module. (Read-only.)

MODULES (VIDEO) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module. (Read-only.)

MODULES (VIDEO) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the installed module. (Read-only.)

MODULES (VIDEO) > ALARM STATUS

Write security: 5; Read security: 5

Displays the current alarm status of the DTE interface.

MODULES (VIDEO) > ALARM STATUS > PRT

Write security: 5; Read security: 5

Indicates the port number.

MODULES (VIDEO) > ALARM STATUS > ALARMS

Write security: 5; Read security: 5

Displays an alarm condition on the DTE interface.

SLIP	A rate mismatch exists between the DTE clock and the network-side clock (as set by DS0 assignment).
PLL	The Video Module DTE port is not able to lock onto the clock provided by the network interface.
ZERO	The DTE is sending an excessive number of consecutive zeroes to the network interface.
NO EXT CLK	The DTE is not providing an external transmit clock. This alarm displays only if the Video Module DTE port is configured to get its transmit clock from the DTE.

MODULES (VIDEO) > DTE STATUS

Write security: 5; Read security: 5

Shows the status of key DTE interface signals. An asterisk (*) indicates the presence of a signal and a hyphen (-) indicates no signal present.

MODULES (VIDEO) > DTE STATUS > PRT

Write security: 5; Read security 5

Operating port number.

MODULES (VIDEO) > DTE STATUS > DTE STATUS

Write security: 5; Read security 5

The following signals are monitored (these options are read-only):

RTS	Request to send from DTE.
CTS	Clear to send to DTE.
DTR	Data terminal ready from DTE.
DSR	Data set ready to DTE.
DCD	Data carrier detect to DTE.
RI	Ring indicate to DTE.
TD	Transmit data from the DTE.
RD	Receive data toward the DTE.
EC	External clock present.

MODULES (VIDEO) > DATA RATE

Write security: 5; Read security: 5

Displays data rate at which each port is currently operating.

MODULES (VIDEO) > DATA RATE > PORT

Write security: 5; Read security: 5

Indicates port number.

MODULES (VIDEO) > DATA RATE > RATE

Write security: 5; Read security: 5

Displays the data rate at which each Video Module DTE port is currently operating. A port's data rate is determined by the number of B channels assigned to it and the rate per channel associated with the active call.

MODULES (VIDEO) > PLL/FIFO

Write security: 5; Read security: 5

Displays the Phase Lock Loop (PLL) and FIFO status.

MODULES (VIDEO) > PLL/FIFO > PORT

Write security: 5; Read security: 5

Indicates the operating port.

MODULES (VIDEO) > PLL/FIFO > PLL/FIFO

Write security: 5; Read security: 5

Displays the PLL and FIFO status.

LOCK	PLL is locked (This is required to transfer data.)
RXE	Receive data FIFO empty.
RXF	Receive data FIFO full.
TXE	Transmit data FIFO empty.
TXF	Transmit data FIFO full.

MODULES (VIDEO) > CONFIGURATION

Write security: 5; Read security: 5

Describes the configurable parameters which apply to the individual Video Module DTE ports.

MODULES (VIDEO) > CONFIGURATION > PRT

Write security: 5; Read security: 5

Displays the port number.

MODULES (VIDEO) > CONFIGURATION > NAME

Write security: 3; Read security: 5

Accepts any alpha-numeric name up to 16 characters long, to uniquely identify each DTE port on the Video Module.

MODULES (VIDEO) > CONFIGURATION > CLK +/-

Write security: 3; Read security: 5

Controls the clock used by the ATLAS 830 to accept the transmit (TX) data from the DTE. This is usually set to **NORMAL**. If the interface cable is long, causing a phase shift in the data, the clock can be set to **INVERTED**. This switches the phase of the clock, which compensates for a long cable.

MODULES (VIDEO) > CONFIGURATION > DATA

Write security: 3; Read security: 5

Controls the inverting of the DTE data. This inversion can be useful when operating with a high-level data link control (HDLC) protocol (often used as a means to ensure 1s density). Select either **NORMAL** or **INVERTED**. Data inversion configuration must match at both ends of the circuit.

MODULES (VIDEO) > CONFIGURATION > CTS

Write security: 3; Read security: 5

Determines the behavior of the Clear To Send (**CTS**) signal. If set to **NORMAL**, CTS will follow the value of Request To Send (**RTS**). If set to **FORCED ON, CTS** will always be asserted.

MODULES (VIDEO) > CONFIGURATION > DCD

Write security: 3; Read security: 5

Determines the behavior of the Data Carrier Detect (**DCD**) signal, also called RLSD on V.35 interfaces. If set to **NORMAL, DCD** will generally be asserted when the interface is capable of passing data. If set to **FORCED ON, DCD** will always be asserted.

MODULES (VIDEO) > CONFIGURATION > DSR

Write security: 3; Read security: 5

Determines the behavior of the Data Set Ready (**DSR**) signal. If set to **NORMAL, DSR** will generally be asserted when the interface is capable of passing data. If set to **FORCED ON, DSR** will always be asserted.

MODULES (VIDEO) > CONFIGURATION > DTR

Write security: 3; Read security: 5

Selects the response to DTR transitions. Table 2 on page 163 lists the configuration options for the DTR parameter with respect to the current configuration for the module in the Dial Plan.

Table 2. DTR Descriptions

DIAL METHOD (DIAL PLAN)	DTR SETTING	DESCRIPTION
Dial on DTR	Recognize DTR	Call is dialed when DTR is high and disconnects when DTR goes low.
	Ignore DTR	Call will never connect.
RS-366	Recognize DTR	Call is dialed if DTR is already high and disconnected when DTR goes low.
	Ignore DTR	Call is dialed regardless of DTR state and must be disconnected manually.
Manual	Recognize DTR	Call is dialed if DTR is already high and disconnected when DTR goes low.
	Ignore DTR	Call is dialed regardless of DTR state and must be disconnected manually.

MODULES (VIDEO) > CONFIGURATION > 0 INH

Write security: 3; Read security: 5

When the port detects an uninterrupted string of 0s being transmitted for more than one second, setting this parameter to **ON** will cause the ATLAS 830 to send 1s toward the network.

MODULES (VIDEO) > TEST

Write security: 5; Read security: 5

These options initiate different types of tests and display test results.

MODULES (VIDEO) > TEST > PRT

Write security: 5; Read security: 5

Indicates the port number.

MODULES (VIDEO) > TEST > LOOPBACK

Write security: 4; Read security: 5

The Video Module supports both local and remote loopbacks. The following options are available:

NO LOOPBACK	No active loopback.
LOCAL LOOPBACK	Activates both a local loopback (back toward the DTE) and a port loopback (toward the network).
REMOTE LOOPBACK	Initiates a local loopback request sent to the remote Video Module. This allows for end-to-end circuit test.

The **REMOTE LOOPBACK** *option is only supported for Dual Video Module to Dual Video Module applications.*

MODULES (VIDEO) > TEST > LOOPBACK STATUS

Write security: 5; Read security: 5

This read-only option indicates a port's current loopback status by displaying any of the following status messages:

NO LOOPBACK ACTIVE

LOOPING UP REMOTE UNIT . . .

REMOTE UNIT LOOPED BACK

LOOPING DOWN REMOTE UNIT . . .

REMOTE LOOP-UP FAILED

PORT LOOPED FROM REMOTE SOURCE

PORT LOOPBACK ACTIVE

MODULES (VIDEO) > TEST > 511

Write security: 4; Read security: 5

Controls the activation of the 511 test pattern generator and detector. The 511 pattern is generated inward through the ATLAS system.

MODULES (VIDEO) > TEST > 511 RESULT

Write security: 5; Read security: 5

Displays the results of the 511 test. This option is read-only. Clear these results by pressing <Enter > when **CLR** is selected.

NONE	Pattern is not synchronized.
LOS	At one point the pattern was synchronized, but is currently not synchronized.
SYNC	Pattern is synchronized.
ES	Number of seconds with at least one bit error.

MODULES (VIDEO) > TEST > 511 > CLR

Write security: 4; Read security: 4

Clears error counters on test pattern results menu.

MODULES (VIDEO) > TEST > 511 > INJECT

Write security: 4; Read security: 4

Injects errors into transmitted test pattern.

MODULES (VIDEO) > DTE INTERFACE

Write security: 5; Read security: 5

Configures the DTE port of the Video Module for the appropriate interface type. Select the parameters matching the interface cable being used.

MODULES (VIDEO) > DTE INTERFACE > PRT

Write security: 5; Read security: 5

Displays the port number.

MODULES (VIDEO) > DTE INTERFACE > DTE INTERFACE MODE

Write security: 3; Read security: 5

Configures the DTE port interface type. The following options are available:

AUTO	The ATLAS 800 Series will automatically detect the interface type. The cable must be connected before the interface can be determined.
EIA-530	Configures the interface for EIA-530 use.
V.35	Configures the interface for V.35 use.
RS-449	Configures the interface for RS-449 use.
LOOPBACK	Configures the interface to emulate a connected loopback cable.

MODULES (VIDEO) > DTE INTERFACE > CURRENT DTE TYPE

Write security: 5; Read security: 3

Displays the current configuration of the Video Module DTE Interface.

MODULES MENU (NXT1 HSSI OPTION MODULE)

The NxT1 HSSI/V.35 Module system controller automatically detects the presence of the NxT1 HSSI Option Module when it is installed in the system (listed as **NXT1 HSSI**). To see the menus for the NxT1 HSSI Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. V.35 is available when using the optional adapter cable (ADTRAN P/N 3125I081). Some of the following menus do not apply when configured for V.35 mode.

MODULES (NXT1 HSSI) > INFO

Read security: 5

Provides information about the module part number, serial number, and board revision.

MODULES (NXT1 HSSI) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module.

MODULES (NXT1 HSSI) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module.

MODULES (NXT1 HSSI) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the installed module.

MODULES (NXT1 HSSI) > INFO > FIRMWARE REVISION

Read security: 5

Displays the firmware revision of the installed module.

MODULES (NXT1HSSI) > T1 ENABLE

Write Security: 3; Read Security: 5

Configures the NxT1 HSSI Option Module to activate the module's four built-in T1 interfaces. When configuring the module to use more than four T1s from other installed T1/T3 modules, this field should be set to **DISABLED**.

NOTE

The NxT1 HSSI/V.35 Module's four built-in T1 interfaces are activated collectively as a bundle. Setting the **T1 ENABLE** *menu to* **ENABLED** *allows you to map from any/all of the built-in T1 ports to the HSSI interface. Setting the* **T1 ENABLE** *menu to* **DISABLED** *requires ALL of the T1s mapped to the HSSI interface to be from other installed T1/T3 modules.*

MODULES (NXT1HSSI) > IMUX MENUS

Read Security: 5

Contains the inverse muxing configuration parameters for the NxT1 HSSI Option Module.

MODULES (NXT1HSSI) > IMUX MENUS > CONFIG

Read Security: 5; Write Security: 5

Contains parameters to include T1 data streams to the HSSI interface.

MODULES (NXT1HSSI) > IMUX MENUS > CONFIG > PRT

Indicates the port number. Displays the port number for the T1s mapped to the NxT1 HSSI interface. Ports 1 through 4 are the T1 interfaces located on the NxT1 HSSI Option Module. Ports 5 through 8 are T1s mapped to the NxT1 HSSI Option Module in the Dedicated Maps.

MODULES (NXT1HSSI) > IMUX MENUS > CONFIG > GRP ASSOC

Associates T1s (either mapped to this card and/or the on-board T1s) with the HSSI interface data stream. To add the T1 to the data stream, select the **GROUP1** option.

MODULES (NXT1HSSI) > IMUX MENUS > CONFIG > SCRAMBLE

Enabling the **SCRAMBLE** option configures the NxT1 HSSI Module to prevent ones density violations when transmitting ADTRAN IMUX headers on a T1 circuit with AMI line coding.

Use extreme caution when disabling the **SCRAMBLE** *option. ADTRAN recommends enabling the* **SCRAMBLE** *option for normal use.*

MODULES (NXT1HSSI) > HSSI MENUS

Read Security: 5

Provides status, configuration, and testing parameters for the 50-pin SCSI-II HSSI interface.

MODULES (NXT1HSSI) > HSSI MENUS > STATUS

Read Security: 5

Displays the current loopback status of the HSSI interface.

MODULES (NXT1HSSI) > HSSI MENUS > STATUS > PRT

Indicates the port number.

MODULES (NXT1HSSI) > HSSI MENUS > STATUS > LOOPBACK

Displays the current loopback status of the HSSI interface. See Figure 13 on page 168.

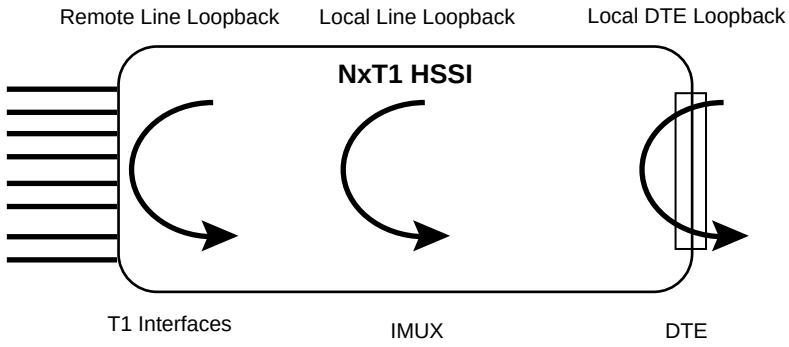


Figure 13. HSSI Interface Loopback Test Diagram

MODULES (NXT1HSSI) > HSSI MENUS > STATUS > LOCAL DTE LOOPBACK

A local DTE loopback occurs at the DTE port of the DCE, and is used to test the link between the DTE and DCE (NxT1HSSI module).

MODULES (NXT1HSSI) > HSSI MENUS > STATUS > LOCAL LINE LOOPBACK

A local line loopback occurs in the IMUX engine and is used to test functionality between the DTE and the IMUX engine.

MODULES (NXT1HSSI) > HSSI MENUS > STATUS > REMOTE LINE LOOPBACK

A remote line loopback occurs at the T1 interface and is used to test functionality between the DTE and the T1 interfaces.

MODULES (NXT1HSSI) > HSSI MENUS > STATUS > LA AND LB

Displays the status of the loopback circuit A and B signals. LA and LB are asserted by the DTE to enable a loopback on the DCE and its associated data communications channel. There are four loopback options:

LA	LB	LOOPBACK
Off	Off	No Loopback Active
On	On	Local DTE Loopback is Active
On	Off	Local Line Loopback is Active
Off	On	Remote Line Loopback is Active

MODULES (NXT1HSSI) > HSSI MENUS > STATUS > TA

Displays the status of the data Terminal equipment **AVAILABLE** signal. TA will be asserted by the DTE (independently of CA) when the DTE is prepared to both send and receive data to and from the DCE. Valid data transmission should not commence until CA has also been asserted by the DCE. If the data communications channel requires a keep alive data pattern when the DTE is disconnected, then the DCE shall supply this pattern while TA is de-asserted.

When using the NxT1 HSSI Module (1200346L2 only) in V.35 mode, TA displays the status of the Request to Send (**RTS**) signal. When RTS is active in a V.35 configuration, Clear to Send (**CTS**) is also active.

MODULES (NXT1HSSI) > HSSI MENUS > STATUS > RX RATE

Displays the current average receive data rate on the HSSI interface.

MODULES (NXT1HSSI) > HSSI MENUS > STATUS > TX RATE

Displays the current average transmit data rate on the HSSI interface.

MODULES (NXT1HSSI) > HSSI MENUS > CONFIG

Read Security: 5

Provides configuration parameters for the HSSI interface including data clocking.

*When using the NxT1 HSSI/V35 Module in V.35 mode, Data Set Ready (***DSR***) and Data Carrier Detect (***DCD***) are always active.*

MODULES (NXT1HSSI) > HSSI MENUS > CONFIG > PRT

Indicates port number.

MODULES (NXT1HSSI) > HSSI MENUS > CONFIG > TX CLK

Controls the clock used by the NxT1 HSSI/V.35 Module to accept the transmit (TX) data from the DTE. This is usually set to **NORMAL.** If the interface cable is long, causing a phase shift in the data, the clock can be set to **INVERTED**. This switches the phase of the clock, which compensates for a long cable.

MODULES (NXT1HSSI) > HSSI MENUS > CONFIG > CA

(Not applicable in V.35 mode.)

Asserts the data Communications equipment **AVAILABLE** signal from the DCE. CA will be asserted by the DCE, independently of TA, when the DCE is prepared to both send and receive data to and from the DTE. This indicates that the DCE has obtained a valid data communications channel. Data transmission should not commence until TA has also been asserted by the DTE.

MODULES (NXT1HSSI) > HSSI MENUS > CONFIG > LC

(Not applicable in V.35 mode.)

Enables the Loopback Circuit C signal from the DCE. LC is an optional loopback request signal from the DCE to the DTE, requesting the DTE provide a loopback path to the DCE.

MODULES MENU (OCTAL FXS OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the Octal FXS Option Module when it is installed in the system (listed as **FXS-8**). To see the menus for the Octal FXS Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the Octal FXS Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (FXS-8) > INFO

Read security: 5

Provides information about the module part number, serial number and assembly revision.

MODULES (FXS-8) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module.

MODULES (FXS-8) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module.

MODULES (FXS-8) > INFO > BOARD REVISION

Read security: 5

Displays the assembly revision.

MODULES (FXS-8) > STATUS

Read security: 5

Displays the status of each of the FXS ports.

MODULES (FXS-8) > STATUS > PRT

Read security: 5

Indicates the port number.

MODULES (FXS-8) > STATUS > STATUS

Read security: 5

Displays the call status of each voice port. This field may display the following:

INACTIVE

The port is preconfigured, but the FXS module is not present.

DISABLED

The FXS module is present, but the port is not mapped.

IDLE

The FXS port is in an idle state for LS configurations, and tip is grounded in GS configurations.

TIP-OPEN

The FXS port tip conductor is high impedance. This is an idle condition for GS trunks.

OFF HOOK

The FXS port has detected an off hook condition (loop current flowing).

REVERSE BATTERY

The FXS port has reversed T/R polarity.

TEST

This generic FXS port test indicator is used when multiple tests are being run or the test is not a 2W test.

ACTIVE	Active test is currently running.
OFF HOOK	Active/Reverse Battery test is running, but an off hook condition is detected.
REV. BAT	Reverse Battery test is currently running.
RINGING	Ringing test is currently running
TIP OPEN	Tip Open test is currently running.
RING GND	Tip Open test is currently running, but ring ground is detected.
(-R) TRIP	Ringing test is currently running, but an off hook condition is detected.

MODULES (FXS-8) > STATUS > RX ABCD

Read security: 5

Receive Signaling bits have local significance only, and represent signaling between the ATLAS 830 Controller and the voice port if the port is configured in the **DIAL PLAN**. The bit pattern is formatted **ESF RBS**.

MODULES (FXS-8) > STATUS > TX ABCD

Read security: 5

Transmit Signaling bits have local significance only, and represent signaling between the ATLAS 830 Controller and the voice port if the port is configured in the **DIAL PLAN**. The bit pattern is formatted **ESF RBS**.

MODULES (FXS-8) > TEST

Write security: 4; Read security: 5

These options initiate different types of tests and display test results.

MODULES (FXS-8) > TEST > PORT

Write security: 5; Read security: 5

Displays the operating port.

MODULES (FXS-8) > TEST > TEST 2W

Write security: 4; Read security: 5

Activates 2W (FXS) tests on a per-port basis. Options include **OFF, ACTIVE, TIP OPEN, REV. BATTERY, DISABLED,** and **RINGING**. The 2W tests will disrupt the active call on the selected FXS port. Table 3 displays the state of the 2W conductors during each test.

Table 3. FXS 2W State Table

TEST	TIP OUTPUT	RING OUTPUT
Off	No test active	No test active
Active	Ground	Supervision voltage
Tip Open	High impedance	Supervision voltage
Rev. Battery	Supervision voltage	Ground
Disabled*	High impedance	High impedance
Ringing	Ringing voltage	Ringing voltage
* Disables the output of the FXS port; it does not disable the test.		

MODULES (FXS-8) > TEST > TX ABCD

Write security: 4; Read security: 5

Forces the Transmit Robbed Bit Signaling (Tx RBS) to a specified value. Values include **OFF, 0000, 0101, 1010,** or **1111**.

NOTE

Calls may be affected when activating the Tx ABCD test. This test is not valid when the port is used in the **DIAL PLAN**.

MODULES (FXS-8) > TEST > 1KHZ TONE

Write security: 3; Read security: 5

Sends a 1kHz tone into the following locations, based on test selection: **NEAR** sends the tone out the FXS port, while **FAR** sends the tone into the digital PCM stream of the ATLAS 830 controller. These tests are useful for verifying a voice path.

MODULES (FXS-8) > TEST > LOOPBACK

Write security: 3; Read security: 5

Activates loopback tests on a per-port basis.

OFF	Normal operation.
ANALOG	Loops the 2W test on itself.
DIGITAL	Loops digital data entering the FXS from the ATLAS controller on itself.

MODULES (FXS-8) > TEST > LOOPBACK > BOTH

Processes both analog and digital loopback tests.

Loopback tests disrupt the call in progress on the selected FXS port.

MODULES (FXS-8) > CONFIG

Write security: 3; Read security: 5

All of the following configurable parameters apply to the individual FXS ports.

MODULES (FXS-8) > CONFIG > PRT

Read security: 5

Displays the port number.

MODULES (FXS-8) > CONFIG > PORT NAME

Write security: 3; Read security: 5

Accepts any alpha-numeric name up to 16 characters long, to uniquely identify each port on the Octal FXS Option Module.

MODULES (FXS-8) > CONFIG > RX GAIN

Write security: 3; Read security: 5

Adjusts the (+)Gain and (-)Attenuation of the relative signal received by the FXS. The range includes 0 (loudest), -3, and -6dB (softest).

MODULES (FXS-8) > CONFIG > TX GAIN

Write security: 3; Read security: 5

Adjusts the (+)Gain and (-)Attenuation of a digital signal transmitted by the FXS into the digital PCM stream. The range includes +3 (loudest), 0, -3, and -6 dB (softest).

When the digital signal is connected through the PSTN, a setting of -3 dB should be used.

MODULES (FXS-8) > CONFIG > 2W IMPEDANCE

Read security: 5

2-wire input impedance is set to 600 ohms +2.16 µF. This is a read-only field.

MODULES (FXS-8) > CONFIG > CODING SCHEME

Read security: 5

Displays the current PCM coding scheme. Currently only µ-Law is supported.

MODULES MENU (VCOM OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the Voice Compression (VCOM) Resource Module when it is installed in the system (listed as **VCOM-X** where X is **8** for 1200221L1, **16** for 1200221L2, **24** for 1200221L3, and **32** for 1200221L4). To see the menus for the VCOM Resource Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the VCOM Resource Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (VCOM) > INFO

Read security: 5

Provides information about the module part number, serial number and assembly revision.

MODULES (VCOM) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module.

MODULES (VCOM) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module.

MODULES (VCOM) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the installed module.

MODULES (VCOM) > INFO > FIRMWARE REVISION

Read security: 5

Displays the current firmware revision of the selected module.

MODULES (VCOM) > STATUS

Read security: 5

Displays the status of each of the voice compression resources.

MODULES (VCOM) > STATUS > DEVICE

Read security: 5

Indicates the resource number of the packet voice device listed. On the ATLAS 830, packet voice devices are numbered 1-32.

MODULES (VCOM) > STATUS > STATUS

Read security: 5

Indicates the condition of the individual packet voice device. This field may display the following:

N/A	This device is not populated on the selected VCOM Resource Module.
AVAILABLE	This resource is available for voice compression and functioning properly. If a VCOM-8 Option Module is installed, 8 voice compression resources will be **AVAILABLE** and the rest will display **N/A**. The same principle applies to the VCOM-16, 24, and 32 Option Modules.
PENDING	This resource is currently changing state.
BUSY	This resource is currently in use.
TESTING	This resource is currently being tested and is not available for use.
FAILED	This resource has failed testing and is not available for use.
RELOADED	This resource was reinitialized after excessive errors.

MODULES (VCOM) > STATUS > ALGORITHM

Read security: 5

Denotes the voice compression algorithm being used by the packet voice device. Any packet voice device can use any available compression algorithm. When ATLAS 830 chooses a packet voice device for a particular call, the voice compression algorithm is set to match the dial plan endpoint configuration. Refer to the Frame Relay menu section of this manual for more information.

N/A	This device has not been assigned a voice compression algorithm.
G.723.1	CCITT G.723.1 compression; 6.3 kbps bandwidth.
NETCODER	Proprietary NETCODER compression; 6.4 kbps bandwidth.

Some voice compression standards may be used only under specific licensing arrangements due to existing patents. The ATLAS 830 provides complete management of these licensed resources; therefore, users are not required to take additional steps to ensure conformance with licensing provisions. For example, the ATLAS 830 manages its resources so users never exceed the maximum licensed number of simultaneous connections.

MODULES (VCOM) > STATUS > SILENCE

Read security: 5

Voice endpoints continue to originate frame relay traffic during periods of relative silence. The ATLAS 830 expects to receive such silence frames; therefore, silence compression is **DISABLED** by default. Some voice endpoints can be configured so that no silence frames are transmitted during periods of relative silence. For compatibility with these devices, the ATLAS 830 can be configured to expect that silence suppression is **ENABLED**; thus, no frame relay traffic is generated during periods of silence. Both voice endpoints must agree on the silence suppression setting.

MODULES (VCOM) > STATUS > CONNECTION

Read security: 5

Helps identify a suspect packet voice device if a particular call reports poor quality. The displayed packet identifier and the dial plan endpoint identify the call using this packet voice device.

MODULES (VCOM) > STATUS > FRAME TYPE

Read security: 5

Displays the kind of frame the ATLAS 830 receives from the frame relay endpoint connected to the VCOM channel, allowing users to monitor the kind of data being carried on the network and processed by the ATLAS 830. (The ATLAS 830 interprets the most-recently received frame from the endpoint.)

During a voice connection, the frame type displays as **VOICE**. For a FAX connection, a variety of frame types display. Initially, **VOICE** displays indicating that although the call has completed, the answering FAX machine has not yet announced its 2100 HZ tone. After completing the 2100 Hz, both FAX endpoints repeat a V.21 cycle for each page of the FAX document.

Each packet the ATLAS 830 receives from its connected frame relay endpoint is classified into one of the following groups:

BLANK	No frame has yet been received from the endpoint, or a FAX connection is between protocol states.
DTMF	Dual-tone, multi-frequency (DTMF) digit received.
VOICE	Receiving voice frames. A connection to a FAX endpoint shows a VOICE status until the FAX protocol is established.
2100 HZ TONE	FAX single-frequency tone detected indicating the beginning of a FAX session.
V.21	FAX single-frequency tone detected indicating the beginning of a FAX page.
V.27TER (2400 BPS)	FAX data reception of 2400 bps using protocol V.27ter.
V.27TER (4800 BPS)	FAX data reception of 4800 bps using protocol V.27ter.
V.29 (7200 BPS)	FAX data reception of 7200 bps using protocol V.29.
V.29 (9600 BPS)	FAX data reception of 9600 bps using protocol V.29.
V.33 (12000 BPS)	FAX data reception of 12000 bps using protocol V.33.
V.33 (14400 BPS)	FAX data reception of 14400 bps using protocol V.33.

MODULES (VCOM) > CONFIG

Write security: 4; Read security: 5

Provides diagnostic tools for suspected problems; under normal operation, users do not configure the packet voice devices.

MODULES (VCOM) > CONFIG > CONFIGURE VCOM DEVICES

Write security: 4; Read security: 5

Contains configuration parameters for individual VCOM devices.

MODULES (VCOM) > CONFIG > CONFIGURE VCOM DEVICES > DEVICE

Read security: 5

Indicates the resource number of the packet voice device listed. On the ATLAS 830, packet voice devices are numbered 1-32.

MODULES (VCOM) > CONFIG > CONFIGURE VCOM DEVICES > STATE

Write security: 4; Read security: 5

Controls the configuration state of the individual packet voice device. The ATLAS 830 determines the initial configuration state of each device. ATLAS uses this configuration information to determine which packet voice devices are functional and may be used, which are defective and should not be used, or which are not present on the module and should not be used. Users who suspect an individual packet voice device of improper operation can manually disable that device to prevent ATLAS from attempting to use it. The possible states are defined below.

DEFERRED	Devices which fail built-in testing are automatically marked as **DEFERRED**, indicating that the ATLAS 830 declines to use the device.
AVAILABLE	The device is properly functioning and can be used when required. The ATLAS 830 automatically marks devices that pass built-in testing as **AVAILABLE**.
DISABLED	Marking a device as **DISABLED** prevents the ATLAS 830 from attempting to use it. You can mark a device currently in use as disabled without disturbing the connection, but the device will not be eligible for use in future calls until you re-mark it as **AVAILABLE**. This is helpful if you suspect that a particular device is malfunctioning and do not want any calls routed to it.

MODULES (VCOM) > CONFIG > GAIN SETTINGS

Write security: 5; Read security: 5

Contains the configuration for output and input gain for the VCOM Resource Module.

MODULES (VCOM) > CONFIG > GAIN SETTINGS > OUTPUT GAIN

Write security: 3; Read security: 5

Output gain is applied in the receive direction. Choices range from +12 dB (loudest) to -12 dB (softest) in 3 dB increments. This setting takes affect immediately.

MODULES (VCOM) > CONFIG > GAIN SETTINGS > INPUT GAIN

Write security: 3; Read security: 5

Input gain is applied in the transmit direction. Choices range from -12 dB (softest) to +12 dB (loudest) in 3 dB increments. This setting does not affect currently active calls.

MODULES (VCOM) > CONFIG > CURRENT FAX STATUS

Write security: 5; Read security: 5

Enables or disables fax over packet capability using the voice compression module.

MODULES (VCOM) > STATISTICS

Write security: 4; Read security: 5

These options initiate different types of tests and display test results.

MODULES (VCOM) > STATISTICS > DEVICE

Read security: 5

Indicates the resource number of the packet voice device listed. On the ATLAS 830, packet voice devices are numbered 1-32.

MODULES (VCOM) > STATISTICS > USAGE TIME

Write security: 4; Read security: 5

Measures the total elapsed time that a packet voice device has the status **BUSY**. The time is expressed with millisecond precision. Available packet voice devices are assigned new connections using a round-robin technique where all other available packet voice devices must be used before a given device is assigned a new connection. This scheme tends to use all packet voice devices evenly. If a given device shows significantly less elapsed usage time than other packet voice devices on the same ATLAS 830, that device may be faulty.

MODULES (VCOM) > STATISTICS > ATLAS FRMS

Write security: 4; Read security: 5

(ATLAS Frames) Counts every frame that the ATLAS 830 sends to or receives from the packet voice device. This count indicates activity but does not indicate the actual amount of frame relay data exchanged. The total number of frames handled by the packet voice device is given by the following equation:

$$Frames_{ATLASTotal} = Frames_{ATLAS} + Frames_{ATLASDropped}$$

See the **ATLAS DROP** definition below for a description of the term: $Frames_{ATLASDropped}$

MODULES (VCOM) > STATISTICS > ATLAS DROP

Write security: 4; Read security: 5

A counter that measures each frame that is dropped or discarded during communication between the ATLAS 830 and the packet voice device; i.e., ATLAS Frames Dropped. The exchange protocol is designed so that no frames should be discarded during this operation. A consistent pattern of dropped frames by a given packet voice device may indicate a faulty packet voice device or an overloaded ATLAS 830 system.

The discarded frame indicated by this value does not reflect network-level performance management, but indicates an anomalous condition within the ATLAS 830 unit. Persistently dropped frames may indicate a problem with the ATLAS 830 unit or the Voice Compression Resource Module.

MODULES (VCOM) > STATISTICS > VCOM FRMS

Write security: 4; Read security: 5

Counts every frame successfully sent to or received from the ATLAS 830 system controller. This is an indication of activity but does not indicate the actual amount of packet data exchanged. The following equation gives the total number of frames handled for this packet voice device by the ATLAS 830:

$$Frames_{VCOMTotal} = Frames_{VCOM} + Frames_{VCOMDropped}$$

See the **VCOM DROP** definition below for a description of the term: $Frames_{VCOMDropped}$

MODULES (VCOM) > STATISTICS > VCOM DROP

Write security: 4; Read security: 5

Counter that measures each frame dropped or discarded by ATLAS 830 during communication with the ATLAS 830 system controller about a packet voice device. The exchange protocol is designed so that no frames should be discarded during this operation. A consistent pattern of dropped frames by a given packet voice device may indicate a faulty packet voice device or an overloaded ATLAS 830 system.

NOTE

The discarded frame indicated by this value does not reflect network-level performance management but indicates an anomalous condition within the ATLAS 830 unit. Persistently dropped frames may indicate a problem with the ATLAS 830 unit or the VCOM module.

MODULES (VCOM) > STATISTICS > CLEAR

Write security: 4; Read security: 5

Resets the elapsed usage time and frame counters for this packet voice device. Ordinarily, users won't reset these performance measurements. However, this feature can be useful when testing that a suspected problem has been resolved and when zeroing the various counters would make observing future events easier.

NOTE

Resetting these performance counters has no effect on the performance values accessible via the SNMP network management interface.

MODULES (VCOM) > STATISTICS > RELOADS

Write security: 4; Read security: 5

Number of times since module reboot that this device has been reloaded due to a failure.

MODULES MENU (NX 56/64 BONDING RESOURCE MODULE)

The ATLAS 830 system controller automatically detects the presence of the Nx 56/64 BONDing Resource Module when it is installed in the system (listed as **IMUX**). To see the menus for the Nx 56/64 BONDing Resource Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the Nx 56/64 BONDing Resource Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (IMUX) > INFO

Read security: 5

Provides information about the module part number, serial number and assembly revision.

MODULES (IMUX) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module.

MODULES (IMUX) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module.

MODULES (IMUX) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the installed module.

MODULES (IMUX) > INFO > FIRMWARE REVISION

Read security: 5

Displays the current firmware revision of the Nx 56/64 BONDing Resource Module.

MODULES (IMUX) > STATUS

Read security: 5

Indicates the current status of a particular BONDING session.

MODULES (IMUX) > STATUS > STATUS

Read security: 5

Displays the current status of the BONDING session.

IDLE	Indicates the number of Idle BONDING resources for a particular BONDING engine.
RESERVED	BONDING resources reserved for a BONDING session that is in the process of coming up.
NEGOTIATING	A single channel is connected and negotiating the BONDING call for a particular BONDING session.
ADD CHANNELS	The initial BONDING negotiation was successful, and the ATLAS 830 is in the process of adding channels to the BONDING session.
BONDING	The remaining channels were brought up successfully, and the BONDING session is now ready to pass data.
TERMINATED	The BONDING session has been terminated for some reason and is in the process of freeing BONDING resources.

MODULES (IMUX) > STATUS > NUMBCHANNELS

Read security: 5

Displays the number of bearer channels used in this BONDING session. When the number is displayed in the format X/Y, Y is the number of BONDING resources reserved for this session, and X is the number of calls belonging to this session that are up. If just a number is displayed, then all calls are up, and the number displayed is the number of BONDING resources in use for this session.

MODULES (IMUX) > STATUS > DATA RATE

Read security: 5

Displays the data rate for this BONDING session. The number in the parenthesis is the data rate of the individual bearer channels.

MODULES (IMUX) > STATUS > BONDED EP

Read security: 5

Displays the slot and port of the terminating endpoint that is using this BONDING session.

MODULES (IMUX) > CONFIGURATION

Write security: 3; Read security: 5

All of the following configurable parameters apply to the Nx 56/64 BONDing Resource Module. In most applications the default values will be correct.

MODULES (IMUX) > CONFIGURATION > TXINIT TIMER (SEC)

Specifies the length of time the originating endpoint attempts to detect the BONDING negotiation pattern from the answering endpoint before deciding the BONDING call has failed.

MODULES (IMUX) > CONFIGURATION > TXFA TIMER (SEC)

Specifies the length of time both endpoints attempt to detect the BONDING frame pattern when a call is connected before deciding the BONDING call has failed. When interoperating with other manufacturers' BONDING equipment, it may be necessary to change this time so that it matches **TXADD01**.

MODULES (IMUX) > CONFIGURATION > TXADD01 TIMER (SEC)

Specifies the length of time both endpoints wait for additional calls to be connected at the end of negotiation before deciding that the BONDING call has failed. The factory default setting is sufficient for most calls to connect, although when dialing overseas it may be necessary to lengthen this timer to allow for slower call routing.

MODULES (IMUX) > CONFIGURATION > TXDEQ TIMER (SEC)

Specifies the length of time both endpoints attempt to equalize the network delay between the bearer channels before deciding the BONDING call has failed.

MODULES (IMUX) > CONFIGURATION > TANULL TIMER (SEC)

Specifies the length of time the answering endpoint attempts to detect the BONDING negotiation pattern from the originating endpoint before deciding the BONDING call has failed. It may be necessary to shorten this timer if the DTE equipment using the BONDING module also has timer constraints for completing non-BONDING parameter negotiation.

MODULES (IMUX) > CONFIGURATION > TCID TIMER (SEC)

Specifies the length of time both endpoints attempt to negotiate an agreeable value for bearer channels and channel capacities before deciding the BONDING call has failed.

MODULES (IMUX) > CONFIGURATION > CALL STAGGER

Specifies the amount of delay between placing calls for outgoing BONDING sessions. The following call stagger values are available:

NO STAGGER	There is no delay between the call dialing of a BONDING session.
500 MS	Wait approximately ½ second between the call dialing of a BONDING session.
1 SEC.	Wait approximately 1 second between the call dialing of a BONDING session.
2 SEC.	Wait approximately 2 seconds between the call dialing of a BONDING session.

MODULES MENU (HDLC OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the HDLC Option Module when it is installed in the system (listed as **HDLC-128**). To see the menus for the HDLC Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the HDLC Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (HDLC-128) > INFO

Read security: 5

Provides information about the module part number, serial number and assembly revision.

MODULES (HDLC-128) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module.

MODULES (HDLC-128) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module.

MODULES (HDLC-128) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the installed module.

MODULES (HDLC-128) > STATUS

Read security: 5

Displays the submenus for available resources on the HDLC Option Module.

MODULES (HDLC-128) > STATUS > DS0S AVAILABLE

Read security: 5

Displays the total number of DS0s currently available for allocation on the HDLC Option Module. The maximum value is 128.

MODULES (HDLC-128) > STATUS > CHANNELS

Write security: 4; Read security: 5

Displays status information about the resources that have been allocated on the HDLC Option Module.

MODULES (HDLC-128) > STATUS > CHANNELS > CHANNEL ID

Read security: 5

Indicates the resource number of the allocated resource listed. If a number does not appear in the list, that resource is not currently allocated.

MODULES (HDLC-128) > STATUS > CHANNELS > DS0S

Read security: 5

Displays the number of DS0s that are being used by the resource. This value multiplied by the DS0 Rate yields the bandwidth that has been assigned to the resource.

MODULES (HDLC-128) > STATUS > CHANNELS > 56/64K

Read security: 5

Displays the per DS0 rate that is being used by the resource. This value multiplied by the number of DS0s yields the bandwidth that has been assigned to this resource.

MODULES (HDLC-128) > STATUS > CHANNELS > TX FRAMES

Read security: 5

Displays the number of frames that have been transmitted by this resource.

MODULES (HDLC-128) > STATUS > CHANNELS > RX FRAMES

Read security: 5

Displays the number of frames that have been received by this resource.

MODULES (HDLC-128) > STATUS > CHANNELS > ERRORS

Read security: 5

Displays the total number of errors received by the resource. Press <Enter > on this field to view the number of Total Errors, CRC Errors, Aborted Frames, and Invalid Frames.

MODULES (HDLC-128) > STATUS > CHANNELS > CLRCNTR

Write security: 4; Read security: 5

Resets all counters for the resource channel.

MODULES MENU (MODEM-16 OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the Modem-16 Option Module when it is installed in the system (listed as **M56K-16**). To see the menus for the Modem-16 Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the Modem-16 Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (M56K-16) > INFO

Read security: 5

Provides information about the module part number, serial number and assembly revision.

MODULES (M56K-16) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module.

MODULES (M56K-16) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module.

MODULES (M56K-16) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the installed module.

MODULES (M56K-16) > INFO > FIRMWARE REVISION

Read security: 5

Displays the revision of the coprocessor firmware on the installed module.

MODULES (M56K-16) > STATUS

Read security: 5

Displays the status submenus for both analog and digital resources available on the Modem-16 Option Module.

MODULES (M56K-16) > STATUS > ANALOG RSRC SESSION STATUS

Read security: 5

This submenu displays the session status information for the analog resources available on the Modem-16 Option Module.

MODULES (M56K-16) > STATUS > ANALOG RSRC SESSION STATUS > RSRC

Read security: 5

Indicates the resource number of the analog call resource. On the Modem-16 Option Module, analog resources are numbered 1-16 and digital ISDN resources are numbered 17-32.

MODULES (M56K-16) > STATUS > ANALOG RSRC SESSION STATUS > STATUS

Read security: 5

Indicates the current status of the particular analog call resource and displays new activity as it occurs. The possible status display values are listed below.

DISPLAY VALUE	MEANING
N/A	Card is not able to determine the status of the analog call resource.
AVAILABLE	Indicates this resource is available for use as an analog call.
IN USE	Indicates this resource is currently being used in an analog call.
TESTING	Indicates this resource is in a test mode and may be unavailable for use.
DISABLED	Indicates this resource has been disabled for use as an analog call resource. This may be done automatically by the system if a given analog resource does not initialize properly.

NOTE

System resource usage for analog and digital call resources can be viewed under the **SYSTEM STATUS** *menu of the ATLAS. This menu provides detailed resource availability information for each resource type, including hourly average available, minimum available, and number of times there were no available resources of a particular type.*

MODULES (M56K-16) > STATUS > ANALOG RSRC SESSION STATUS > MODULATION

Read security: 5

Displays the modulation scheme being used by the analog resource for a currently active call. If the analog resource is not in use, this field will display **N/A**.

MODULES (M56K-16) > STATUS > ANALOG RSRC SESSION STATUS > RX RATE

Read security: 5

Displays the receive bit rate of the analog resource for a currently active call. If the analog resource is not in use, this field will display **N/A**.

MODULES (M56K-16) > STATUS > ANALOG RSRC SESSION STATUS > TX RATE

Read security: 5

Displays the transmit bit rate of the analog resource for a currently active call. If the analog resource is not in use, this field will display **N/A**.

MODULES (M56K-16) > STATUS > ANALOG RSRC SESSION STATUS > ERROR CORR

Read security: 5

Displays the error correction mode being used by the analog resource for a currently active call. If the analog resource is not in use, this field will display **N/A**.

MODULES (M56K-16) > STATUS > ANALOG RSRC SESSION STATUS > DATA COMPR

Read security: 5

Displays the data compression mode being used by the analog resource for a currently active call. If the analog resource is not in use, this field will display **N/A**.

MODULES (M56K-16) > STATUS > ANALOG RSRC SESSION STATUS > LAST DISC

Read security: 5

Displays the reason for the previous disconnect which occurred on this analog resource. If no disconnect has occurred on this analog resource, this field will display **N/A**.

MODULES (M56K-16) > STATUS > ANALOG RSRC SESSION STATUS > LINE PARAMS

Read security: 5

Displays technical details about the analog resource for the currently active call. This information may be used when troubleshooting modem connection problems with the Modem-16 Option Module.

RESOURCE STATUS

This field indicates the current status of the analog resource. The following states are valid.

N/A	Module is not able to determine the status of the analog resource
AVAILABLE	This resource is available for use as an analog call resource
IN USE	This resource is currently being used in an analog call
TESTING	This resource is in a test mode and may be unavailable for use
DISABLED	This resource has been disable for use as an analog call resource

SIGNAL TO NOISE RATIO (dB)

Signal to noise ratio (in decibels) on the modem's receive signal.

RX MEAN SQUARE ERROR

Mean square error of the received signal.

ROUND TRIP DELAY (ms)

Delay between the near and far end modem devices.

RX LEVEL (-dBm)

Displays the level of the signal (in -dBm) of the signal received by the resource.

TX LEVEL (-dBm)

Displays the level of the signal (in -dBm) of the signal transmitted by the resource.

NEAR END ECHO (-dBm)

Displays the echo level of the signal (in -dBm) of the signal received by the resource.

FAR END ECHO (-dBm)

Displays the echo level of the signal (in -dBm) of the signal transmitted by the resource.

RETRAINS REQUESTED BY REMOTE

Number of Retrain Requests sent to the resource.

RETRAINS GRANTED TO REMOTE

Number of Retrain Requests granted by the resource.

RETRAINS GRANTED TO LOCAL

Number of Retrains granted to the resource.

RENEGOTIATIONS REQUESTED BY REMOTE

Number of Renegotiation Requests sent to the resource.

RENEGOTIATIONS GRANTED TO REMOTE

Number of Renegotiation Requests granted by the modem card.

RENEGOTIATIONS GRANTED TO LOCAL

Number of Renegotiation Requests granted to the modem card.

MODULES (M56K-16) > STATUS > ANALOG RSRC CONNECTIONS STATS

Write security: 5; Read security: 5

This menu option displays the connection statistics for the analog resources available on the Modem-16 Option Module.

MODULES (M56K-16) > STATUS > ANALOG RSRC CONNECTIONS STATS > RSRC

Read security: 5

Indicates the resource number of the analog call resource. On the Modem-16 Option Module, analog resources are numbered 1-16 and digital ISDN resources are numbered 17-32.

MODULES (M56K-16) > STATUS > ANALOG RSRC CONNECTIONS STATS > ATTEMPTS

Read security: 5

Displays the number of connections attempted for this analog resource since the last reset.

MODULES (M56K-16) > STATUS > ANALOG RSRC CONNECTIONS STATS > COMPLETED

Read security: 5

Displays the number of successful connections for this analog resource.

MODULES (M56K-16) > STATUS > ANALOG RSRC CONNECTIONS STATS > FAILURES

Read security: 5

Displays the number of unsuccessful connections for this analog resource. It is defined as the number of connection attempts minus the number of successful connections.

MODULES (M56K-16) > STATUS > ANALOG RSRC CONNECTIONS STATS > RESET STATS

Read security: 5

Resets the connection statistics for the given analog resource. This option resets the connection attempts, connection completions, and the connections failures fields for the analog resource.

MODULES (M56K-16) > STATUS > ANALOG RSRC CONNECTIONS STATS > RATE STATS

Read security: 5

Displays connection rate statistics for selected data rates for the given analog resource. The number of connections at a rate or range of rates is displayed.

MODULES (M56K-16) > STATUS > ANALOG RSRC I/O STATS

Write security: 5; Read security: 5

Displays the input and output statistics for the analog resources available on the module. All statistics are for the current active call and are reset once the call becomes disconnected.

MODULES (M56K-16) > STATUS > ANALOG RSRC I/O STATS > RSRC

Read security: 5

Indicates the resource number of the analog call resource. On the Modem-16 Option Module, analog resources are numbered 1-16 and digital ISDN resources are numbered 17-32.

MODULES (M56K-16) > STATUS > ANALOG RSRC I/O STATS > TX-BYTES

Read security: 5

Displays the number of data bytes transmitted by the analog resource to the remote client modem during the current call. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > ANALOG RSRC I/O STATS > RX-BYTES

Read security: 5

Displays the number of data bytes received by the analog resource from the client modem during the current call. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > ANALOG RSRC I/O STATS > TX-FRAMES

Read security: 5

Displays the number of data frames transmitted by the analog resource to the remote client modem during the current call. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > ANALOG RSRC I/O STATS > RX-FRAMES

Read security: 5

Displays the number of data frames received by the analog resource from the remote client modem during the current call. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > ANALOG RSRC I/O STATS > RX-OVRNS

Read security: 5

Displays the number of receiver overruns which occurred on the analog resource during the current call. A receiver overrun occurs when the client modem transmits data too fast for the analog resource to keep up. This causes data to be lost. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > ANALOG RSRC I/O STATS > RX-PRTY

Read security: 5

Displays the number of bytes received by the analog resource from the remote client modem during the current call. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > ANALOG RSRC I/O STATS > RX-FRME

Read security: 5

Displays the number of framing errors detected by the analog resource during the current call. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > ANALOG RSRC I/O STATS > RX-CRC BAD

Read security: 5

Displays the number of received PPP frames by the analog resource from the remote client modem during the current call. This is used only when the analog resource is performing Sync-to-Async PPP conversion. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > ANALOG RSRC I/O STATS > RESET STATS

Write security: 5; Read security: 5

Resets the input and output statistics for the given analog resource. This option resets the transmit and receive statistics for the analog resource.

MODULES (M56K-16) > STATUS > DIGITAL RSRC SESSION STATUS

Write security: 5; Read security: 5

Displays the session status information for the digital resources available on the Modem-16 Option Module.

MODULES (M56K-16) > STATUS > DIGITAL RSRC SESSION STATUS > RSRC

Read security: 5

Indicates the resource number of the digital call resource. On the Modem-16 Option Module, analog resources are numbered 1-16 and digital ISDN resources are numbered 17-32.

MODULES (M56K-16) > STATUS > DIGITAL RSRC SESSION STATUS > STATUS

Read security: 5

Indicates the current status of the particular digital call resource. The status display values are listed below.

DISPLAY VALUE	MEANING
N/A	Card is not able to determine the status of the digital call resource.
AVAILABLE	Indicates this resource is available for use as a digital call.
IN USE	Indicates this resource is currently being used in a digital call.
TESTING	Indicates this resource is in a test mode and may be unavailable for use.
DISABLED	Indicates this resource has been disabled for use as a digital call resource.

System resource usage for analog and digital call resources can be viewed under the **SYSTEM STATUS** *menu of the ATLAS. This menu provides detailed resource availability information for each resource type, including hourly average available, minimum available, and number of times there were no available resources of a particular type.*

MODULES (M56K-16) > STATUS > DIGITAL RSRC SESSION STATUS > BIT RATE

Read security: 5

Displays the bit rate of the digital resource for a currently active call. If the digital resource is not in use, this field displays **N/A**.

MODULES (M56K-16) > STATUS > DIGITAL RSRC CONNECTION STATS

Write security: 5; Read security: 5

Displays the connection statistics for the digital resources available on the Modem-16 Option Module.

MODULES (M56K-16) > STATUS > DIGITAL RSRC CONNECTION STATS > RSRC

Read security: 5

Indicates the resource number of the digital call resource. On the Modem-16 Option Module, analog resources are numbered 1-16 and digital ISDN resources are numbered 17-32.

MODULES (M56K-16) > STATUS > DIGITAL RSRC CONNECTION STATS > ATTEMPTS

Read security: 5

Displays the number of connections attempted for this digital resource since the last reset.

MODULES (M56K-16) > STATUS > DIGITAL RSRC CONNECTION STATS > COMPLETED

Read security: 5

Displays the number of successful connections for this digital resource.

MODULES (M56K-16) > STATUS > DIGITAL RSRC CONNECTION STATS > FAILURES

Read security: 5

Displays the number of unsuccessful connections for this digital resource. It is defined as the number of connection attempts minus the number of successful connections.

MODULES (M56K-16) > STATUS > DIGITAL RSRC CONNECTION STATS > 56K CONNECTS

Read security: 5

Displays the number of successful connections at 56 kbps for this digital resource.

MODULES (M56K-16) > STATUS > DIGITAL RSRC CONNECTION STATS > 64K CONNECTS

Read security: 5

Displays the number of successful connections at 64 kbps for this digital resource.

MODULES (M56K-16) > STATUS > DIGITAL RSRC CONNECTION STATS > RESET STATS

Write security: 5; Read security: 5

Resets the connection statistics for the given digital resource. This option resets the connection attempts, connection completions, and the connections failures fields for the analog resource.

MODULES (M56K-16) > STATUS > DIGITAL RSRC I/O STATS

Write security: 5; Read security: 5

Displays the input and output statistics for the digital resource available on the Modem-16 Option Module. All statistics are for the current active call and are reset once the call becomes disconnected.

MODULES (M56K-16) > STATUS > DIGITAL RSRC I/O STATS > RSRC

Read security: 5

Indicates the resource number of the digital call resource. On the Modem-16 Option Module, analog resources are numbered 1-16 and digital ISDN resources are numbered 17-32.

MODULES (M56K-16) > STATUS > DIGITAL RSRC I/O STATS > TX-FRAMES

Read security: 5

Displays the number of data frames transmitted by the digital resource to the remote client modem during the current call. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > DIGITAL RSRC I/O STATS > RX-FRAMES

Read security: 5

Displays the number of data frames received by the digital resource from the remote client modem during the current call. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > DIGITAL RSRC I/O STATS > TX-BYTES

Read security: 5

Displays the number of data bytes transmitted by the digital resource to the remote client modem during the current call. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > DIGITAL RSRC I/O STATS > RX-BYTES

Read security: 5

Displays the number of data bytes received by the digital resource from the client modem curing the current call. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > DIGITAL RSRC I/O STATS > RX-OVRNS

Read security: 5

Displays the number of receiver overruns which occurred on the digital resource during the current call. A receiver overrun occurs when the client modem transmits data too fast for the digital resource to keep up. This causes data to be lost. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > DIGITAL RSRC I/O STATS > RX-CRC BAD

Read security: 5

Displays the number of frames of data received by the digital resource with an invalid CRC. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > DIGITAL RSRC I/O STATS > RX-ABORTED

Read security: 5

Displays the number of aborted receive frames detected by the digital resource during the current call. This parameter is reset once the call is disconnected.

MODULES (M56K-16) > STATUS > DIGITAL RSRC I/O STATS > RESET STATS

Write security: 5; Read security: 5

Resets the input and output statistics for the given analog resource. This option resets the transmit and receive statistics for the analog resource.

MODULES (M56K-16) > CONFIGURATION

Write security: 5; Read security: 5

Displays the configuration submenus available for both analog and digital resources available on the option module.

MODULES (M56K-16) > CONFIGURATION > ANALOG RSRC

Write security: 5; Read security: 5

Displays the configuration parameters for the analog resources available on the option module.

MODULES (M56K-16) > CONFIGURATION > ANALOG RSRC > RSRC

Read security: 5

Indicates the resource number of the analog call resource. On the Modem-16 Option Module, analog resources are numbered 1-16 and digital ISDN resources are numbered 17-32.

MODULES (M56K-16) > CONFIGURATION > ANALOG RSRC > STATUS

Read security: 5

Indicates the current status of the particular analog call resource and displays new activity as it occurs. The possible status display values are listed below.

DISPLAY VALUE	MEANING
N/A	Card is not able to determine the status of the analog call resource.
AVAILABLE	Indicates this resource is available for use as an analog call.
IN USE	Indicates this resource is currently being used in an analog call.
TESTING	Indicates this resource is in a test mode and may be unavailable for use.
DISABLED	Indicates this resource has been disabled for use as an analog call resource. This may be done automatically by the system if a given analog resource does not initialize properly.

System resource usage for analog and digital call resources can be viewed under the **SYSTEM STATUS** *menu of the ATLAS. This menu provides detailed resource availability information for each resource type, including hourly average available, minimum available, and number of times there were no available resources of a particular type.*

MODULES (M56K-16) > CONFIGURATION > ANALOG RSRC > OPERATION

Write security: 3; Read security: 5

Selects the mode of operation for the particular analog call resource. The following selections are permissible:

OPERATION MODE	MEANING
ENABLED	Indicates the selected analog resource is available for use as an analog call resource in the system.
DISABLED	Indicates this resource is not available for use as an analog call resource in the system. If a call is active on this resource when changing the operation to **DISABLED**, it will be immediately terminated.
AUTO DISABLED	Indicates this resource will not be available for use as an analog call resource once the current call has been completed.

MODULES (M56K-16) > CONFIGURATION > ANALOG RSRC > HARDWARE RESET

Write security: 3; Read security: 5

Reset a specific analog resource on the modem module. Any calls currently active will be dropped.

MODULES (M56K-16) > CONFIGURATION > DIGITAL RSRC

Write security: 5; Read security: 5

Displays the configuration parameters for the digital resources available on the option module.

MODULES (M56K-16) > CONFIGURATION > DIGITAL RSRC > RSRC

Read security: 5

Indicates the resource number of the digital call resource. On the Modem-16 Option Module, analog resources are numbered 1-16 and digital ISDN resources are numbered 17-32.

MODULES (M56K-16) > CONFIGURATION > DIGITAL RSRC > STATUS

Read security: 5

Indicates the current status of the particular digital call resource. The status display values are listed below.

DISPLAY VALUE	MEANING
N/A	Card is not able to determine the status of the digital call resource.
AVAILABLE	Indicates this resource is available for use as a digital call.
IN USE	Indicates this resource is currently being used in a digital call.
TESTING	Indicates this resource is in a test mode and may be unavailable for use.
DISABLED	Indicates this resource has been disabled for use as a digital call resource.

NOTE

System resource usage for analog and digital call resources can be viewed under the **SYSTEM STATUS** *menu of the ATLAS. This menu provides detailed resource availability information for each resource type, including hourly average available, minimum available, and number of times there were no available resources of a particular type.*

MODULES (M56K-16) > CONFIGURATION > DIGITAL RSRC > OPERATION

Write security: 3; Read security: 5

Selects the mode of operation for the particular digital call resource. The following selections are permissible:

OPERATION MODE	MEANING
ENABLED	Indicates the selected digital resource is available for use as an analog call resource in the system.
DISABLED	Indicates this resource is not available for use as a digital call resource in the system. If a call is active on this resource when changing the operation to **DISABLED**, it will be immediately terminated.
AUTO DISABLED	Indicates this resource will not be available for use as a digital call resource once the current call has been completed.

MODULES MENU (ASYNC-232 OPTION MODULE)

The ATLAS 830 system controller automatically detects the presence of the Async-232 Option Module when it is installed in the system (listed as **ASYNC232**). To see the menus for the Async-232 Option Module via the terminal menu, use the arrow keys to scroll to the **MODULES** menu and press <Enter > to access the module choices. Refer to the Async-232 Option Module Quick Start Guide for a menu tree containing a complete listing of menus.

MODULES (ASYNC232) > INFO

Read security: 5

Provides information about the module part number, serial number and assembly revision.

MODULES (ASYNC232) > INFO > PART NUMBER

Read security: 5

Displays the part number of the module.

MODULES (ASYNC232) > INFO > SERIAL NUMBER

Read security: 5

Displays the serial number of the module.

MODULES (ASYNC232) > INFO > BOARD REVISION

Read security: 5

Displays the board revision of the installed module.

MODULES (ASYNC232) > INFO > FIRMWARE REVISION

Read security: 5

Displays the revision of the coprocessor firmware on the installed module.

MODULES (ASYNC232) > SIGNAL STATUS

Read security: 5

Shows the status of key DTE interface signals. An asterisk (*) indicates the presence of a signal and a hyphen (-) indicates no signal present.

MODULES (ASYNC232) > SIGNAL STATUS > PORT

Operating port number.

MODULES (ASYNC232) > SIGNAL STATUS > DTE SIGNALS

The following signals are monitored (these options are read-only):

DTR	Data terminal ready from DTE
DSR	Data set ready to DTE
RTS	Request to send from DTE
DCD	Data carrier detect to DTE
RI	Ring indicate to DTE

MODULES (ASYNC232) > I/O STATUS

Write security: 5; Read security: 5

Displays the input/output statistics for the Async-232 ports.

MODULES (ASYNC232) > I/O STATS > PORT

Read security: 5

Displays the port number.

MODULES (ASYNC232) > I/O STATS > TX BYTES

Read security: 5

Displays the number of bytes transmitted by the DTE.

MODULES (ASYNC232) > I/O STATS > RX BYTES

Read security: 5

Displays the number of bytes sent to the DTE.

MODULES (ASYNC232) > I/O STATS > OVERRUNS

Read security: 5

Displays the received overrun errors from the DTE. A receiver overrun occurs when the DTE performs data transmission too fast for the Async-232 port to keep up, therefore causing data to be lost. An overrun may indicate the need to turn on hardware flow control.

MODULES (ASYNC232) > I/O STATS > PRTYERRS

Read security: 5

Displays the number of bytes received from the DTE that contained parity errors.

MODULES (ASYNC232) > I/O STATS > FRMERRS

Read security: 5

Displays the number of bytes received from the DTE that contained framing errors.

MODULES (ASYNC232) > I/O STATS > RST STATS

Write security: 5; Read security: 5

Clears the current stored I/O statistics for each port.

MODULES (ASYNC232) > SESSION STATUS

Read security: 5

Shows the status of key DTE interface signals. An asterisk (*) indicates the presence of a signal and a hyphen (-) indicates no signal present.

MODULES (ASYNC232) > SESSION STATUS > PRT

Read security: 5

Displays the port number.

MODULES (ASYNC232) > SESSION STATUS > MODE

Read security: 5

Indicates the session mode for the port. The following modes are available:

UNASSIGNED	Port not assigned to a phone number in the Dial Plan.
IDLE	Port assigned but no call is active.
LOOPBACK	Loopback is turned on in the test menu.

MODEM RING	Incoming analog modem call is ringing on port. Async-232 port will toggle RI.
MODEM ANSWER	The DTE has answered an incoming analog modem call.
MODEM DIAL	The DTE is using the Async-232 port to make an outgoing analog modem call.
MODEM CONNECTED	An analog modem call has been established.
ISDN PPP RING	Incoming ISDN PPP call is ringing on the port. Async-232 port will toggle RI.
ISDN PPP ANSWER	The DTE has answered an incoming ISDN PPP call.
ISDN PPP DIAL	The DTE is using the Async-232 port to make an outgoing ISDN PPP call.
ISDN PPP CONNECTED	An ISDN PPP call has been established.

MODULES (ASYNC232) > SESSION STATUS > CALL DIR

Read security: 5

Displays the current call direction as **INCOMING** or **OUTGOING**. If there is no active call, **IDLE** will display.

MODULES (ASYNC232) > SESSION STATUS > RSC

Read security: 5

This field indicates the slot and device number allocated for a call to or from this port. If no call is active, it will indicate **NONE**. The allocated resource will be either an analog modem, or an ISDN digital call resource.

MODULES (ASYNC232) > SESSION STATUS > LAST DISCONNECT

Read security: 5

This field indicates the reason for the last call disconnect or dialout failure for this port. If no call has been attempted for the given port, this field will indicate **NONE**. This information is also available in the system log if Async-232 module events are enabled.

MODULES (ASYNC232) > SESSION STATUS > HANGUP

Write security: 3; Read security: 5

Activator used to hangup the current active call on the port.

MODULES (ASYNC232) > CONFIGURATION

Write security: 5; Read security: 5

All of the following configurable parameters apply to the individual Async-232 ports.

MODULES (ASYNC232) > CONFIGURATION > PRT

Read security: 5

Displays the port number.

MODULES (ASYNC232) > CONFIGURATION > PORT NAME

Write security: 3; Read security: 5

Accepts any alpha-numeric name up to 16 characters long, to uniquely identify each port on the Async-232 Option Module.

MODULES (ASYNC232) > CONFIGURATION > BIT RATE

Write security: 3; Read security: 5

Configures the fixed DTE port bit rate. Changing this field hangs up an active call and requires confirmation. Options include the following: **300, 1200, 2400, 4800, 9600, 19.2K, 38.4K, 57.6K,** and **115.2K.**

MODULES (ASYNC232) > CONFIGURATION > FLOW CTR

Write security: 3; Read security: 5

Configures the flow control for the Async-232 port. Options are:

HARDWARE	Hardware flow control monitors RTS from the DTE and controls CTS to indicate flow control status. Hardware flow control should be used in all cases except when it is not supported by the attached DTE equipment.
SOFTWARE	Software flow control uses XON and XOFF characters in the data stream to control flow.
NONE	No flow control selected for this port.

MODULES (ASYNC232) > CONFIGURATION > FMT

Write security: 5; Read security: 5

Configures the asynchronous character format options for the Async-232 port.

MODULES (ASYNC232) > CONFIGURATION > FMT > DATA BITS

Number of data bits per character.

MODULES (ASYNC232) > CONFIGURATION > FMT > PARITY

Parity method used for transmit and receive characters.

MODULES (ASYNC232) > CONFIGURATION > FMT > STOP BITS

Number of stop bits per character.

MODULES (ASYNC232) > CONFIGURATION > CALL DIR

Write security: 3; Read security: 5

Configures the Async-232 port to answer incoming calls and/or originate outgoing calls. The following options are available: **IN ONLY, OUT ONLY,** and **IN & OUT**.

MODULES (ASYNC232) > CONFIGURATION > IN CTRL

Write security: 3; Read security: 5

Selects the method by which incoming calls are indicated to and controlled by the DTE. Options include the following:

AT CMDS AT commands and responses indicate and control calls. AT commands also support port and allocated modem or ISDN resource configuration.

DTR-DCD An activated data carrier detect (DCD) signal indicates that an incoming call is answered from the Async-232 Module port. Upon call hang-up, the DCD becomes inactive. The data terminal ready (DTR) signal must be active from the DTE for an incoming call to be answered. If the port is part of a group assigned in the **DIAL PLAN**, then the first idle port with DTR active will answer the call. If the DTE drives DTR inactive, the Async-232 Module port hangs up an active call.

MODULES (ASYNC232) > CONFIGURATION > DIALOUT

Write security: 5; Read security: 5

Includes all options that affect dialing outgoing calls. The record field indicates the values of the key dialout subfields.

AT/MDM Indicates that AT dialing of a modem is selected.

DTR/MDM Indicates that DTR dialing of a modem is selected.

AT/ISDN Indicates that AT dialing of an ISDN resource is selected.

DTR/ISDN Indicates that DTR dialing of an ISDN resource is selected.

MODULES (ASYNC232) > CONFIGURATION > DIALOUT > DIALOUT METHOD

Write security: 3, Read security: 5

Selects the method by which outgoing calls may be initiated by the DTE.

DTR DIAL When DTR is enabled by the DTE and a number has been entered in the **DTR DIAL NUMBER** field, an outgoing call attempt is made. The call is hung up when DTR is dropped. If the call does not connect, the call will continue to be retried as long as DTR remains active.

AT DIAL When enabled, AT commands may be used to dial outgoing calls. Port an allocated modem or ISDN resource configuration is also supported via AT commands. The DTR signal must be active from the DTE to dial out. The call is hung up when DTR is dropped or when the escape-to-command mode sequence (+++) and ATH are issued. When the call is connected, the Async-232 port enables DCD.

MODULES (ASYNC232) > CONFIGURATION > DIALOUT > DTR DIAL NUMBER

This field is only active when outgoing calls are enabled and **DIALOUT METHOD** is set to **DTR DIAL**. If a phone number is entered here, it will be dialed when DTR goes active.

MODULES (ASYNC232) > CONFIGURATION > DIALOUT > CALLOUT PROTOCOL

Write security: 3; Read security: 5

This field determines what type or resource will be allocated and the data protocol that will be used for an outgoing call attempt for the port. The following selections are available:

ANALOG MODEM — An outgoing call attempts to allocate a modem resource and make an analog call. Asynchronous data is passed unmodified between the Async-232 Module port and the allocated modem. The analog modem resource is freed when the call is hung up.

ISDN PPP — An outgoing call attempts to allocate an ISDN resource and make a digital call. Both ends of the call must be using PPP as the protocol to communicate across the link. The Async-232 Module port performs PPP Async-to-Sync conversion between the asynchronous DCE port and the synchronous ISDN link. This conversion is the standard method of transporting PPP frames available in ISDN Terminal Adapters from ADTRAN and other manufacturers. The PPP Async-to-Sync protocol complies with the Internet Engineering Task Force (IETF) RFC 1662. For the ISDN call to be routed outside ATLAS 830, a PRI or BRI interface must be connected to the system and be correctly configured.

MODULES (ASYNC232) > CONFIGURATION > DIALOUT > OUT ISDN CALL TYPE

Write security: 3; Read security: 5

When **CALLOUT PROTOCOL** has been set to **ISDN PPP**, this field determines what type of ISDN call will be made when a call is attempted. The value must match the network services provisioned for the PRI or BRI interface that the call will be carried on. This field is not present and ignored when the **CALLOUT PROTOCOL** is **ANALOG MODEM**.

DATA 64K — Directs the call control software to request an unrestricted 64 kbps circuit. The default call type for ISDN service is Data 64 kbps.

DATA 56K — Directs the call control software to request a 64 kbps data circuit that is rate-adapted to 56 kbps. It is intended for use in circumstances where interoperability with Switched 56 service is desired.

AUDIO — Directs the call control software to request a 3.1 kHz audio circuit as the bearer capability for outgoing calls. The Audio option is used with an ISDN line configured for voice service. Selecting an Audio call type guarantees a digital end-to-end ISDN connection.

SPEECH — Speech direct the call control software to request a μ-Law speech circuit as the bearer capability for outgoing calls. The Speech option is used with an ISDN line configured for voice service. A Speech call type does not guarantee and end-to-end digital connection with some local and long distance providers.

MODULES (ASYNC232) > CONFIGURATION > MODEM

Write security: 3; Read security: 5

Configures an allocated modem for incoming and outgoing analog modem calls. Selected options are issued to the modem when it is allocated to answer an incoming call or initiate an outgoing call. Some options imply a negotiation with the remote modem. These modem options may also be specified through the AT command interface if enabled.

MODULES (ASYNC232) > CONFIGURATION > MODEM > HIGHEST TX BIT RATE

Write security: 3; Read security: 5

Selects the highest bit rate the allocated modem will attempt to connect with to the remote modem. Modulation scheme is automatically selected based on the connection speed.

MODULES (ASYNC232) > CONFIGURATION > MODEM > LOWEST BIT RATE

Write security: 3; Read security: 5

Selects the lowest bit rate the allocated modem will attempt to connect with to the remote modem. If the lowest bit rate or higher cannot be negotiated with the remote modem, the call is disconnected. Modulation scheme is automatically selected based on the connection speed.

MODULES (ASYNC232) > CONFIGURATION > MODEM > ERROR CORRECTION

Write security: 3; Read security: 5

Configures the error correction for the allocated modem. The following options are available:

DISABLED	No error correction is requested. If the remote modem refuses to support the option, the call is disconnected. Although no error correction is used, this mode still allows speed matching, data buffering, and flow control.
AUTO-RELIABLE LINK MODE	Modem will attempt to negotiate LAPM, MNO, or no error correction with the remote modem. This is the default setting.
FORCE LAPM MODE	Modem will attempt to negotiated LAPM error correction with the remote modem. If it cannot, the call is disconnected.
FORCE MNP MODE	Modem will attempt to negotiate MNO error correction with the remote modem. If it cannot, the call is disconnected.

MODULES (ASYNC232) > CONFIGURATION > MODEM > DATA COMPRESSION

Write security: 3; Read security: 5

Error correction must be enabled to use data compression; data compression is automatically disabled if error correction is disabled. The following data compression options are available:

DISABLED	Both MNP5 and V.42bis data compression methods are disabled.
MNP5	MNP5 data compression is enabled.
V.42BIS	V.42bis data compression is enabled.
V.42BIS AND MNP5	Both MNP5 and V.42 bis data compression are enabled. This is the default setting.

MODULES (ASYNC232) > TEST

Write security: 4; Read security: 5

These options initiate different types of tests and display test results.

MODULES (ASYNC232) > TEST > PORT

Read security: 5

Displays the port number.

MODULES (ASYNC232) > TEST > DTE LOCAL LOOPBACK

Write security: 4; Read security: 5

Loopback can be **ENABLED** or **DISABLED** for a port with this field. When **ENABLED**, all data received from the DTE by the Async-232 Module port is transmitted back to the DTE. Loopback state is not saved in the module configuration; and, if the card is hot swapped or the ATLAS 830 system is restarted, loopback is disabled on all ports. It is not necessary to have a Dial Plan entry for a port to enable loopback.

PACKET MANAGER

The **PACKET MANAGER** submenus define and configure all layer 2 connections, including frame relay endpoints (Figure 14). These submenus include **PACKET ENDPNTS, PACKET CNCTS, CNCTS SORT** and **FRAME RELAY IQ**.

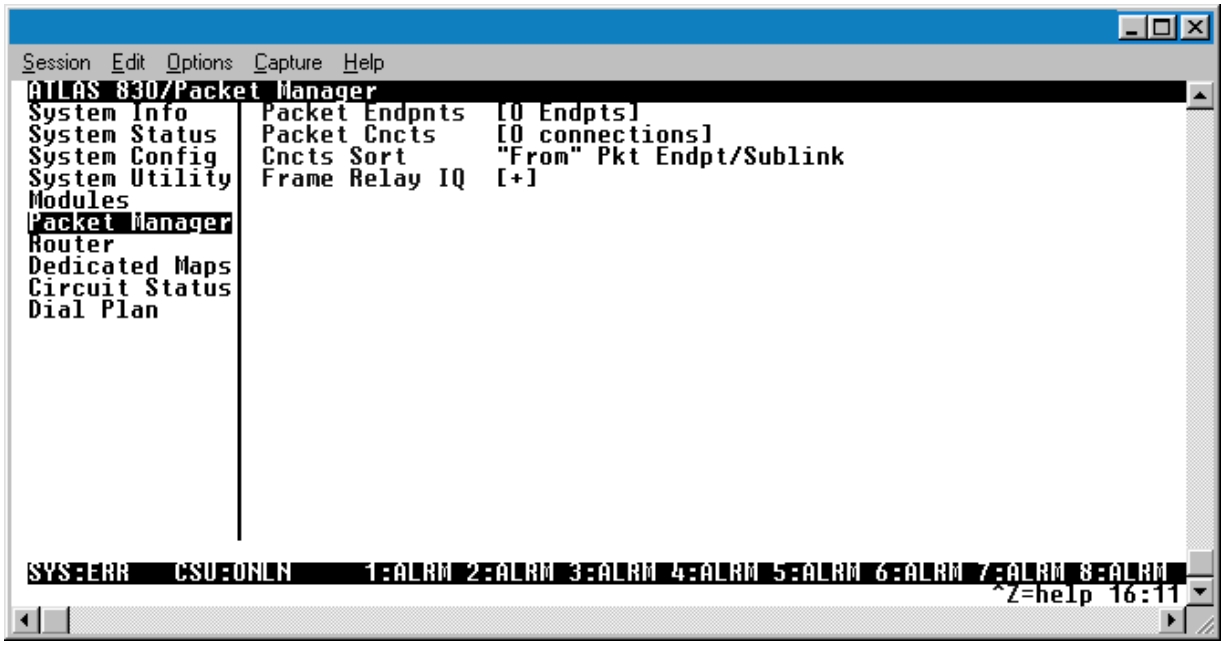


Figure 14. Packet Manager Menu

PACKET MANAGER > PACKET ENDPNTS

Read security: 5

Defines, monitors, and tests a packet endpoint. Submenus include **STATUS, PERFORMANCE, CONFIG, TEST, ENDPNT COUNT,** and **ENDPNTS SORT**.

PACKET MANAGER > PACKET ENDPNTS > STATUS

Read security: 5

Displays the status of each packet endpoint including the packet endpoint name, the protocol type, the signaling role, the signaling type, the signaling activity, and the connections. The configuration choices are given below.

PACKET MANAGER > PACKET ENDPNTS > STATUS > ENDPNT NAME

Read security: 5

Displays the packet endpoint name as defined in the **PACKET ENDPNTS/CONFIG** menu.

PACKET MANAGER > PACKET ENDPNTS > STATUS > PROTOCOL

Read security: 5

Displays the layer 2 protocol for this packet endpoint. **FR** indicates this packet endpoint is configured for frame relay. **TBOP** indicates this packet endpoint is configured for Transparent Bit Oriented Protocol (TBOP). **PPP** indicates this packet endpoint is configured for the Point-to-Point Protocol.

PACKET MANAGER > PACKET ENDPNTS > STATUS > SIG ROLE

Read security: 5

Displays the frame relay signaling role for this packet endpoint. The following options indicate the signaling role for this packet endpoint. *These settings are not applicable for PPP.*

USER	Indicates the user side of the User to Network Interface (UNI).
NETWORK	Indicates the network side of the UNI.
BOTH	Indicates the packet endpoint is operating in Network to Network Interface (NNI) mode.
OFF	Indicates no LMI signaling is generated or expected. All DLCI's are considered active.

PACKET MANAGER > PACKET ENDPNTS > STATUS > SIG TYPE

Read security: 5

Displays the frame relay signaling type used on this packet endpoint. *These settings are not applicable for PPP.*

ANNEX A	Signaling using ITU-T Q.933-A.
ANNEX D	Signaling using ANSI T1.617-D.
LMI	Signaling using Group of Four.

PACKET MANAGER > PACKET ENDPNTS > STATUS > SIG STATE - FRAME RELAY

Read security: 5

Indicates the frame relay signaling state on this packet endpoint. The possible states are defined below.

UP	Indicates that there is active frame relay signaling on this endpoint. The packet endpoint must be defined by the frame relay configuration settings to show active frame relay signaling.
DOWN	The packet endpoint stays in this state only when the physical line is down.

PACKET MANAGER > PACKET ENDPNTS > STATUS > SIG STATE - PPP

Read security: 5

Indicates the status of the PPP negotiation.The possible states are defined below.

INITIAL	This is the first state of LCP negotiation. If the packet endpoint is connected to a physical port in the **DEDICATED MAP**, this state will usually transition to the **STARTING** state to begin the PPP negotiation.
STARTING	The packet endpoint stays in this state only when the physical line is down.
REQ - SENT	The packet endpoint has sent an LCP configuration request to the peer and is waiting for an "acknowledge."
ACK - RECVD	The packet endpoint has received an "acknowledge" from the peer for the sent configuration request.
ACK - SENT	The packet endpoint has acknowledged the peer's configuration request, but the peer has not acknowledged us.
OPENED	LCP negotiation on the packet endpoint has finished; authentication, if enabled, occurs now.
CLOSING	The packet endpoint has sent the peer a "terminate" request and is waiting for the peer's acknowledgement.
CLOSED	The packet endpoint has received the peer's acknowledgement to the sent terminate request; this is followed by the initial state.
STOPPING	The packet endpoint has received a terminate request from the peer.
STOPPED	The packet endpoint has acknowledged the peer's terminate request.
NOT CONNECTED	The packet endpoint is not connected to the router in the **PACKET CNCTS** menu.

PACKET MANAGER > PACKET ENDPNTS > STATUS > CURRENT PORT

Read security: 5

Displays the connections for the packet endpoint. The letter **U** in this field indicates that this packet endpoint is used in the **PACKET CNCTS** map. The remainder of the field indicates the physical port this packet endpoint is connected to in the **DEDICATED MAP**. If the port is a channelized interface such as a T1, the DS0 assignment is also provided.

PACKET MANAGER > PACKET ENDPNTS > PERFORMANCE

Write security: 3; Read security: 5

Displays performance information for each packet endpoint including the endpoint name, the protocol used, link stats, and sublink stats.

PACKET MANAGER > PACKET ENDPNTS > PERFORMANCE > ENDPNT NAME

Read security: 5

Displays the packet endpoint name as defined in the **PACKET ENDPNTS/CONFIG** menu (see also *Packet Manager > Packet Endpnts > Config > Endpnt Name* on page 210).

PACKET MANAGER > PACKET ENDPNTS > PERFORMANCE > PROT

Read security: 5

Displays the layer 2 protocol for this packet endpoint. **FR** indicates this packet endpoint is configured for frame relay. **TBOP** indicates this packet endpoint is configured for Transparent Bit Oriented Protocol (TBOP). **PPP** indicates this packet endpoint is configured for the Point-to-Point Protocol.

PACKET MANAGER > PACKET ENDPNTS > PERFORMANCE > LINK STATS - FRAME RELAY

Write security: 3; Read security: 5

Displays layer 2 performance statistics. The statistics fields for frame relay reflect the total count since last cleared. The available statistic information is discussed below.

TX PACKETS	Total number of frame relay packets transmitted through this packet endpoint, including both user data (on all PVCs) and signaling.
RX PACKETS	Total number of frame relay packets received through this packet endpoint on all PVCs.
STATE CHANGES	Total number of times that frame relay signaling has gone active or inactive.
SIGNALING ERRORS	Total number of signaling frames received with PVC signaling protocol violations.
SIGNALING TIMEOUTS	Number of times signaling polls were not received in the time specified in **T391** in the **PACKET ENDPTS/CONFIG** menu.
ASYNC STATUS TX	Full status not transmitted during the normal full status cycle. An asynchronous status message is used to quickly activate a link.
ASYNC STATUS RX	Full status not received during the normal full status cycle. An asynchronous status message is used to quickly activate a link.
FULL STATUS TX	Number of full status polls transmitted by this packet endpoint.
FULL STATUS RX	Number of full status polls received by this packet endpoint.
LINK INTEGRITY STATUS TX	Number of link integrity polls transmitted by this packet endpoint.
LINK INTEGRITY STATUS RX	Number of link integrity polls received by this packet endpoint.
CLEAR COUNTERS	Clears all values in this submenu.

PACKET MANAGER > PACKET ENDPNTS > PERFORMANCE > LINK STATS - TBOP

Write security: 3; Read security: 5

Displays layer 2 performance statistics. The statistics fields for TBOP reflect the total count since last cleared. The available statistic information is discussed below.

TX PACKETS	Total number of HDLC packets transmitted through this packet endpoint.
RX PACKETS	Total number of HDLC packets received through this packet endpoint.
CLEAR COUNTERS	Clears all values in this submenu.

PACKET MANAGER > PACKET ENDPNTS > PERFORMANCE > LINK STATS - PPP

Write security: 3; Read security: 5

Displays layer 2 performance statistics. The statistics fields for PPP reflect the total count since last cleared. The available statistic information is discussed below.

LCP STATE	Displays the current state of the LCP negotiations.
IPCP	Displays the UP if PPP IP control has successfully negotiated.
TX PACKETS	Number of packets transmitted over this link.
RX PACKETS	Number of packets received over this link.
CLEAR COUNTERS	Resets the Tx and Rx packet counts.

PACKET MANAGER > PACKET ENDPNTS > PERFORMANCE > SUBLINK STATS - FRAME RELAY

Write security: 3; Read security: 5

Displays frame relay performance statistics for supported packet endpoint sublinks. These statistic fields reflect the total count since cleared. *These settings are not applicable for PPP or TBOP.*

NAME

User-defined name of a sublink (PVC).

DLCI

Local address for each PVC as assigned by the carrier.

STATE

Indicates if this particular sublink (PVC) has been defined as active by a full status poll, and also indicates if the PVC is in backup mode.

ACTIVE	PVC is active.
INACTIVE	PVC is inactive.
ACTIVE/BU	PVC is active, but in backup mode.
INACTIVE/BU	PVC is inactive and in backup mode.

TX PCKTS

Total number of frame relay user data packets transmitted over this PVC.

RX PCKTS

Total number of frame relay user data packets received over this PVC.

STATISTICS

Provides additional information, as follows, on the individual sublink:

RESET COUNTERS	Resets all sublink counters.
FECN COUNT	Total number of FECN bits received on this PVC.
BECN COUNT	Total number of BECN bits received on this PVC.
DE DISCARD COUNT	Total number of Discard Eligible bits that have been received on this PVC.

ACTIVE FLAGS

For ADTRAN use only.

PACKET MANAGER > PACKET ENDPNTS > CONFIG

Write security: 3; Read security: 5

Creates and configures packet endpoints.

PACKET MANAGER > PACKET ENDPNTS > CONFIG > ENDPNT NAME

Write security: 3; Read security: 5

User-definable name (such as the name of the frame relay provider or the circuit ID).

PACKET MANAGER > PACKET ENDPNTS > CONFIG > PROT

Write security: 3; Read security: 5

Defines the protocol operating on this port. **FRAME RELAY** configures this packet endpoint for frame relay signaling. **TBOP** configures this endpoint as transparent bit oriented protocol. **PPP** configures this packet endpoint as point-to-point protocol.

PACKET MANAGER > PACKET ENDPNTS > CONFIG > CONFIG - FRAME RELAY

Write security: 3; Read security: 5

Contains the configuration parameters for this packet endpoint.

SIGNALING ROLE

Displays the frame relay signaling role for this packet endpoint. The following options indicate the signaling role of this packet endpoint.

OFF	The remote device does not support frame relay signaling.
AUTO	Detects the role of the device on the other end of the circuit and automatically sets this packet endpoint to the appropriate value.
BOTH	Operates in NNI mode.
NETWORK	Acts as the network side of the UNI interface.
USER	Acts as the user side of the UNI interface.

SIGNALING TYPE

Displays the frame relay signaling type for this packet endpoint. The following options indicate the signaling type for this packet endpoint.

AUTO	Detects the signaling type of the device on the other end of the circuit and automatically sets this packet endpoint to the same signaling type.
ANNEX A	Transmits and responds to ITU-T Q.933-A standards.
ANNEX D	Transmits and responds to ANSI T1.617-D standards.
LMI	Transmits and responds to Group of Four specifications.

USER POLL TIMER (T391)

Sets the polling interval to the network in seconds.

USER POLLS PER STATUS (N391)

Controls how many link integrity polls occur between full status polls.

USER BAD EVENT THRESHOLD (N392)

Sets the number of bad polling events that will cause the link to be declared down in N393 polls.

USER EVENT WINDOW SIZE (N393)

Defines the number of poll events in each monitored window.

> NOTE *For most applications, the* **USER POLL TIMER, USER POLLS PER STATUS, USER BAD EVENT THRESHOLD,** *and* **USER EVENT WINDOW SIZE** *configuration parameters should be left in the default state. Use caution when changing these parameters.*

NET POLL RESPONSE TIMEOUT (T392)

Determines how long this packet endpoint will wait without receiving a poll before declaring the poll bad.

> NOTE *Ensure that this timer is greater than the T391 on the user side of the UNI; otherwise, erratic behavior will result.*

NET POLLS PER STATUS (N391)

Sets the number of link integrity polls before a full status is transmitted.

NET BAD EVENTS THRESHOLD (N392)

Sets the number of bad polling events that will cause the link to be declared down in N393 polls.

NET EVENT WINDOW SIZE (N393)

Defines the number of poll events in each monitored window.

> NOTE *If the number of bad polls reaches N392 in any N393 period, the link will be declared down. When N393 good polls are received, the link will be declared active again.*

PACKET MANAGER > PACKET ENDPNTS > CONFIG > CONFIG - PPP

Write security: 3; Read security: 5

Displays the configuration for this packet endpoint.

AUTHENTICATION

Contains the Authentication parameters for this endpoint.

RX METHOD	These are methods the ATLAS 830 uses to authenticate the peer. **NONE** is selected when you do not want to authenticate the peer. **PAP, CHAP,** or **EAP** is selected when you will allow the peer to be authenticated with one of the listed authentication protocols. In this case, the most secure method will be used first (**EAP,** then **CHAP,** then **PAP). CHAP** or **EAP** is selected when you will authenticate the peer only using one of the encrypted authentication protocols. **EAP** is selected when you will authenticate the peer only using the **EAP** authentication protocol.
TX METHOD	This field displays a list of the methods that we will allow the peer to authenticate us with. This is of use when a peer wants to do **PAP** just to get your password. None is selected when you do not want to be authenticated by the peer. **PAP, CHAP,** or **EAP** is selected when you will let the peer use one or all of the authentication protocols. **CHAP** or **EAP** is selected when you will let the peer use only one of the encrypted authentication protocols. **EAP** is selected when you will let the peer use only the **EAP** authentication protocol.
TX USERNAME	The username that the peer will use to authenticate the ATLAS 830.
TX PASSWORD	The password that the peer will use to authenticate the ATLAS 830.

DEBUG LOG

The following events can be viewed in the event log when PPP events have been turned to **INFO**.

LCP DEBUGGING	This turns on LCP negotiation debugging.
IPCP DEBUGGING	This turns on IPCP negotiation debugging.
BCP DEBUGGING	This turns on BCP negotiation debugging.
AUTHENTICATION DEBUGGING	This turns on authentication debugging.
UNKNOWN PROTOCOL DEBUGGING	This turns on debugging for unknown protocols.

MAX CONFIG

This value is the number of unanswered configuration requests that should be transmitted before giving up on negotiation. The default value is 10.

MAX TIMER

This value is the number of seconds to wait between unanswered configuration requests. The default value is 2 seconds.

MAX FAILURE

Due to the nature of PPP, configuration options may not be agreed upon between two PPP peers. This value is the number of configuration-NAKs that should occur before an option is configuration-rejected. This allows a connection to succeed that might otherwise fail. The default value is 5.

KEEPALIVE

Configures the ATLAS 830 to send keepalive frames on PPP connections that are not currently in use for data.

PACKET MANAGER > PACKET ENDPNTS > CONFIG > SUBLINKS - FRAME RELAY

Contains the configuration parameters for individual sublinks, or PVCs. The following parameters are available.

NAME

User-definable name for the DLCI.

DLCI

Local address for each PVC as assigned by the carrier.

QOS

Quality of service. These values can be used to assign a guaranteed amount of bandwidth available for this connection. The sum of all QOS values for the sublink should not exceed the Committed Information Rate (CIR).

BURST

Sets the burst rate used by this virtual circuit for data traffic. A value of zero means that the burst rate is not limited. The value is in kilobits/second. If voice traffic is flowing on ANY sublink on the port carrying THIS sublink, you should enter a value for this setting. Otherwise, leave this field set to default (zero). If the service provider has supplied a 'Be' value, enter that value in this field. The burst rate defines the amount that this virtual circuit is allowed to exceed the CIR. If the service provider has not supplied an excess burst rate, enter the wire speed in this field.

CONFIG

Allows configuration of parameters for each DLCI.

FRAGMENTATION THRESHOLD

Max packet size allowed on this PVC. A zero value disables fragmentation. Fragmentation is used to improve the quality of voice transmission. A good value is R/300, where R is the smallest of the ATLAS 830 link rates or the far end link rate in bits per second. For example, if a DLCI comes from an FSU 5622 running on a 56K DDS line and is delivered to the ATLAS 830 on a full T1, the lower rate is 56000 and the value is 186 or 187. Entered values between 1 and 127 are adjusted upward.

DLCI STATE

Controls how the state of this DLCI is reported to any packet connections within ATLAS 830 attempting to send or receive data on this DLCI.

AUTO	Passes the state as reported by the frame relay switch. Set **DLCI STATE** to **AUTO** for normal operation.
FORCE ACTIVE	This DLCI disregards the status as reported from the switch and reports Active to all packet endpoints within ATLAS 830.
FORCE INACTIVE	Reports status as **DOWN** to all packet endpoints within ATLAS 830.

DIAGNOSTIC MODE

Controls operation of PVC testing options. To allow the far end to measure delay, select **ECHO FAR-END LOOPBACKS**. To continuously measure in-band delay, select **IN-BAND DELAY MEASUREMENT**. To turn off continuous diagnostic functions, select **PASS-THROUGH DIAGNOSTIC PACKETS**.

ECHO FAR-END LOOPBACKS	Generates and transmits a response on this DLCI to the remote equipment if an ADTRAN proprietary diagnostic message is received on this DLCI.
IN-BAND DELAY MEASUREMENT	Generates a diagnostic packet to measure delay through the frame relay network. This process requires that the equipment at the remote site be ADTRAN IQ compatible.
PASS-THROUGH DIAGNOSTIC PACKETS	Used when ATLAS 830 is acting as a frame relay switch. Transmits a diagnostic packet out the packet endpoint connected to this DLCI, if a diagnostic packet is received on this packet endpoint.

PRIMARY | BACKUP SELECTION

Allows you to define a sublink as a primary or a backup sublink. **PRIMARY** defines a normal sublink and includes the menus **ENABLE BACKUP SUPPORT, BACKUP PACKET ENDPT,** and **BACKUP SUBLINK. BACKUP** defines a backup sublink and includes the menus **PRIMARY PACKET ENDPT** and **PRIMARY SUBLINK**.

ENABLE BACKUP SUPPORT Visible only if the sublink type is **PRIMARY. YES** displays the backup menus. No hides the backup menus.

BACKUP PACKET ENDPT Visible only if **ENABLE BACKUP SUPPORT** is set to **YES**. Selects **BACKUP PACKET ENDPT** that contains the **BACKUP SUBLINK** to be tied to this sublink.

BACKUP SUBLINK Visible only if **ENABLE BACKUP SUPPORT** is set to **YES**. Selects the **BACKUP SUBLINK** to be tied to this sublink.

PRIMARY PACKET ENDPT Visible only if Backup is selected. Selects the **PRIMARY PACKET ENDPT** that contains the **PRIMARY SUBLINK** to be tied to this sublink.

PRIMARY SUBLINK Visible only if **BACKUP** is selected. Selects the **PRIMARY SUBLINK** to be tied to this sublink.

The fields **BACKUP MODE, SWITCH ON SUBLINK DOWN, SWITCH ON LMI INACTIVE, SWITCH ON BACKUP ACTIVE, BACKUP DELAY IN SECONDS,** *and* **RESTORE DELAY IN SECONDS** *display if* **PRIMARY** *(with* **BACKUP SUPPORT***) or* **BACKUP** *is enabled.*

BACKUP MODE Provides switching options.

- **AUTO** Provides normal operation.
- **FORCED** Forces a switch to backup.
- **DISABLED** Disables backup switching.

SWITCH ON SUBLINK INACTIVE Provides switching options if the sublink goes down. Select **YES** to switch to backup if the primary sublink goes down, otherwise select **NO**.

SWITCH ON LMI DOWN Provides switching options for LMI signaling. Select **YES** to switch to backup if LMI signaling is inactive on the primary link, otherwise select **NO**.

SWITCH ON BACKUP ACTIVE Provides switching options if the backup sublink goes active. Select **YES** to switch to backup if the backup sublink goes active, otherwise select **NO**.

BACKUP DELAY IN SECONDS The amount of time within which any of the enabled switch criteria must be met before service is switched to the backup circuit.

RESTORE DELAY IN SECONDS The amount of time within which the criteria for switching to backup are reached before service is returned to the primary circuit.

PACKET MANAGER > PACKET ENDPNTS > CONFIG > USAGE

Read security: 5

This field displays a 7-character summary of the references to this link. Each position is populated with a dash (-) or a character indicating the resource represented. The characters are as follows:

1	Packet connection in the first dedicated map
2	Packet connection in the second dedicated map
3	Packet connection in the third dedicated map
4	Packet connection in the fourth dedicated map
5	Packet connection in the fifth dedicated map
–	Reserved and currently not is use
S	Used as a Packet Endpoint in the switched dial plan
U	Used by one or more packet switch connections or packet voice entries

PACKET MANAGER > PACKET ENDPNTS > TEST

Write security: 3; Read security: 5

Provides menus for controlling options and setting for packet endpoints.

PACKET MANAGER > PACKET ENDPNTS > TEST > ENDPNT NAME

Write security: 3; Read security: 5

Displays the name of the packet endpoint.

PACKET MANAGER > PACKET ENDPNTS > TEST > PROTOCOL

Write security: 3; Read security: 5

Displays the protocol running on the packet endpoint.

PACKET MANAGER > PACKET ENDPNTS > TEST > SUBLINK - FRAME RELAY

Write security: 3; Read security: 5

Displays test menus for the packet endpoint sublinks. The menus vary depending on the protocol. Testing is not supported on TBOP or PPP.

NAME

Displays the user-defined name for the DLCI.

DLCI

Displays the local address for each PVC as assigned by the carrier.

TEST

Displays the test mode for the PVC.

START	The fixed duration that Test is not running and the DLCI is not configured for continuous in-band delay measurement. To change this option, set **DIAGNOSTIC MODE** to **IN-BAND DELAY MEASUREMENT** (also see *Packet Manager > Packet Endpnts > Config > Sublinks - Frame Relay*, *In-band Delay Measurement option*).
CONTDLY	The fixed duration **TEST** is not running and the DLCI is configured for continuous in-band delay measurement. The following **RESULTS** menu accumulates these measurements.
STOP	The fixed duration **TEST** is running. The following **DURATION** field shows the time remaining in the current test.

DURATION

Shows the duration in seconds for the fixed-duration test.

RESULTS [MN/AV/MX DLY]

Displays the minimum, average, and maximum delay for the delay-measurement test. To display the additional test results, place the cursor over this field and press <Enter > on the keyboard. The displayed times are in milliseconds.

ECHO PKT TX	Displays the total number of test packets that have been transmitted.
ECHO PKT RX	Displays the total number of test packets that have been received.
ECHO PKT DROPPED	Displays the total number of packets lost in the receiving direction (traveling from the remote ADTRAN frame relay device to the ATLAS).
RMT PKT DROPPED	Displays the total number of packets lost in the transmit direction (traveling from the ATLAS to the remote ADTRAN frame relay device).
MIN DELAY	Displays the minimum round trip delay for the current test period.
MAX DELAY	Displays the maximum round trip delay for the current test period.
AVG DELAY	Displays the average round trip delay for the current test.
RESET COUNTERS	Resets the counters.

PACKET MANAGER > PACKET ENDPNTS > ENDPT COUNT

Read security: 5

Displays the total number of packet endpoints configured.

PACKET MANAGER > PACKET ENDPNTS > ENDPTS SORT

Write security: 3; Read security: 5

Provides sorting options for the packet endpoints. **SORTING BY NAME** sorts packet endpoints alphabetically by name. If you do not want to sort packet endpoints, set this option to **OFF**.

PACKET MANAGER > PACKET CNCTS

Write security: 3; Read security: 5

After packet endpoints are defined, they are connected in the packet connects (**PACKET CNCTS**) map. **PACKET CNCTS** connects upper layer protocols from packet endpoint to packet endpoint. You can think of it as a dedicated map for virtual ports rather than physical ports.

PACKET MANAGER > PACKET CNCTS > FROM: PEP

Write Security: 3; Read Security: 5

Selects one packet endpoint for the packet connection. Packet endpoints created in the packet endpoint configuration are visible on a pull-down menu which includes the **ROUTER** option. This router is the internal ATLAS 830 router and can be used multiple times within the **PACKET CNCTS** menu.

PACKET MANAGER > PACKET CNCTS > SUBLINK

Write Security: 3; Read Security: 5

If the packet endpoint selected in **FROM: PEP** supports sublinks, they are available in this menu. In frame relay, this is the PVC from which you are selecting to groom data.

PACKET MANAGER > PACKET CNCTS > TO: PEP

Write Security: 3; Read Security: 5

Selects the other packet endpoint for the packet connection. Refer to **FROM: PEP** above for more detail.

PACKET MANAGER > PACKET CNCTS > SUBLINK

Write Security: 3; Read Security: 5

If the **TO: PEP** packet endpoint supports sublinks, the available sublinks are shown within this menu, which includes the **ROUTER** option.

PACKET MANAGER > PACKET CNCTS > PROTOCOL

Write Security: 3; Read Security: 5

Selects the protocols for this packet connection. Selecting the protocols on each individual connection allows the mixing of data from multiple sources onto a single PVC. Available protocols include the following: **ALL, IP, BRIDGE IP, PACKET VOICE, SNA, SNAP,** and **TRANSPARENT PROTOCOLS** (**TBOP** and **TASYNC**).

1. *If* **ALL** *is selected, additional connections from that PVC are not allowed.*
2. *If* **ROUTER** *is selected as one packet endpoint,* **IP** *is automatically set as the* **PROTOCOL**.
3. *If a* **TBOP** *packet endpoint is selected as one packet endpoint,* **TRANSPARENT** *is automatically set as the* **PROTOCOL**.

PACKET MANAGER > PACKET CNCTS > CONFIG

Write Security: 3; Read Security: 5

Determines data source and destination. The available options depend on the protocol selected.

CONFLICT	Indicates DLCI mismatch.
FROM	Indicates data source.
TO	Indicates data destination.

PACKET MANAGER > CNCTS SORT

Write Security: 3; Read Security: 5

Determines the order in which connections are displayed within **PACKET CNCTS**. Options include **FROM PKT ENDPT/SUBLINK, TO PKT ENDPT/SUBLINK, CONNECTION PROTOCOL,** and **OFF**.

PACKET MANAGER > FRAME RELAY IQ

Write Security: 2; Read Security: 5

Gathers and stores statistical information in the submenus **ENABLE IQ STATS, PORT ENABLES, CONFIG,** and **VIEW IQ STATISTICS**.

PACKET MANAGER > FRAME RELAY IQ > ENABLE IQ STATS

Write Security: 2; Read Security: 5

Globally enables and disables IQ statistics gathering. IQ statistics are only gathered when this option is enabled. This field defaults to the original setting of [**15 MIN, 7 DAYS, 96 INTS**] when re-enabled.

PACKET MANAGER > FRAME RELAY IQ > PORT ENABLES

Write Security: 2; Read Security: 5

Enables and disables IQ statistics gathering for each port. Use the submenus **NAME, ENABLE, ALL SUBLINKS,** and **SUBLINKS** to configure the individual ports.

PACKET MANAGER > FRAME RELAY IQ > PORT ENABLES > NAME

Displays the port number and name.

PACKET MANAGER > FRAME RELAY IQ > PORT ENABLES > ENABLE

Enables and disables IQ statistics gathering for the port identified in **NAME**.

PACKET MANAGER > FRAME RELAY IQ > PORT ENABLES > ALL SUBLINKS

Provides an easy way to enable or disable IQ statistics gathering on all sublinks. When this activator reads **DISABLE**, pressing <Enter > disables IQ statistics gathering on all sublinks. When it reads **ENABLE**, pressing <Enter > enables IQ statistics gathering on all sublinks.

PACKET MANAGER > FRAME RELAY IQ > PORT ENABLE > SUBLINKS

Identifies the PVC to be polled. Indicates the number of sublinks that ATLAS 830 will collect IQ data for within the given link.

NAME	Displays the user-designated name of the sublink (up to 15 characters).
DLCI	Displays the Data Link Connection Identifier (circuit number).
ENABLE	Indicates collection of IQ data for the target DLCI.

PACKET MANAGER > FRAME RELAY IQ > CONFIG

Write Security: 2; Read Security: 5

Sets the parameters for IQ statistics gathering.

PACKET MANAGER > FRAME RELAY IQ > CONFIG > CURRENT PIVS

Identifies resources used by IQ statistics storage. A PIV is a port or PVC per interval. ATLAS can track up to 10,000 PIVs. Think of it as a resource meter. The PIV number is derived from the **MAX DAYS** and **MAX INTERVALS** selected by the user. Changing one affects the other.

PACKET MANAGER > FRAME RELAY IQ > CONFIG > INTERVAL PERIOD

Sets the period for IQ statistics gathering. Options are 5, 10, 15, 20, and 30 minutes.

PACKET MANAGER > FRAME RELAY IQ > CONFIG > MAX DAYS

Defines the number of history day intervals to keep. Maximum entry is dependent on the **MAX INTERVALS** setting.

PACKET MANAGER > FRAME RELAY IQ > CONFIG > MAX INTERVALS

Defines the number of history intervals to keep. Maximum entry is dependent on the **MAX DAYS** setting.

PACKET MANAGER > FRAME RELAY IQ > VIEW IQ STATISTICS

Write Security: 2; Read Security: 5

Displays statistical information gathered for intervals and days on a port and for intervals and days on sublinks (PVCs or DLCIs).

PACKET MANAGER > FRAME RELAY IQ > VIEW IQ STATISTICS > INTERVAL AND DAY

Descriptions of the statistics available in the **INTERVAL** or **DAY** submenus follow:

RX FRAMES	The number of frames the port received for the interval or day.
RX BYTES	The number of bytes the port received for the interval or day.
MAX RX THRU	The maximum throughput the port received for the interval or day.
AVG RX THRU	The average throughput the port received for the interval or day.
MAX RX UTIL%	The maximum utilization the port received for the interval or day.
AVG RX UTIL%	The average utilization the port received for the interval or day.
TX FRAMES	The number of frames the port transmitted for the interval or day.
TX BYTES	The number of bytes the port transmitted for the interval or day.
MAX TX THRU	The maximum throughput the port transmitted for the interval or day.
AVG TX THRU	The average throughput the port transmitted for the interval or day.
MAX TX UTIL%	The maximum utilization the port transmitted for the interval or day.
AVG TX UTIL%	The average utilization the port transmitted for the interval or day.
PORT UA TIME	Time, in seconds, the port is unavailable due to physical or frame relay outage.
SIG DOWN TIME	Time, in seconds, the signaling state has been down.
SIGNAL ERROR	The number of PVC signaling frames received with protocol violations.
SIGNAL T/O	The number of PVC signal time-outs. Either T391 seconds elapsed without receiving a response to a poll or T392 seconds elapsed without receiving a poll.
SIG STATE CHG	The number of state changes for the PVC signaling protocol. This number includes transitions from down state to up state and vice-versa.
RX FULL STAT	The number of PVC-signaling, full-status frames received.
TX FULL STAT	The number of PVC-signaling, full-status frames transmitted.
RX LI ONLY	The number of PVC-signaling, link integrity only frames received.
TX LI ONLY	The number of PVC-signaling, link integrity only frames transmitted.
ASYNC STATUS	The number of single PVC status frames received.
DISCARD FRAME	The number of frames discarded by the IQ unit.
ABORTS	The number of frames received without proper flag termination.

RX FRAMES	The number of frames the port received for the interval or day.
CRC ERROR	The number of frames received with CRC errors.
OCTET ALIGN	The number of frames received with a bit count not divisible by eight.
LENGTH ERROR	The number of frames received that are less than 5 bytes or greater than 4500 bytes.
EA VIOLATION	The number of frames received with errors in the EA field of the frame relay header.
INACTIVE DLCI	The number of frames received while the PVC is in the inactive state.
INVALID DLCI	The number of frames received with a DLCI value less than 16 or greater than 1007, not including PVC signaling frames.

PACKET MANAGER > FRAME RELAY IQ > VIEW IQ STATISTICS > SUBLINK

Provides statistics for a particular DLCI or PVC by interval or day.

INTERVAL AND DAY

Descriptions of the statistics available in the **INTERVAL** or **DAY** submenus follow:

RX FRAMES	The number of frames the PVC received for the interval or day.
RX BYTES	The number of bytes the PVC received for the interval or day.
MAX RX THRU	The maximum throughput the PVC received for the interval or day.
AVG RX THRU	The average throughput the PVC received for the interval or day.
MAX RX UTIL%	The maximum utilization the PVC received for the interval or day.
AVG RX UTIL%	The average utilization the PVC received for the interval or day.
TX FRAMES	The number of frames the PVC transmitted for the interval or day.
TX BYTES	The number of bytes the PVC transmitted for the interval or day.
MAX TX THRU	The maximum throughput the PVC transmitted for the interval or day.
AVG TX THRU	The average throughput the PVC transmitted for the interval or day.
MAX TX UTIL%	The maximum utilization the PVC transmitted for the interval or day.
AVG TX UTIL%	The average utilization the PVC transmitted for the interval or day.
PVC IA TIME	Time, in seconds, the PVC has been in the inactive state for the interval or day.

RX FRAMES	The number of frames the PVC received for the interval or day.
RX FECN	The number of FECNs the PVC has received for the interval or day.
TX FECN	The number of FECNs the PVC has transmitted for the interval or day.
RX BECN	The number of BECNs the PVC has received for the interval or day.
TX BECN	The number of BECNs the PVC has transmitted for the interval or day.
RX DE	The number of DEs the PVC has received for the interval or day.
TX DE	The number of DEs the PVC has transmitted for the interval or day.
RX CR	The number of CRs the PVC has received for the interval or day.
TX CR	The number of CRs the PVC has transmitted for the interval or day.
LOST FRAMES	The number of lost frames on the PVC for the interval or day.
RMT LOST FRMS	The number of remote lost frames on the PVC for the interval. Applies only if **IN-BAND SEQUENCE NUMBER** is **ENABLED** on the PVC.
RX BURST SEC	The number of bursty seconds the PVC received for the interval or day.
TX BURST SEC	The number of bursty seconds the PVC transmitted for the interval or day.
MIN RX FRAME	The minimum frame size the PVC received for the interval or day.
MAX RX FRAME	The maximum frame size the PVC received for the interval or day.
AVG RX FRAME	The average frame size the PVC received for the interval or day.
MIN TX FRAME	The minimum frame size the PVC transmitted for the interval or day.
MAX TX FRAME	The maximum frame size the PVC transmitted for the interval or day.
AVG TX FRAME	The average frame size the PVC transmitted for the interval or day.
MIN FRAME DLY	The minimum delay in milliseconds on the **PVC IN-BAND DELAY MEASUREMENT** is **ENABLED** (see *Packet Manager > Packet Endpnts > Config > Sublinks - Frame Relay* on page 214, the **IN-BAND DELAY MEASUREMENT** option) for the PVC or if PVC diagnostics are being performed.

RX FRAMES	The number of frames the PVC received for the interval or day.
MAX FRAME DLY	The maximum delay in milliseconds on the PVC for the interval or day. Applies only if **IN-BAND DELAY MEASUREMENT** is **ENABLED** (see *Packet Manager > Packet Endpnts > Config > Sublinks - Frame Relay* on page 214, the **IN-BAND DELAY MEASUREMENT** option) for the PVC or if PVC diagnostics are being performed.
AVG FRAME DLY	The average delay in milliseconds on the PVC for the interval or day. Applies only if **IN-BAND DELAY MEASUREMENT** is **ENABLED** (see *Packet Manager > Packet Endpnts > Config > Sublinks - Frame Relay* on page 214, the **IN-BAND DELAY MEASUREMENT** option) for the PVC or if PVC diagnostics are being performed.
PVC STATE CHANGE	The number of state changes for this PVC for the interval or day.

ROUTER

The ATLAS 830 router uses the integral 10/100BaseT Ethernet port to transmit local area network (LAN) traffic over the wide area network (WAN) to a remote LAN. By integrating the router into the network access device, you benefit from the cost savings of not requiring an external router. To view the menu options for the Router, see Figure 15. All routing functions within the ATLAS are configured and monitored from the **ROUTER** menu.

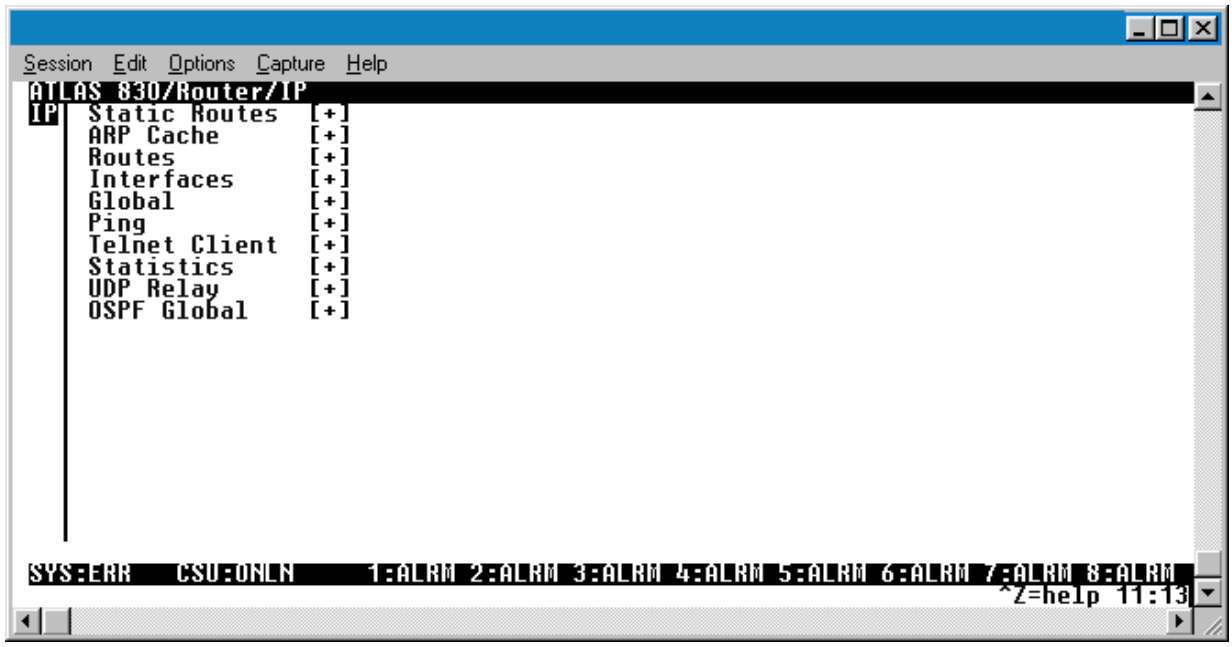


Figure 15. Router Menu (IP Selected)

ROUTER > IP > STATIC ROUTES

Write Security: 2; Read Security: 2

The **STATIC ROUTES** menu manages static IP routes. You can create, modify, and delete routes using this menu.

ROUTER > IP > STATIC ROUTES > IP ADDRESS

Write Security: 2; Read Security: 2

Defines the IP address of the host or network device being routed to.

ROUTER > IP > STATIC ROUTES > NETMASK

Write Security: 2; Read Security: 2

Determines the number of bits used in the above-defined IP address for routing. If a host address is desired for the IP address, this field must be set to 255.255.255.255.

ROUTER > IP > STATIC ROUTES > GATEWAY

Write Security: 2; Read Security: 2

Defines the IP address of the router to receive the forwarded IP packet.

ROUTER > IP > STATIC ROUTES > INTERFACE

Write Security: 2; Read Security: 2

Defines the interface to which IP packets with this address will be routed. These are either Ethernet or frame relay DLCIs.

ROUTER > IP > STATIC ROUTES > HOPS

Write Security: 2; Read Security: 2

Defines the number of router hops required to get to the network or host. Maximum distance is 15 hops.

ROUTER > IP > STATIC ROUTES > COST

Write Security: 2; Read Security: 2

Defines the total cost of getting to the network. Normally, the cost is based on the available bandwidth.

ROUTER > IP > STATIC ROUTES > ENABLED

Write Security: 2; Read Security: 2

Adds a static route to the router.

ROUTER > IP > STATIC ROUTES > ADVERTISE

Write Security: 2; Read Security: 2

When set to **YES**, this static route is advertised over all interfaces on which a route advertisement protocol (e.g., RIP) is enabled. When set to **NO**, this is a private route.

ROUTER > IP > ARP CACHE

Write Security: 2; Read Security: 2

The **ARP CACHE** menu displays the contents of the ATLAS Address Resolution Protocol (ARP) cache. All resolved cache entries time out after 20 minutes. Unresolved entries time out in 3 minutes.

ROUTER > IP > ARP CACHE > IP ADDRESS

Read Security: 2

Displays the IP address used for resolving MAC address.

ROUTER > IP > ARP CACHE > MAC ADDRESS

Read Security: 2

Resolves Ethernet address. If set to all zeros, there is no resolution for that address.

ROUTER > IP > ARP CACHE > TIME

Read Security: 2

Displays the minutes since the entry was last referenced.

ROUTER > IP > ARP CACHE > TYPE

Read Security: 2

Defines this entry as **DYNAMIC** or **STATIC**.

ROUTER > IP > ARP CACHE > INTERFACE

Read Security: 2

Displays the interface upon which this entry was found.

ROUTER > IP > ARP CACHE > TX PENDING

Read Security: 2

Displays the number of transmit packets pending a reply.

ROUTER > IP > ROUTES

Write Security: 2; Read Security: 2

The **ROUTES** menu displays the contents of the ATLAS routing table. All static and discovered routes are displayed from this menu.

ROUTER > IP > ROUTES > IP ADDRESS

Read Security: 2

Displays the IP address of the destination host or network.

ROUTER > IP > ROUTES > NETMASK

Read Security: 2

Displays the subnet mask applied to the destination address.

ROUTER > IP > ROUTES > GATEWAY

Read Security: 2

Displays the IP address of the next-hop router or host receiving the forwarded IP packet.

ROUTER > IP > ROUTES > INTERFACE

Read Security: 2

Displays the next-hop router or host interface through which IP packets are routed, as defined here:

LOCAL	Forwards the packet directly to the ATLAS router.
EN0 IP	Forwards the packet through the ATLAS Ethernet port.
ENDPOINT NAME	Forwards the packet using the DLCI number.

ROUTER > IP > ROUTES > USED

Read Security: 2

Displays the number of times the router has referenced this route.

ROUTER > IP > ROUTES > CLR

Write Security: 2; Read Security: 2

Clears the **USED** menu and resets the value to zero.

ROUTER > IP > ROUTES > FLAGS

Read Security: 2

Indicates the properties of this routing table entry, composed of the following letters:

H	-	route is a host route
G	-	route is a gateway route
DR	-	route learned dynamically from RIP
I	-	route learned from an ICMP redirect
A	-	route learned from IARP
P	-	route is private and is not advertised with RIP
T	-	route is to a triggered port (updated only when table changes)

ROUTER > IP > ROUTES > HOPS

Read Security: 2

Displays the number of router hops required to get to the network or host. Ranges from 0 to 16. If set to 16, the route is defined as infinite and cannot be used.

ROUTER > IP > ROUTES > COST

Read security: 2

Normally, the cost is based on the available bandwidth.

ROUTER > IP > ROUTES > TTL

Read Security: 2

Displays the number of seconds until the address is removed from table. A value of 999 means the route is static.

ROUTER > IP > INTERFACES

Write Security: 2; Read Security: 2

The **INTERFACES** menu configures and monitors all interfaces connected to the ATLAS router. These include the Ethernet and frame relay DLCIs connected in the **PACKET MANAGER/ PACKET CNCTS**.

ROUTER > IP > INTERFACES > NETWORK NAME

Read Security: 2

Displays the name of the interface connected to the ATLAS router, as follows:

EN0 IP	ATLAS Ethernet port
ENDPOINT NAME	DLCI Number

ROUTER > IP > INTERFACES > ADDRESS

Write Security: 2; Read Security: 2

Defines the individual interface IP address. If this field is left as 0.0.0.0, it is treated as an unnumbered interface.

ROUTER > IP > INTERFACES > SUBNET MASK

Write Security: 2; Read Security: 2

Defines the subnet mask applied to the address defined for this link. If the interface IP address is unnumbered, leave as 0.0.0.0.

ROUTER > IP > INTERFACES > IARP

Write Security: 2; Read Security: 2

The Inverse ARP (**IARP**) menu is only present when this interface is a frame-relay network interface. ATLAS sends Inverse ARP packets to determine the IP address on the other end of the virtual circuit. ATLAS always responds to Inverse ARP requests with its IP address for the requested DLCI.

ENABLE	Causes ATLAS to dynamically send Inverse ARP packets to determine the IP address on the other end of the virtual circuit. When an Inverse ARP packet is not responded to, no route is placed in the IP route table. If the Inverse ARP packet is responded to, a route is placed in the IP route table.
DISABLE	Instructs ATLAS not to generate Inverse ARP request packets. In this case, the **FAR-END ADDRESS** parameter may be used to statically assign a route address (see the following, Far-End Address).

ROUTER > IP > INTERFACES > FAR-END ADDRESS

Write Security: 2; Read Security: 2

This menu is only present for frame-relay network interfaces, and it is only selectable when **IARP** is disabled. Use this menu to specify the IP address of the device on the other end of the virtual circuit. If that IP address is non-zero, a static route to the far-end network will be added using the interface **SUBNET-MASK**. If 0.0.0.0 has been specified for the **SUBNET-MASK**, a default subnet mask is used, based on the class of the Far-End Address.

ROUTER > IP > INTERFACES > MTU

Write Security: 2; Read Security: 2

Defines maximum number of bytes in a datagram transmitted over this interface (Maximum Transmit Unit).

ROUTER > IP > INTERFACES > RIP

Write Security: 2; Read Security: 2

Configures routing information protocol (RIP) on this interface.

MODE

Allows RIP to be enabled or disabled on a per-interface basis.

TX ONLY	RIP advertisements are periodically transmitted, but are not listened to on this virtual circuit.
RX ONLY	RIP advertisements are not transmitted on this virtual circuit, but they are listened to.
TX AND RX	RIP advertisements are periodically transmitted and are listened to on this virtual circuit.

NOTE *If* **RIP/MODE** *is off,* **PROTOCOL, METHOD,** *and* **UPDATE** *will* ***not*** *be visible.*

PROTOCOL

Sets the version of RIP being used on this interface. The options are **RIP V1** and **RIP V2**. If **RIP V2** is used, a new menu, **AUTHENTICATION**, opens.

NOTE *If* **RIP V2** *is used, a user-defined secret may have to be created.*

METHOD

Defines the method used to send RIP route advertisements. The options are listed below:

NONE	All routes in the router table are advertised through this interface with no modification of the routing metric.
SPLIT HORIZON	Only advertises routes not learned through this interface.
POISON REVERSE	All routes are advertised, but the routes learned through this interface are "poisoned" with an infinite route metric.

UPDATES

Defines when RIP advertisements are transmitted.

PERIODIC	RIP advertisements are periodically transmitted.
TRIGGERED	RIP advertisements are transmitted only when new routes are learned, and learned routes do not age.

AUTHENTICATION

Defines the secret used to advertise routes when using RIP V2.

REDISTRIBUTE DEFAULT GATEWAY

Enables or disables the transmission of the Default Gateway to be sent with RIP on a per interface basis.

ROUTER > IP > INTERFACES > PROXY ARP

Enables or disables Proxy ARP on this interface. Allows the network portion of a group of addresses to be shared among several physical network segments. When **ENABLED**, and an ARP (address resolution protocol) request is received on the Ethernet port, the address is looked-up in the IP routing table. If the forwarding port is not on the Ethernet port and the route is not the default route, the router answers the request with its own hardware address. When **DISABLED** (default), the router only responds to ARP request received for its own address.

The ARP protocol itself provides a way for devices to create a mapping between physical (i.e., Ethernet) addresses and logical IP addresses. **PROXY ARP** uses the mapping feature by instructing a router to answer ARP requests as a "proxy" for the IP addresses behind one of its ports. The device which sent the ARP request then correctly assumes that it can reach the requested IP address by sending packets to the physical address that was returned. This technique effectively hides the fact that a network has been (further) subnetted.

ROUTER > IP > GLOBAL

Write security: 2; Read security: 2

Provides a way to configure various settings for the Ethernet port. The following menus are available for review and editing:

ROUTER > IP > GLOBAL > DEFAULT GATEWAY

Write Security: 2; Read Security: 2

Defines or changes the default gateway. Enter the default gateway address by entering a decimal number into the appropriate field and then pressing <Enter > to move to the next field. You will need a default gateway if the LAN contains multiple segments. This address is composed of four decimal numbers, each in the range of 0 to 255, separated by periods. This value is set to 0.0.0.0 by default. Contact your LAN administrator for the appropriate address.

ROUTER > IP > GLOBAL > DEFAULT METRIC

Write Security: 2; Read Security: 2

Defines the default gateway metric. Enter the default gateway metric by pressing <Enter > and entering a decimal number.

ROUTER > IP > GLOBAL > DEFAULT GATEWAY COST

Write Security: 2; Read Security: 2

Defines the default gateway cost. Enter the default gateway metric by pressing <Enter > and entering a decimal number.

ROUTER > IP > PING

Write Security: 2; Read Security: 2

Allows you to send pings (ICMP requests) to devices accessible via the network.

Only one ping session can be active at a time.

ROUTER > IP > PING > IP ADDRESS

Write Security: 2; Read Security: 2

Specifies the IP address to ping.

ROUTER > IP > PING > COUNT

Write Security: 2; Read Security: 2

Specifies the number of pings to send. The maximum value is 99.

ROUTER > IP > PING > SIZE

Write Security: 2; Read Security: 2

Specifies the size in bytes of the data portion of the ping request. The default value is 64 bytes, and the maximum size is 1024 bytes.

ROUTER > IP > PING > TIMEOUT

Write Security: 2; Read Security: 2

Specifies the time in milliseconds to wait for the ping reply before timing out. The default timeout is three seconds, and the maximum timeout value is ten seconds.

ROUTER > IP > PING > ROUND TRIP MIN

Write Security: 2; Read Security: 2

Displays the minimum round trip time of the ping request/reply of the current set of pings.

ROUTER > IP > PING > ROUND TRIP AVG

Write Security: 2; Read Security: 2

Displays the average round trip time of the ping request/reply of the cur-rent set of pings.

ROUTER > IP > PING > ROUND TRIP MAX

Write Security: 2; Read Security: 2

Displays the maximum round trip time of the ping request/reply of the cur-rent set of pings.

ROUTER > IP > PING > TX STATS

Write Security: 2; Read Security: 2

Displays the number of ping requests transmitted (**n txed**), the number of ping replies received (**n rxed**) and the number of ping requests that were lost (**n lost**).

ROUTER > IP > PING > RESET STATS

Write Security: 2; Read Security: 2

Resets all ping statistics to zero. If the ping client is active, this menu will stop it.

ROUTER > IP > PING > START/STOP

Write Security: 2; Read Security: 2

If the ping client is currently idle, this menu sends pings to the specified address. If the ping client is active, the menu stops sending pings.

ROUTER > IP > TELNET CLIENT

Write security: 2; Read security: 2

Allows a user to open a Telnet session to any device listed in the ATLAS 830 route table.

ROUTER > IP > TELNET CLIENT > ADDRESS

Write security: 2; Read security: 2

Defines the IP address assigned to the remote unit you are trying to connect to.

ROUTER > IP > TELNET CLIENT > ESCAPE CHAR

Write security: 2; Read security: 2

Defines the Telnet client escape character. Typing the combination characters will close the active telnet session to the remote unit specified in the **ADDRESS** field.

Option	Keystroke
^]	<Ctrl > +]
^ \	<Ctrl > + \
^ [	<Ctrl > + [
^ ^	<Ctrl > + <Shift > + 6
^ _	<Ctrl > + <Shift > + -

ROUTER > IP > TELNET CLIENT > PORT

Write security: 2; Read security: 2

Defines the port used in the remote login session. Default (for Telnet) is **23**.

ROUTER > IP > TELNET CLIENT > CONNECT

Write security: 2; Read security: 2

Activator used to start a Telnet session to the remote unit configured in the **ADDRESS** field.

ROUTER > IP > STATISTICS

Write security: 2; Read security: 2

This section describes the following **STATISTICS** submenus (and see the tables on the pages following):

- IP
- ICMP
- TCP
- UDP
- IP Fast Cache

All of these statistics are taken from the MIB-II variables in RFC 1156. To clear the accumulated statistics, press the Enter key on **CLEAR**.

Table 4. IP Statistics

NAME	DESCRIPTION
FORWARDING	The indication of whether this ATLAS 830 is acting as an IP gateway in respect to the forwarding of datagrams received by, but not addressed to, this ATLAS 830. IP gateways forward datagrams; hosts do not (except those Source-Routed via the host).
DEFAULT TTL	The default value inserted into the Time-To-Live field of the IP header of datagrams originated at this ATLAS 830, whenever a TTL value is not supplied by the transport layer protocol.
INRECEIVES	The total number of input datagrams received from interfaces, including those received in error.
INHDRERRORS	The number of input datagrams discarded due to errors in their IP headers, including bad checksums, version number mismatch, other format errors, time-to-live exceeded, errors discovered in processing their IP options, etc.
INADDRERRORS	The number of input datagrams discarded because the IP address in their IP header's destination field was not a valid address to be received at this ATLAS 830. This count includes invalid addresses (e.g., 0.0.0.0) and addresses of unsupported Classes (e.g., Class E). For entities which are not IP Gateways and therefore do not forward datagrams, this counter includes datagrams discarded because the destination address was not a local address.
FORWDATAGRAMS	The number of input datagrams for which this ATLAS 830 was not their final IP destination, as a result of which an attempt was made to find a route to forward them to that final destination. In entities which do not act as IP Gateways, this counter will include only those packets which were Source-Routed via this ATLAS 830, and the Source-Route option processing was successful.
INUNKNOWNPROTOS	The number of locally-addressed datagrams received successfully but discarded because of an unknown or unsupported protocol.
INDISCARDS	The number of input IP datagrams for which no problems were encountered to prevent their continued processing, but which were discarded (e.g., for lack of buffer space). Note that this counter does not include any datagrams discarded while awaiting re-assembly.
INDELIVERS	The total number of input datagrams successfully delivered to IP user-protocols (including ICMP).
OUTREQUESTS	The total number of IP datagrams which local IP user-protocols (including ICMP) supplied to IP in requests for transmission. Note that this counter does not include any datagrams counted in FORWDATAGRAMS.

Table 4. IP Statistics (Continued)

NAME	DESCRIPTION
OUTDISCARDS	The number of output IP datagrams for which no problem was encountered to prevent their transmission to their destination, but which were discarded (e.g., for lack of buffer space). Note that this counter would include datagrams counted in FORWDATAGRAMS if any such packets met this (discretionary) discard criterion.
OUTNOROUTES	The number of IP datagrams discarded because no route could be found to transmit them to their destination. Note that this counter includes any packets counted in FORWDATAGRAMS which meet this "no-route" criterion. Note also that this includes any datagrams which a host cannot route because all of its default gateways are down.
REASMTIMEOUT	The maximum number of seconds which received fragments are held while they are awaiting reassembly at this ATLAS 830.
REASMREQDS	The number of IP fragments received which needed to be reassembled at this ATLAS 830.
REASMOKS	The number of IP datagrams successfully reassembled.
REASMFAILS	The number of failures detected by the IP reassembly algorithm (for whatever reason: timed out, errors, etc.). Note that this is not necessarily a count of discarded IP fragments since some algorithms (notably RFC 815s) can lose track of the number of fragments by combining them as they are received.
FRAGOKS	The number of IP datagrams that have been successfully fragmented at this ATLAS 830.
FRAGFAILS	The number of IP datagrams that have been discarded because they needed to be fragmented at this ATLAS 830 but could not be, e.g., because their "Don't Fragment" flag was set.
FRAGCREATES	The number of IP datagram fragments that have been generated as a result of fragmentation at this ATLAS 830.
CLEAR	Clears the accumulated statistics.

Table 5. ICMP Statistics

NAME	DESCRIPTION
INMSGS	The total number of ICMP messages which the ATLAS 830 received. Note that this counter includes all those counted by INERRORS.

Table 5. ICMP Statistics (Continued)

NAME	DESCRIPTION
INERRORS	The number of ICMP messages which the ATLAS 830 received but determined as having errors (bad ICMP checksums, bad length, etc.)
INDESTUNREACHS	The number of ICMP Destination Unreachable messages received.
INTIMEEXCDS	The number of ICMP Time Exceeded messages received.
INPARMPROBS	The number of ICMP Parameter Problem messages received.
INSRCQUENCHS	The number of ICMP Source Quench messages received.
INREDIRECTS	The number of ICMP Redirect messages received.
INECHOS	The number of ICMP Echo (request) messages received.
INECHOREPS	The number of ICMP Echo Reply messages received.
INTIMESTAMPS	The number of ICMP Timestamp (request) messages received.
INTIMESTAMPREPS	The number of ICMP Timestamp Reply messages received.
INADDRMASKS	The number of ICMP Address Mask Request messages received.
INADDRMASKREPS	The number of ICMP Address Mask Reply messages received.
OUTMSGS	The total number of ICMP messages which this ATLAS 830 attempted to send. Note that this counter includes all those counted by **ICMPOUTERRORS.**
OUTERRORS	The number of ICMP messages which this ATLAS 830 did not send due to problems discovered within ICMP such as a lack of buffers. This value should not include errors discovered outside the ICMP layer such as the inability of IP to route the resultant datagram. In some implementations there may be no types of error which contribute to this counter's value.
OUTDESTUNREACHS	The number of ICMP Destination Unreachable messages sent.
OUTTIMEEXCDS	The number of ICMP Time Exceeded messages sent.
OUTPARMPROBS	The number of ICMP Parameter Problem messages sent.
OUTSRCQUENCHS	The number of ICMP Source Quench messages sent.
OUTREDIRECTS	The number of ICMP Redirect messages sent.
OUTECHOS	The number of ICMP Echo (request) messages sent.
OUTECHOREPS	The number of ICMP Echo Reply messages sent.

Table 5. ICMP Statistics (Continued)

NAME	DESCRIPTION
OUTTIMESTAMPS	The number of ICMP Timestamp (request) messages sent.
OUTTIMESTAMPREPS	The number of ICMP Timestamp Reply messages sent.
OUTADDRMASKS	The number of ICMP Address Mask Request messages sent.
OUTADDRMASKREPS	The number of ICMP Address Mask Reply messages sent.
CLEAR	Clears the accumulated statistics.

Table 6. TCP Statistics

NAME	DESCRIPTION
RTOALGORITHM	The algorithm used to determine the timeout value used for retransmitting unacknowledged octets.
RTOMIN	The minimum value permitted by a TCP implementation for the retransmission timeout, measured in milliseconds. More refined semantics for objects of this type depend upon the algorithm used to determine the retransmission timeout. In particular, when the timeout algorithm is rsre(3), an object of this type has the semantics of the LBOUND quantity described in RFC 793.
RTOMAX	The maximum value permitted by a TCP implementation for the retransmission timeout, measured in milliseconds. More refined semantics for objects of this type depend upon the algorithm used to determine the retransmission timeout. In particular, when the timeout algorithm is rsre(3), an object of this type has the semantics of the UBOUND quantity described in RFC 793.
MAXCONN	The limit on the total number of TCP connections the ATLAS 830 can support. In entities where the maximum number of connections is dynamic, this object should contain the value -1.
ACTIVEOPENS	The number of times TCP connections have made a direct transition to the SYN-SENT state from the CLOSED state.
PASSIVEOPENS	The number of times TCP connections have made a direct transition to the SYN-RCVD state from the LISTEN state.
ATTEMPTFAILS	The number of times TCP connections have made a direct transition to the CLOSED state from either the SYN-SENT state or the SYN-RCVD state, plus the number of times TCP connections have made a direct transition to the LISTEN state from the SYN-RCVD state.

Table 6. TCP Statistics (Continued)

NAME	DESCRIPTION
ESTABRESETS	The number of times TCP connections have made a direct transition to the CLOSED state from either the ESTABLISHED state or the CLOSE-WAIT state.
CURRESTAB	The number of TCP connections for which the current state is either ESTABLISHED or CLOSE-WAIT.
INSEGS	The total number of segments received, including those received in error. This count includes segments received on currently established connections.
OUTSEGS	The total number of segments sent, including those on current connections but excluding those containing only retransmitted octets.
RETRANSSEGS	The total number of segments retransmitted - that is, the number of TCP segments transmitted containing one or more previously transmitted octets.
CLEAR	Clears the accumulated statistics.

Table 7. UDP Statistics

NAME	DESCRIPTION
INDATAGRAMS	The total number of UDP datagrams delivered to UDP users.
NOPORTS	The total number of received UDP datagrams for which there was no application at the destination port.
INERRORS	The number of received UDP datagrams that could not be delivered for reasons other than the lack of an application at the destination port.
OUTDATAGRAMS	The total number of UDP datagrams sent from this ATLAS 830.
CLEAR	Clears the accumulated statistics.

Table 8. IP Fast Cache Statistics

NAME	DESCRIPTION
HITS	Total number of times the ATLAS 830 went into the Fast Cache and successfully retrieved an IP address.
MISSES	Total number of times the ATLAS 830 went into the Fast Cache and failed to retrieve an IP address.
CLEAR	Clears the accumulated statistics.

ROUTER > IP > STATISTICS > CLEAR

Write Security: 2; Read security: 2

Clears current statistics in the IP, ICMP, TCP, UDP, and IP Fast Cache statistics tables.

ROUTER > IP > UDP RELAY

Write Security: 2; Read security: 2

Allows the router to act as a relay agent for UDP (User Datagram Protocol) broadcast packets. Normally, a router will not forward UDP broadcast packets. However, many network applications use UDP broadcasts to configure addresses, host names, and other information. If hosts using these protocols are not on the same network segment as the servers providing the information, the client programs will not receive a response without enabling the UDP relay agent.

ROUTER > IP > UDP RELAY > ENABLE

Write Security: 2; Read security: 2

Enables/disables the router to act as a relay agent.

ROUTER > IP > UDP RELAY > RELAY TABLE

Write Security: 2; Read security: 2

Lists up to four relay destination servers (**RELAY TABLE 0 - 3**). Each server can be configured using the following menus: **ENABLE, IP,** and **UDP**.

ENABLE

Enables/disables this field. Select either **STANDARD** or **SPECIFIED**. (**DISABLE** is not used.)

STANDARD (DEFAULT)	Relays any of the following standard UDP protocols: DHCP, TFTP, DNS, NTP (Network Time Protocol, port 123), NBNS (NetBIOS Name Server, port 137), NBDG (Net BIOS Datagram, port 138), and BootP.
SPECIFIED	Specifies the UDP port (1 to 65,535) in the UDP Port columns (maximum of three per server).

IP

Write Security: 2; Read security: 2

Defines the IP address of the server that receives the relay packet.

UDP PORTS 1 - 3

Write Security: 2; Read security: 2

Specifies the UDP ports to relay. These fields are active only when **ENABLE** is set to **SPECIFIED**.

DEDICATED MAPS

The **DEDICATED MAPS** menu assigns dedicated connections between any two ports in the ATLAS 830. This section describes the **DEDICATED MAPS** menu items (see Figure 16). These options are module-dependent; that is, the menu items available depend on the module selected.

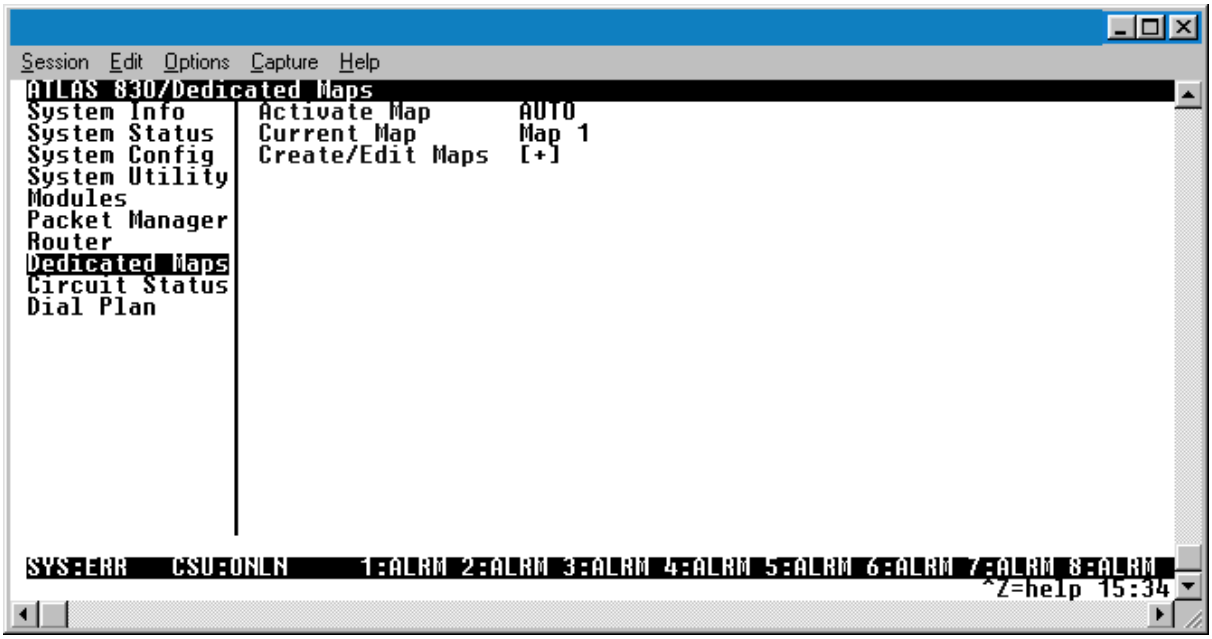


Figure 16. Dedicated Maps Menu

DEDICATED MAPS > ACTIVATE MAP

Write security: 3; Read security: 5

Activates a dedicated map—automatically or manually. You can have up to five different dedicated maps, each with an optionally specified name. The configuration choices are:

AUTO	Automatically activates a particular dedicated map at the time and day specified in the **ACTIVATE TIME** field.
MAPS 1 THROUGH 5	Allows you to manually activate a specific dedicated map. To manually activate a dedicated map, highlight the **ACTIVATE MAP** field and press <Enter > . Choose the desired dedicated map from the popup menu list.

DEDICATED MAPS > CURRENT MAP

Read security: 5

Displays the name of the currently active dedicated map (read-only).

DEDICATED MAPS > CREATE/EDIT MAPS

Write security: 3; Read security: 5

Creates new maps and defines settings, as well as edits existing maps. To add a new map, position the cursor in the index column and press <I > . ATLAS 830 automatically names the maps in the sequence in which they are created. You can change the names with **MAP NAME**.

DEDICATED MAPS > CREATE/EDIT MAPS >

Displays the index number of the available maps.

DEDICATED MAPS > CREATE/EDIT MAPS > MAP NAME

Write security: 3; Read security: 5

Displays the name of the dedicated map. The name can contain up to 57 alpha-numeric characters, including spaces and special characters. To edit the name, press <Enter > and type in the new name.

DEDICATED MAPS > CREATE/EDIT MAPS > SORT TO/FROM

Write security: 3; Read security: 5

Specifies sort order based on the end points set in **CONNECTS/FROM CONFIG** and **CONNECTS/TO CONFIG**. You can also turn **OFF** this option. The sort feature is helpful when you are attempting to find a particular connection in a large connection list.

DEDICATED MAPS > CREATE/EDIT MAPS > CONNECTS

Enters the dedicated map connections. Press <Enter > to activate the submenus.

Some of the options available in this submenu change depending on the type of modules selected in the **FROM** *or* **TO** *fields. For more information on these submenus, refer to the individual module discussions in this section.*

You must return to **DEDICATED MAPS** *in the* **MAIN MENU** *for changes to take effect.*

DEDICATED MAPS > CREATE/EDIT MAPS > CONNECTS > FROM SLT

Write security: 3; Read security: 5

Specifies the slot to use for the **FROM** connection. When you select this option, a list of all of the slots and the modules installed in the slots displays. Select the appropriate slot and press <Enter > .

DEDICATED MAPS > CREATE/EDIT MAPS > CONNECTS > PORT

Write security: 3; Read security: 5

Specifies the port to use for the **FROM** connection. When you select this option, a list of ports and module types appears. Select the appropriate port and module type, and press <Enter > .

DEDICATED MAPS > CREATE/EDIT MAPS > CONNECTS > TO SLOT/SERVICE

Write security: 3; Read security: 5

Specifies the slot to use for the second end of a connection. Select this option, and a list of all of the slots and the modules installed in the slots displays. Pick the appropriate slot and press <Enter > . A **PKTENDPT** or **PKTVOICE** endpoint may also be selected as the service for the connection.

DEDICATED MAPS > CREATE/EDIT MAPS > CONNECTS > PORT

Write security: 3; Read security: 5

Specifies the port to use for the second end of a connection. When you select this option, a list of ports and module types appears. Select the appropriate port and module type, and press <Enter > . If a **PKTENDPT** or **PKTVOICE** endpoint is selected for the **TO SLOT/SERVICE** field, the available packet endpoints or packet voice endpoints will display in the drop down menu after pressing <Enter > .

DEDICATED MAPS > CREATE/EDIT MAPS > CONNECTS > FROM CONFIG

Write security: 3; Read security: 5

Specifies the configuration for the **FROM** connection. The selections displayed in this field are based on the type of module selected in the **FROM SLT** option. For detailed information on submenus for a particular module type, please refer to the **DEDICATED MAPS** menu discussion for the appropriate network, option, or resource module.

DEDICATED MAPS > CREATE/EDIT MAPS > CONNECTS > TO CONFIG

Write security: 3; Read security: 5

Specifies the configuration for the **TO** connection. The selections displayed in this field are based on the type of module selected in the **TO SLT** option. For detailed information on submenus for a particular module type, please refer to the **DEDICATED MAPS** menu discussion for the appropriate network, option, or resource module.

DEDICATED MAPS > CREATE/EDIT MAPS > CONNECTS > SIG

Write security: 3; Read security: 5

Specifies whether the ATLAS 830 uses active RBS on the connection. Selecting **ON** allows the ATLAS 830 to preserve signaling bits between the two endpoints of the connection. Selecting **OFF** ignores the signaling bits of the connection. This selection is automatically set to **OFF** when RBS does not apply. For example, a T1-to-Nx connection is set to **OFF**.

DEDICATED MAPS > CREATE/EDIT MAPS > ACTIVATE TIME

Write security: 3; Read security: 5

Sets the time when the map becomes active if you have selected **AUTO** in the **ACTIVATE MAP** field. Enter this time in hh:mm:ss 24-hour format.

DEDICATED MAPS > CREATE/EDIT MAPS > ENBL DAY

Security level: 3; Read security: 5

Specifies which days of the week the map is active.

DEDICATED MAPS (T1/PRI)

DEDICATED MAPS (T1/PRI) > CREATE/EDIT MAPS > CONNECTS

Write security: 3; Read security: 5

Enters the dedicated map connections. Press <Enter > to activate the submenus.

DEDICATED MAPS (T1/PRI) > CREATE/EDIT MAPS > CONNECTS > TO/FROM CONFIG

Write security: 3; Read security: 5

Specifies the configuration for the **TO/FROM** connection. The following selections may apply to the Quad T1/PRI Option Module, depending on the application:

DS0 SELECTION

Defines DS0s for a T1 port. Use this field to define the DS0s for this connection. You can enter the DS0s in several ways. For example, to enter DS0s one through five, enter **1-5**. For DS0s one and five, enter **1,5**.

DS0 AVAILABLE

Indicates which DS0s of the T1 are assigned. DS0 assignment is based on the following items.

DIGIT 0-9	This DS0 is available. The digit that displays in this field represents the last digit of the DS0 number.
*****	This DS0 has been requested for this connection, but the DS0 is not yet activated for this port.
!	This DS0 is used by this port in this connection and is currently activated.
s	This DS0 is used in the switched **DIAL PLAN**.
S	This DS0 is used in the switched **DIAL PLAN** and conflicts with this connection.
n	This DS0 is already used in this **DEDICATED MAP**.
N	This DS0 is already used in this **DEDICATED MAP** and conflicts with this connection.

DS0 RATE

Sets the DS0 rate to either 56 or 64 kbps. This field is only valid for T1 ports mapped to a **PKT ENDPNT**.

T1 TRUNK CONDITIONING SERVICE

Sets known values in the signaling bits and the data field for outgoing DS0s which are cross-connected to a T1 port experiencing alarms.

The trunk conditioning process consists of a 2.5 second transmission (indicating call termination), followed by a continuous transmission signaling the final condition as chosen by the user. This selection is only valid for T1 ports having **RBS** set to **ON**.

This option defines to ATLAS 830 the type of signaling being used on the trunk: **E&M, LS/GS NETWORK OR USER, SW56,** or **CUSTOM**.

T1 TRUNK CONDITIONING STATE

Defines the final fault signaling state.

IDLE	Used for one-way trunks; that is, for outgoing or incoming calls only – not both.
SEIZED	Used for two-way trunks. Prevents connected equipment from attempting to use a failed trunk for an outgoing call.

T1 FAULT SIGNALING

Displays the final fault signaling state of the AB bits. This field is read-only unless **CUSTOM** is chosen for the **T1 TRUNK CONDITIONING SERVICE** option.

T1 TROUBLE CODE VALUE

Displays the Hex value of the 2.5 second pre-alarm transmission.

DEDICATED MAPS (E1/PRA)

DEDICATED MAPS (E1/PRA) > CREATE/EDIT MAPS > CONNECTS

Write security: 3; Read security: 5

Enters the dedicated map connections. Press <Enter > to activate the submenus.

DEDICATED MAPS (E1/PRA) > CREATE/EDIT MAPS > CONNECTS > TO/FROM CONFIG

Write security: 3; Read security: 5

Specifies the configuration for the **TO/FROM** connection. The following selections may apply to the Quad E1/PRA Option Module, depending on the application:

TS0 SELECTION

Defines TS0s for an E1 port. Use this field to define the TS0s for this connection. You can enter the TS0s in several ways. For example, to enter TS0s one through five, enter **1-5**. For TS0s one and five, enter **1,5**.

TS0 AVAILABLE

Indicates which TS0s of the E1 are assigned. TS0 assignment is based on the following items:

DIGIT 0-9	This TS0 is available. The digit that displays in this field represents the last digit of the TS0 number.
*****	This TS0 has been requested for this connection, but the TS0 is not yet activated for this port.
!	This TS0 is used by this port in this connection and is currently activated.
s	This TS0 is used in the switched **DIAL PLAN**.
S	This TS0 is used in the switched **DIAL PLAN**and conflicts with this connection.
n	This TS0 is already used in this **DEDICATED MAP**.
N	This TS0 is already used in this **DEDICATED MAP** and conflicts with this connection.

TS0 RATE

Sets the TS0 rate to either 56 or 64 kbps. This field is only valid for E1 ports mapped to a **PKT ENDPNT**.

E1 TROUBLE CODE SERVICE

Sets known values in the signaling bits and the data field for outgoing TS0s which are cross-connected to a E1 port experiencing alarms.

The trunk conditioning process consists of a 2.5 second transmission (indicating call termination), followed by a continuous transmission signaling the final condition as chosen by the user. Set the **E1 TROUBLE CODE SERVICE** field to **OFF** or **VOICE**.

T1 TROUBLE CODE VALUE

Displays the Hex value of the 2.5 second pre-alarm transmission.

DEDICATED MAPS (V35NX)

DEDICATED MAPS (V35NX) > CREATE/EDIT MAPS > CONNECTS

Write security: 3; Read security: 5

Enters the dedicated map connections. Press <Enter > to activate the submenus.

DEDICATED MAPS (V35NX) > CREATE/EDIT MAPS > CONNECTS > TO/FROM CONFIG

Write security: 3; Read security: 5

Specifies the configuration for the **FROM** connection. The following selections may apply to the Quad Nx 56/64 Option Module, depending on the application:

DS0 SELECTION

Defines DS0s for an Nx port. Use this field to define the DS0s for this connection. This field only applies to Nx-to-Nx or Nx-to-Pkt Endpt connections.

DS0 RATE

Sets the DS0 rate to either 56 or 64 kbps.

DEDICATED MAPS (USSI)

DEDICATED MAPS (USSI) > CREATE/EDIT MAPS > CONNECTS

Write security: 3; Read security: 5

Enters the dedicated map connections. Press <Enter > to activate the submenus.

DEDICATED MAPS (USSI) > CREATE/EDIT MAPS > CONNECTS > TO/FROM CONFIG

Write security: 3; Read security: 5

Specifies the configuration for the **FROM** connection. The following selections may apply to the Quad USSI Option Module, depending on the application:

DS0 SELECTION

Defines DS0s for an USSI port. Use this field to define the DS0s for this connection. This field only applies to USSI-to-USSI, USSI-to-Nx or USSI-to-Pkt Endpt connections.

DS0 RATE

Sets the DS0 rate to either 56 or 64 kbps.

DEDICATED MAPS (DS3 AND DS3 D&I)

DEDICATED MAPS (DS3 AND DS3 D&I) > CREATE/EDIT MAPS > CONNECTS

Write security: 3; Read security: 5

Enters the dedicated map connections. Press <Enter > to activate the submenus.

DEDICATED MAPS (DS3 AND DS3 D&I) > CREATE/EDIT MAPS > CONNECTS > TO/FROM CONFIG

Write security: 3; Read security: 5

Specifies the configuration for the **TO/FROM** connection. The following selections may apply to the T3 or T3 with Drop and Insert Option Module, depending on the application:

DS0 SELECTION

Defines DS0s for a specific T1 in the T3 circuit. Use this field to define the DS0s for this connection. You can enter the DS0s in several ways. For example, to enter DS0s one through five, enter**1,5**. For DS0s one and five, enter **1,5**.

DS0 AVAILABLE

Indicates which DS0s of the T1 are assigned. DS0 assignment is based on the following items:

DIGIT 0-9	This DS0 is available. The digit that displays in this field represents the last digit of the DS0 number.
*****	This DS0 has been requested for this connection, but the DS0 is not yet activated for this port.
!	This DS0 is used by this port in this connection and is currently activated.
s	This DS0 is used in the switched **DIAL PLAN**.
S	This DS0 is used in the switched **DIAL PLAN** and conflicts with this connection.
n	This DS0 is already used in this **DEDICATED MAP**.
N	This DS0 is already used in this **DEDICATED MAP** and conflicts with this connection.

DS0 RATE

Sets the DS0 rate to either 56 or 64 kbps. This field is only valid for T1s mapped to a **PKT ENDPNT.**

T1 TRUNK CONDITIONING SERVICE

Sets known values in the signaling bits and the data field for outgoing DS0s which are cross-connected to a T1 port experiencing alarms.

The trunk conditioning process consists of a 2.5 second transmission (indicating call termination), followed by a continuous transmission signaling the final condition as chosen by the user. This selection is only valid for T1 ports having **RBS** set to **ON**.

This option defines to ATLAS 830 the type of signaling being used on the trunk: **E&M, LS/GS NETWORK OR USER, SW56,** or **CUSTOM**.

T1 TRUNK CONDITIONING STATE

Defines the final fault signaling state.

IDLE	Used for one-way trunks; that is, for outgoing or incoming calls only – not both.
SEIZED	Used for two-way trunks. Prevents connected equipment from attempting to use a failed trunk for an outgoing call.

T1 FAULT SIGNALING

Displays the final fault signaling state of the AB bits. This field is read-only unless **CUSTOM** is chosen for the **T1 TRUNK CONDITIONING SERVICE** option.

T1 TROUBLE CODE VALUE

Displays the Hex value of the 2.5 second pre-alarm transmission.

T1 TROUBLE CODE SERVICE

When RBS signaling is off, the T1 alarm code will be transmitted on an alarm event. The options to select are **OFF, VOICE** or **DATA** trouble code, or the **CUSTOM** data code that is configured in **T1 TROUBLE CODE VALUE**.

DEDICATED MAPS (NXT1 HSSI)

DEDICATED MAPS (NXT1 HSSI) > CREATE/EDIT MAPS > CONNECTS

Write Security: 3; Read Security: 5

Enters the dedicated map connections. Press <Enter > to activate the submenus.

DEDICATED MAPS (NXT1 HSSI) > CREATE/EDIT MAPS > CONNECTS > TO/FROM CONFIG

Write Security: 3; Read Security: 5

Specifies the configuration for the **TO/FROM** connection. The following selection applies to the NxT1 HSSI Option Module when connected to a port on a T1 Module. This is the only valid application for the NxT1 HSSI Option Module.

DS0 SELECTION

Defines DS0s for the T1 port. Use this field to define the DS0s for this connection.

> NOTE *For the NxT1 HSSI Module, any entry in the DS0 selection field that is less than 24 DS0s is disregarded. The NxT1 HSSI Module requires the use of all 24 DS0s on a T1 for proper operation.*

DS0s Available

Indicates which DS0s of the T1 are assigned. DS0 assignment is based on the following items:

Digit 0-9	This DS0 is available. The digit that displays in this field represents the last digit of the DS0 number.
*	This DS0 has been requested for this connection, but the DS0 is not yet activated for this port.
!	This DS0 is used by this port in this connection and is currently activated.
s	This DS0 is used in the switched **Dial Plan**.
S	This DS0 is used in the switched **Dial Plan** and conflicts with this connection.
n	This DS0 is already used in this **Dedicated Map.**
N	This DS0 is already used in this **Dedicated Map** and conflicts with this connection.

T1 Trouble Code Service

Sets known values in the signaling bits and the data field for outgoing DS0s which are cross-connected to a T1 port experiencing alarms.

The trunk conditioning process consists of a 2.5 second transmission (indicating call termination), followed by a continuous transmission signaling the final condition as chosen by the user. This selection is only valid for T1 ports having **RBS** set to **On**.

This option defines to ATLAS 830 the type of signaling being used on the trunk: **E&M, LS/GS Network or User, SW56,** or **Custom**.

T1 Trouble Code Value

Displays the Hex value of the 2.5 second pre-alarm transmission.

Dedicated Maps (FXS-8)

Dedicated Maps (FXS-8) > Create/Edit Maps > Connects

Write security: 3; Read security: 5

Enters the dedicated map connections. Press <Enter > to activate the submenus.

DEDICATED MAPS (FXS-8) > CREATE/EDIT MAPS > CONNECTS > TO/FROM CONFIG

Write security: 3; Read security: 5

Specifies the configuration for the **TO/FROM** connection. The following selections may apply to the Octal FXS Option Module, depending on the application:

PORTS

Defines ports to be used for this connection.

PORTS AVAILABLE

Indicates which ports of the module are assigned. Port assignment is based on the following items:

DIGIT 0-9	This DS0 is available. The digit that displays in this field represents the last digit of the DS0 number.
*****	This DS0 has been requested for this connection, but the DS0 is not yet activated for this port.
!	This DS0 is used by this port in this connection and is currently activated.
s	This DS0 is used in the switched **DIAL PLAN**.
S	This DS0 is used in the switched **DIAL PLAN** and conflicts with this connection.
n	This DS0 is already used in this **DEDICATED MAP**.
N	This DS0 is already used in this **DEDICATED MAP** and conflicts with this connection.

SIGNALING METHOD

Defines the mode of operation of the selected voice port. The signaling on the T1 mapped to this voice port must match. The options include **LOOPSTART, GROUNDSTART,** and **PLAR**.

ANSWER SUPERVISION

Configures answer supervision for the appropriate voice port. Answer supervision (when the far end answers the call) is indicated by using reverse battery polarity. This is valid for an outbound call only. On an FXS interface type we respond to LSAS (Line Side Answer Supervision) signaling on the T1. Our response is to reverse battery polarity on (T-R). Telco must configure their T1 for LSAS if this is not a point-to-point T1.

E&M CONVERSION

Configures the selected voice port for E&M signaling conversion. By enabling this option, other selections become available that are E&M trunk specific. This option is sometimes referred to as TANDEM conversion. The following submenu items become visible when **E&M CONVERSION** is **ENABLED**:

E&M SUPERVISION

Configures the E&M trunk as either Immediate start or Wink start. This configuration is for the Rx and Tx direction. When DNIS delay is set, this option only configures the Rx direction.

DIAL TONE

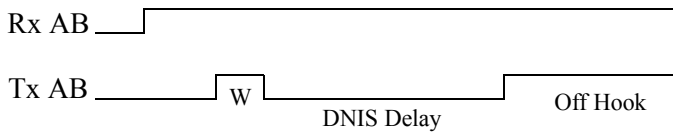
Configures the ATLAS 830 to generate Dial Tone out the selected FXS port in response to the 2W going off hook (outgoing call). Generally, dial tone is provided by the Class 5 switch delivering the T1, but in some instances, the switch cannot provide dial tone.

RINGBACK

Configures the ATLAS 830 to generate ringback tone to the far end while the selected FXS port is ringing. Generally, ringback is provided by the Class 5 switch delivering the T1, but in some instances, the switch cannot provide ringback tones.

DNIS DELAY

Defines the time we delay after transmitting a wink in response to the 2W going off hook (after ringing) before we send off hook in the RBS signaling. This field is only valid for E&M conversion. The timing is as follows:



The following submenu item becomes visible when **DNIS DELAY** is activated:

DNIS WINK TIMEOUT When **DNIS DELAY** is **ENABLED**, a wink will be returned to the originating switch after 5 seconds if the FXS does not detect an off hook. This option, when **DISABLED**, allows the FXS port to ring without winking until the call is answered.

NOTE *Trunks can be taken out of service by telco if there is No wink. Use caution when disabling this option.*

DEDICATED MAPS (PKT ENDPT)

DEDICATED MAPS (PKT ENDPT) > CREATE/EDIT MAPS > CONNECTS

Write security: 3; Read security: 5

To assign a packet endpoint to a physical port, select the port in the **FROM SLOT/PORT** field and configure the **TO SLOT/PORT** as follows:

DEDICATED MAPS (PKT ENDPT) > CREATE/EDIT MAPS > CONNECTS > TO SLOT/SERVICE

Write security: 3; Read security: 5

Select **PKT ENDPNT** to activate a list of available packet endpoints in the **TO PORT** field.

DEDICATED MAPS (PKT ENDPT) > CREATE/EDIT MAPS > CONNECTS > TO PORT/PEP

Write security: 3; Read security: 5

Press <Enter > and select the appropriate packet endpoint to assign the endpoint to a physical port.

DEDICATED MAPS (PKT ENDPT) > CREATE/EDIT MAPS > CONNECTS > TO/FROM CONFIG

Write security: 3; Read security: 5

Specifies the configuration for the **TO/FROM** connection. The following selections apply to the packet endpoint:

TRANSMIT IDLE CODE	Configures the ATLAS 830 to send idle code on the packet endpoint with marks or flags.
RECEIVE IDLE CODE	Defines the idle code (either marks or flags) the ATLAS 830 should expect on the selected packet endpoint.

DEDICATED MAPS (PKT VOICE)

DEDICATED MAPS (PKT VOICE) > CREATE/EDIT MAPS > CONNECTS

Write security: 3; Read security: 5

Enters the dedicated map connections. Press <Enter > to activate the submenus.

DEDICATED MAPS (PKT VOICE) > CREATE/EDIT MAPS > CONNECTS > TO SLOT/SERVICE

Write security: 3; Read security: 5

Select Pkt Voice to activate a list of available packet endpoints in the **TO PORT** field.

DEDICATED MAPS (PKT VOICE) > CREATE/EDIT MAPS > CONNECTS > TO PORT/PEP

Write security: 3; Read security: 5

Press <Enter > and select the appropriate packet endpoint from the drop-down list.

DEDICATED MAPS (PKT VOICE) > CREATE/EDIT MAPS > CONNECTS > TO/FROM CONFIG

Write security: 3; Read security: 5

Specifies the configuration for the **TO/FROM** connection. The following selections apply to the **PKT VOICE** connections:

DLCI	Press <Enter > and select the appropriate DLCI from the drop-down list.
VOICE PORT	Identifies the voice port address of the remote unit. Express units support ports 1 and 2. A remote ATLAS supports ports 1 through 255.
CONFLICT REPORT	Describes existing conflicts. Potential problems include DLCI unavailable or Voice port already in use.
VOICE COMPRESSION	Configures the compression algorithm used on the selected packet voice endpoint. Older FSUs use G.723.1 at 6.3kbps, and newer FSUs use 6.4K Netcoder. The compression algorithm must match at both endpoints.
SILENCE SUPPRESSION	Reduces the total system bandwidth load by preventing ATLAS from sending frames containing a special silence code during periods of silence. Both endpoints must agree to use silence suppression. By default, silence suppression is **ENABLED** to prohibit silence frames from transmitting and to decrease the total system bandwidth.
SIGNALING	Signaling method on the packet voice endpoint. Both endpoints must agree about the compression algorithm choice.

CIRCUIT STATUS

The **CIRCUIT STATUS** menu allows the user to view the status of all circuits configured for dedicated circuit backup (see Figure 17).

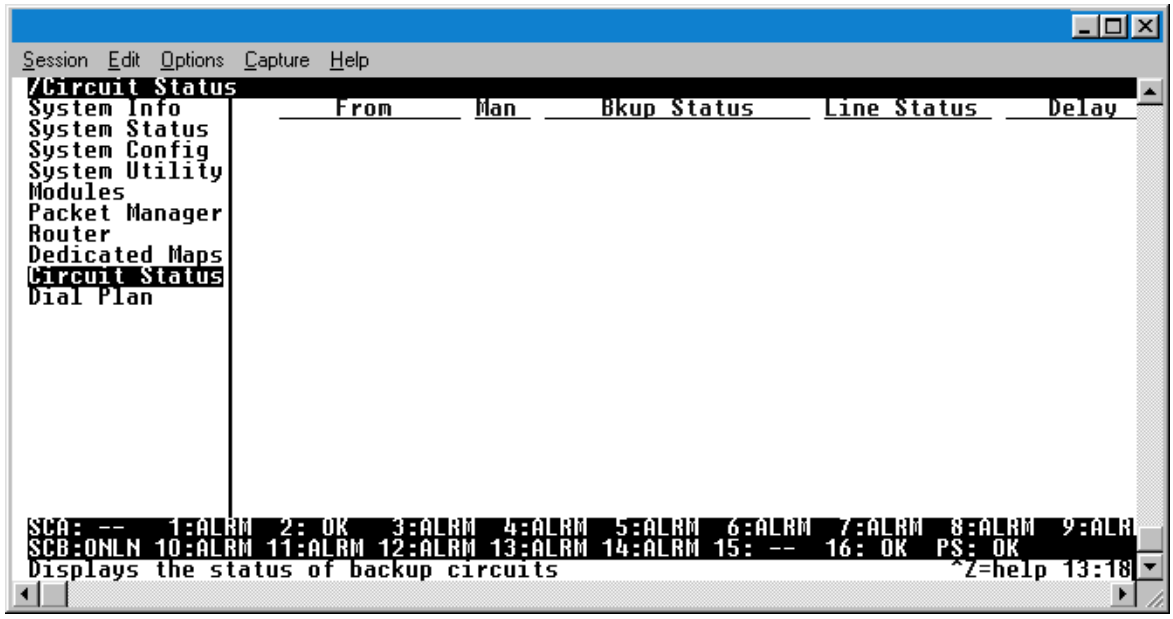


Figure 17. Circuit Status Menu

CIRCUIT STATUS > FROM

Read security: 5

Indicates the slot, port, and name of the endpoint configured for backup.

CIRCUIT STATUS > MAN (MANUAL BACKUP)

Write security: 3; Read security: 5

This activator forces a link in/out of backup.

FB	Force Backup
FR	Force Restore

CIRCUIT STATUS > BKUP STATUS (BACKUP STATUS)

Read security: 5

The displayed string indicates the current status of the dedicated line. The following selections are available for the **BACKUP STATUS** menu item.

FB	Backup was forced through the interface menu.
FR	Restore was forced through the interface menu.
PRIMARY	The link is active.
DIALING	Attempting to dial the backup link.
BACKUP FAILED	Exceeded **MAX NUM REDIALS**.
RETRY DIAL [NUM]	Will retry backup dialing in [num] seconds.
PRIMARY DOWN	The link is in error and waiting on backup.
ANSWERING	The link is answering a backup endpoint.
BACKUP	The link is in backup.

CIRCUIT STATUS > LINE STATUS

Read security: 5

Displays the overall status of the connection. The following selections are available for the **LINE STATUS** menu item.

UNKNOWN	Endpoints do not support (or are not configured) for monitoring.
ACTIVE	The connection is up and running.
INACTIVE	The connection is down due to configuration (i.e., DTR is down).
DATA ALARM	The **FROM** endpoint is in data alarm.
NETWORK ALARM	The **TO** endpoint is in network alarm.
NET/DATA ALARM	Both the **FROM** endpoint and the **TO** endpoint are in alarm.
DATA UNKNOWN	The status of the **FROM** endpoint is unknown.

CIRCUIT STATUS > DELAY

When present, this indicates that one ATLAS 830 has detected a change in state and is counting down to delay/restore.

CIRCUIT STATUS > TEST

Write security: 1; Read security: 5

Contains a test activator and test status displays for dedicated dial backup circuits.

CIRCUIT STATUS > TEST > LAST RUN TIME

Read security: 5

Displays the date and time of the last test call made through this dedicated dial backup circuit. (Not seen until circuit is tested.)

CIRCUIT STATUS > TEST > NEXT RUN TIME

Read security: 5

Displays the date and time of the next schedule test call to be made through this dedicated dial backup circuit. (Not seen unless **TEST CALL** is configured for something other than manual in the **INTERFACE CONFIG** for the **CIRCUIT BACKUP ENDPOINT**.)

CIRCUIT STATUS > TEST > LAST TEST STATUS

Read security: 5

Displays the status of the last test call made through this dedicated dial backup circuit. The following status messages may display:

IDLE	No current test call on this dedicated dial backup circuit
PASSED	Passed last manual or scheduled test
FAILED	Failed last manual or scheduled test

CIRCUIT STATUS > TEST > PASS : FAIL

Read security: 5

Displays the number of successful and unsuccessful test calls made through this dedicated dial backup circuit.

CIRCUIT STATUS > TEST > TEST NOW

Write security: 5; Read security: 5

Press to initiate a test call on the dedicated dial backup circuit.

DIAL PLAN

The **DIAL PLAN** submenus set global ATLAS 830 switch parameters as well as individual parameters for each ATLAS 830 port handling a switched call (see Figure 18). The individual ports are separated into two port types: network and user. Network ports terminate a connection from the network. User ports terminate incoming calls and, in turn may be connected to user equipment.

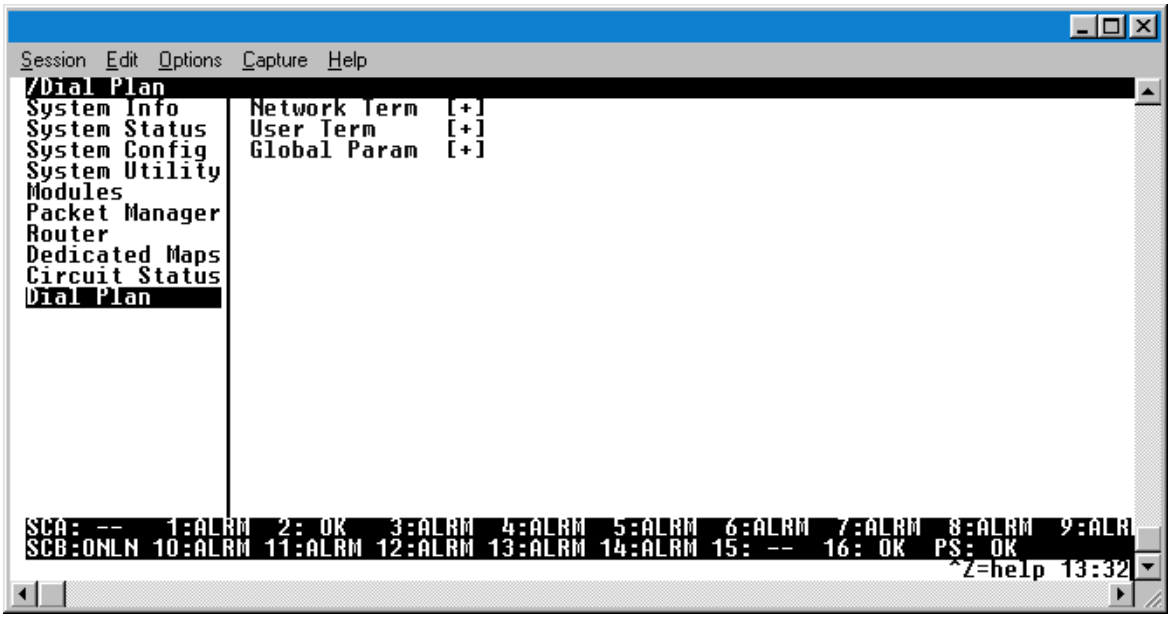


Figure 18. Dial Plan Menu

DIAL PLAN > NETWORK TERM

Write security: 3; Read security: 5

This menu allows the user to define option parameters for ports which terminate a connection from the network.

NOTE

In applications where two ATLAS 830 units are used in a point-to-point configuration, a port in the ATLAS 830 at one end would act as the network (user termination), while the ATLAS 830 at the opposite end would be terminating a network connection (network termination).

DIAL PLAN > NETWORK TERM > SLOT/SVC

Write security: 3; Read security: 5

Selects the ATLAS 830 slot or service that terminates a network connection.

DIAL PLAN > NETWORK TERM > PORT/PEP

Write security: 3; Read security: 5

Selects the ATLAS 830 port or packet endpoint that terminates a network connection.

> NOTE *There may be more than one "endpoint" associated with a particular port. If a T1 is connected to the PSTN, some DS0s may be used for long distance, while others are used for local calls. These would constitute two "endpoints" (trunks) over a single physical port.*

DIAL PLAN > NETWORK TERM > SIG

Write security: 3; Read security: 5

Defines the type of signaling being used for this connection (endpoint). Select **RBS** for a T1 using Robbed Bit Signaling or **PRI** for a Primary Rate ISDN interface. Select **NFAS** for a non-facility associated signalling interface or **NONE** for OSC when bonding DS0s. This selection is only necessary if a T1/PRI is selected as the **SLOT/PORT** type.

> NOTE *One HDLC resource is used by each PRI or each Packet Endpoint.*

DIAL PLAN > NETWORK TERM > OUT#ACCEPT

Write security: 3; Read security: 5

Defines the parameters for the outgoing calls that ATLAS 830 sends to the network.

DIAL PLAN > NETWORK TERM > OUT#ACCEPT > SRC ID

Identifies the call source ID from which this endpoint accepts calls. This field simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call. **SRC ID** may be entered with the usual wild card entries (except $).

X	**=**	Any digit 0 through 9
[1,3,5]	**=**	Any of these digits
0	**=**	Default value

The default ID for all source endpoints all accept numbers is 0. This results in all calls being routed based on the dialed number.

DIAL PLAN > NETWORK TERM > OUT#ACCEPT > ACCEPT NUMBER

Write security: 3; Read security: 5

Designates which numbers this endpoint passes on toward the network. The accept list may consist of multiple entries. The numbers are defined using the following "wild cards":

X	=	Any single digit
N	=	Any single digit 2 through 9
$	=	Any number of digits of any value
9	=	This specific number
[1,2,3...]	=	A single digit in this group

Example: 1-800-$ only permits toll-free, long distance calls to 1-800. If this were used, then a second accept number would need to be specified (NXX-XXXX) permitting local numbers to be dialed.

Any specific entry takes precedence over a wild card. For example, if endpoint A was designated as $ while endpoint B accepted 963-800X, then an incoming call to 963-800X would only be accepted by endpoint B.

DIAL PLAN > NETWORK TERM > OUT#ACCEPT > SEARCH

Instructs ATLAS 830 in which order to search for an accept number match. Normally, all searches are set to primary. The secondary search selection forces ATLAS 830 to only accept a call at this endpoint if all primary endpoints are unavailable.

PRIMARY SEARCH	All long distance calls should go out a PRI directly to an IXC (MCI, ATT, etc.), and local calls should go out a T1 to the LEC. It may be desirable to place long distance calls on the local exchange if all of the IXC trunks are unavailable (busy or in alarm). In this case, the primary accept number for the local exchange would be N$, and the secondary accept would be 1$.
SECONDARY SEARCH	The same accept rules apply for all secondary number searches as for primary searches.

DIAL PLAN > NETWORK TERM > OUT#ACCEPT > DATA 64K, DATA 56K, AUDIO, SPEECH

Reflects the bearer capability the network has provisioned for this line. If the ISDN lines were purchased with different services provisioned, then ATLAS 830 would send the call out of the port which supports the type of service the call requires.

For example, the network termination is on a pair of BRIs (with the same phone number) with one provisioned for data and the other for voice. By enabling data in one and not the other, ATLAS 830 ensures that calls bearing data will be sent out the right BRI interface.

DIAL PLAN > NETWORK TERM > OUT#ACCEPT > TREAT CALL AS

Allows the incoming call to be treated as the selected call type, regardless of the actual incoming call type. The default selection, As Received, effectively disables the feature by using the actual call type. Other options include **DATA 64K** and **DATA 56K**.

DIAL PLAN > NETWORK TERM > OUT#REJ

Write security: 3; Read security: 5

Defines parameters for outgoing calls that ATLAS 830 will not send to the network.

DIAL PLAN > NETWORK TERM > OUT#REJ > REJECT NUMBER

Identifies which numbers this endpoint will not pass on toward the network. The reject list may consist of multiple entries. The reject list may be used to more easily specify the call filtering desired. The wildcards are identical as in **OUT#ACCEPT** (see *Dial Plan > Network Term > Out#Accept* on page 261).

NOTE *The reject list takes precedence over the accept list. For example, 1-900-$ rejects all 1-900 long distance calls, and 1-$ rejects all long distance calls.*

DIAL PLAN > NETWORK TERM > OUT#REJ > DATA 64K, DATA 56K, AUDIO, SPEECH

Rejects outgoing calls based on call type. For example, setting the reject number to **$**, Digital 56/64 to **ENABLED**, and Audio and Speech to **DISABLED** will reject all digital calls, but accept analog calls.

NOTE *This list may remain blank if the accept list meets desired filtering.*

DIAL PLAN > NETWORK TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint. The selections displayed in this field are based on the type of module selected in the **SLOT/SVC** option. For detailed information on submenus for a particular module type, please refer to the dial plan interface configuration menu discussion for the appropriate network, option, or resource module.

Some of the options available in this submenu change depending on the type of modules selected in the **SLT/SVC** *or* **PRT/PEP** *fields. For more information on these submenus, refer to the individual module interface configuration discussions in this section.*

DIAL PLAN > NETWORK TERM > SUBST TEMPL

The substitution template allows the ATLAS 830 to select calls (based on telephone number) and substitute a user-defined number for the received digits after the call has been processed by the switchboard. Substitution templates are created for each entry in the Dial Plan.

DIAL PLAN > NETWORK TERM > SUBST TEMPL

DIAL PLAN > NETWORK TERM > SUBST TEMPL > ORIGINAL#

Designates the number(s) to be the search criteria for the substitution template. The pattern can be a specific number, or wildcards can be used as part of the number specification.

X	=	Any single digit
N	=	Any single digit 2 through 9
$	=	Any number of digits of any value
9	=	This specific number
[1,2,3...]	=	A single digit in this group

Example: 963-812[012] would be 963-8120 to 963-8122.

DIAL PLAN > NETWORK TERM > SUBST TEMPL > SUBSTITUTED#

Designates the number to be substituted for the number(s) defined in the **ORIGINAL#** field. The pattern can be a specific number, or wildcards can be used as a part of the number specification.

X	=	Any single digit
N	=	Any single digit 2 through 9
$	=	Any number of digits of any value
9	=	This specific number
[1,2,3...]	=	A single digit in this group

Punctuation characters ( ) - + are ignored and a comma is interpreted as a .5 second pause in the dial string.

Example: The **ORIGINAL#** field contains **$** and the **SUBSTITUTED#** field contains **,256$**. All calls routed out this connection will be delayed .5 seconds and contain a 256 prefix.

NOTE

Wildcards used in the **SUBSTITUTED#** *field are only valid when used in the same position (relative to the end of the digit string) as the* **ORIGINAL#** *field.*

DIAL PLAN > USER TERM

Write security: 3; Read security: 5

This menu allows you to define option parameters for ports which terminate a connection from user equipment. In this case, ATLAS 830 is acting as the network.

NOTE

In applications where two ATLAS 830 units are used in a point-to-point configuration, a port in the ATLAS 830 at one end would act as the network (user termination), while the ATLAS 830 at the opposite end would be terminating a network connection (network termination).

DIAL PLAN > USER TERM > SLOT/SVC

Write security: 3; Read security: 5

Selects the ATLAS 830 slot or service that terminates a user connection.

DIAL PLAN > USER TERM > PORT/PEP

Write security: 3; Read security: 5

Selects the ATLAS 830 port or packet endpoint that terminates a network connection.

NOTE *There may be more than one "endpoint" associated with a particular port. If a T1 is connected to the PSTN, some DS0s may be used for long distance, while others are used for local calls. These would constitute two "endpoints" (trunks) over a single physical port.*

DIAL PLAN > USER TERM > SIG

Write security: 3; Read security: 5

Defines the type of signaling being used for this connection (endpoint). Select **RBS** for a T1 using robbed bit signaling or **PRI** for a Primary Rate ISDN interface. Select **NFAS** for a non-facility associated signalling interface or **NONE** for OSC when bonding DS0s. This selection is only necessary if a T1/PRI is selected as the **SLOT/PORT** type.

NOTE *One HDLC resource is used by each PRI or each Packet Endpoint.*

DIAL PLAN > USER TERM > IN#ACCEPT

Write security: 3; Read security: 5

Defines the parameters for the incoming calls that ATLAS 830 accepts from the network.

DIAL PLAN > USER TERM > IN#ACCEPT > SRC ID

Identifies the call source ID from which this endpoint accepts calls. This field simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call. **SRC ID** may be entered with the usual wild card entries (except $).

X	**=**	Any digit 0 through 9
[1,3,5]	**=**	Any of these digits
0	**=**	Default value

The default ID for all source endpoints all accept numbers is 0. This results in all calls being routed based on the dialed number.

DIAL PLAN > USER TERM > IN#ACCEPT > ACCEPT NUMBER

Designates which numbers this endpoint will accept (terminate) from the network. The accept list may consist of multiple entries. The numbers are defined using the following wildcards:

X	=	Any single digit
N	=	Any single digit 2 through 9
$	=	Any number of digits of any value
9	=	This specific number
[1,2,3...]	=	A single digit in this group

Example: 963-8000 would be a specific incoming number that would be accepted by this endpoint. If this endpoint consisted of a T1 with multiple DS0s, a "hunt" group for 963-8000 would be formed. The entry $ would accept any call.

NOTE

Any specific entry will take precedence over a wildcard. For example, if endpoint A was designated as $ while endpoint B accepted 963-800X, then an incoming call to 963-800X would only be accepted by endpoint B.

DIAL PLAN > USER TERM > IN#ACCEPT > SEARCH

Instructs ATLAS 830 in which order to search for an accept number match. Normally, all searches are set to primary. The secondary search selection forces ATLAS 830 to only accept a call at this endpoint if all primary endpoints are unavailable.

PRIMARY SEARCH	All long distance calls should go out a PRI directly to an IXC (MCI, ATT, etc.), and local calls should go out a T1 to the LEC. It may be desirable to place long distance calls on the local exchange if all of the IXC trunks are unavailable (busy or in alarm). In this case, the primary accept number for the local exchange would be N$, and the secondary accept would be 1$.
SECONDARY SEARCH	The same accept rules apply for all secondary number searches as for primary searches.

DIAL PLAN > USER TERM > IN#ACCEPT > DATA 64K, DATA 56K, AUDIO, SPEECH

Reflects the bearer capability of the attached user equipment (typically a TA). If the attached TA can only handle digital calls, then a voice call sent to this endpoint would be rejected.

DIAL PLAN > USER TERM > IN#ACCEPT > TREAT CALL AS

Allows the incoming call to be treated as the selected call type, regardless of the actual incoming call type. The default selection, **AS RECEIVED**, effectively disables the feature by using the actual call type. Other options include **DATA 64K** and **DATA 56K**.

DIAL PLAN > USER TERM > OUT#REJ

Write security: 3; Read security: 5

Defines the parameters for the outgoing calls that ATLAS 830 will not send to the network.

DIAL PLAN > USER TERM > OUT#REJ > REJECT NUMBER

Identifies which numbers this endpoint will not pass on toward the network. Use when the outgoing call filter is different for different users sharing this endpoint. The wildcards are identical as in **OUT#ACCEPT** (see *Dial Plan > Network Term > Out#Accept* on page 261).

NOTE **[0,1]-$** *rejects all long distance calls, but only for this User termination. If permitted in the Network termination endpoint, this user could not dial long distance numbers while other users could.*

DIAL PLAN > USER TERM > OUT#REJ > DATA 64K, DATA 56K, AUDIO, SPEECH

Rejects outgoing calls based on call type. For example, setting the reject number to **$,** Digital 56/64 to **ENABLED**, and Audio and Speech to **DISABLED**, rejects all digital calls while not rejecting analog calls.

NOTE *This list may remain blank if the accept list meets desired filtering.*

DIAL PLAN > USER TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.The selections displayed in this field are based on the type of module selected in the **SLOT/SVC** option. For detailed information on submenus for a particular module type, please refer to the dial plan interface configuration menu discussion for the appropriate network, option, or resource module.

NOTE *Some of the options available in this submenu change depending on the type of modules selected in the* **SLOT/SVC** *or* **PORT/PEP** *fields. For more information on these submenus, refer to the individual module interface configuration menu discussions in this section.*

DIAL PLAN > USER TERM > SUBST TEMPL

The substitution template allows the ATLAS 830 to select calls (based on telephone number) and substitute a user-defined number for the received digits after the call has been processed by the switchboard. Substitution templates are created for each entry in the Dial Plan.

DIAL PLAN > USER TERM > SUBST TEMPL > ORIGINAL#

Designates the number(s) to be the search criteria for the substitution template. The pattern can be a specific number, or wildcards can be used as part of the number specification.

X	=	Any single digit
N	=	Any single digit 2 through 9
$	=	Any number of digits of any value
9	=	This specific number
[1,2,3...]	=	A single digit in this group

Example: 963-812[012] would be 963-8120 to 963-8122.

DIAL PLAN > USER TERM > SUBST TEMPL > SUBSTITUTED#

Designates the number to be substituted for the number(s) defined in the **ORIGINAL#** field. The pattern can be a specific number, or wildcards can be used as a part of the number specification.

X	=	Any single digit
N	=	Any single digit 2 through 9
$	=	Any number of digits of any value
9	=	This specific number
[1,2,3...]	=	A single digit in this group

Punctuation characters ( ) - + are ignored and a comma is interpreted as a .5 second pause in the dial string.

Example: The **ORIGINAL#** field contains **$** and the **SUBSTITUTED#** field contains **,256$**. All calls routed out this connection will be delayed .5 seconds and contain a 256 prefix.

Wildcards used in the **SUBSTITUTED#** *field are only valid when used in the same position (relative to the end of the digit string) as the* **ORIGINAL#** *field.*

DIAL PLAN > GLOBAL PARAM

Write security: 2; Read security: 5

Sets ATLAS 830 options which apply to all switched operations, both incoming and outgoing calls.

DIAL PLAN > GLOBAL PARAM > END OF NUMBER TIMEOUT

Write security: 3; Read security: 5

Sets the length of time ATLAS 830 waits before assuming the outgoing dialed number is complete. The default value is six seconds. This timeout will only be invoked if the dialed number does not match one of the patterns set in the **NUMBER COMPLETE TEMPLATE** menu (see *Nbr Complete Templates* below).

DIAL PLAN > GLOBAL PARAM > COUNTRY CODE

Write security: 3; Read security: 5

The country code. Enter your international country code using only digits. For the United States, enter 1.

DIAL PLAN > GLOBAL PARAM > AREA OR CITY CODE

Write security: 3; Read security: 5

The local area code. Use for sending caller ID to the network.

DIAL PLAN > GLOBAL PARAM > NBR COMPLETE TEMPLATES

Write security: 3; Read security: 5

Sets completed number patterns for outgoing calls so that ATLAS 830 recognizes when the phone number is complete. Fields include the index number (#) and **PATTERN**. For example, a local number will be 7 digits long while a long distance (1+ area code + number) will be 11 digits long. The ATLAS 830 defaults cover almost any installation, and these templates should not require any additional user input – except for unusual circumstances. The template allows the use of the following wildcard inputs to define numbers:

X	=	Any single digit
N	=	Any single digit 2 through 9
911	=	This specific number
[1,2,3...]	=	A single digit in this group

DIAL PLAN > GLOBAL PARAM > NUMBER TYPE TEMPLATES

Sets call type patterns. ISDN interfaces require that a number type be sent over the D channel when a call is sent or received. A normal RBS trunk does not send a type designator, but uses prefixes instead. For example, “1 +” prefix is a national long distance call type while a “011 +” prefix is an international long distance call type. These templates form a table to permit ATLAS 830 to translate the RBS prefix into a call type for ISDN and vice-versa.

NOTE *The ATLAS 830 default templates should cover all applications and should not need to be added to by the user except for very rare circumstances.*

DIAL PLAN > GLOBAL PARAM > NUMBER TYPE TEMPLATES >

Denotes an entry number. The maximum number of entries is 50. Press <I > to insert a new entry and <D > to delete any entry.

DIAL PLAN > GLOBAL PARAM > NUMBER TYPE TEMPLATES > PREFIX

Sets the prefix for the number type. Only digits 0 and 1 are allowed (maximum of six characters).

DIAL PLAN > GLOBAL PARAM > NUMBER TYPE TEMPLATES > PATTERN

Modifies an entry when you press <Enter > (maximum of 40 characters). A pattern for a normal long distance call, for example, would be 1+(NXX) NXX - XXXX. Note that the symbols ( ), +, -, and space are not required and are only used to improve the readability of this example.

DIAL PLAN > GLOBAL PARAM > NUMBER TYPE TEMPLATES > NUMBER TYPE

Lists valid selections when you press <Enter > . Selections include **LOCAL, NATIONAL, INTERNATIONAL, PRIVATE,** and **UNKNOWN**.

DIAL PLAN > GLOBAL PARAM > AUTOMATIC ROUTEBACK REJECTION

Write security: 1; Read security: 5

When enabled, **AUTOMATIC ROUTEBACK REJECTION** prevents calls entering through network termination interfaces from being forwarded out another network interface. Such an event could happen if an incoming call specifies a number that has no endpoint configured to accept it and another network interface has a call acceptance entry which could accept it (such as $). Without automatic rejection, such a call would be forwarded back to the network. The network would in turn resend the call to the unit until all incoming resources are consumed.

WARNING *Use extreme caution when disabling* **AUTOMATIC ROUTEBACK REJECTION**.

DIAL PLAN > GLOBAL PARAM > COLLISION RESPONSE

Write security: 0; Read security: 0

When forced, the **COLLISION RESPONSE** will enable the ATLAS to perform AUTOMATIC retransmission of SETUP messages when faced with a collision situation. Forcing this response is not advised.

WARNING *Use extreme caution when forcing* **COLLISION RESPONSE**.

DIAL PLAN > GLOBAL PARAM > GLOBAL TONE TYPE

Write security: 1; Read security: 5

Specifies the dialing digit tone encoding to be used throughout the entire system. **DTMF** (dual-tone-multi frequency) and **MF** (multi frequency) are the available options.

DIAL PLAN (DS3 AND DS3 D&I)

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI)

This menu allows the user to define option parameters for ports which terminate a PRI connection from the network.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI)

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > SWITCH TYPE

Defines the type of PRI switch to which the port is connected. If connected to another ATLAS 830, both need to be set to the same switch type. The following options are available:

- Lucent 5E
- Northern DMS 100
- National ISDN
- AT&T 4ESS

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > FIRST DS0

Defines the first DS0 for this endpoint.The ATLAS 830 uses DS0s, starting with this selection, to send and receive calls to and from the network. The outgoing calls which are allowed or restricted over these DS0s are set by **OUT#ACCEPT** (see *Dial Plan > Network Term > Out#Accept* on page 261) and **OUT#REJECT** (see *Dial Plan > Network Term > Out#Rej* on page 263).

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > NUMBER OF DS0S

Specifies the number of DS0s ATLAS 830 uses for this endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > OUTGOING NUMBER CONVERSION

Converts outgoing (towards the network) numbers to the selected numbering plan and type option.

AS DIALED	Sends the digits provided as an unknown number type.
ISDN-NATIONAL PREFERRED	Regardless of what type of number is received, the outgoing number is substituted with ISDN-National as the number plan and type. Ten digits are always sent to the network. Leading ones, if present, are stripped out and the area code (provisioned under **DIAL PLAN/GLOBAL PARAMETERS**) is added, if only seven digits are supplied. This action may be required in areas with ten-digit local dialing.
ISDN-SUBSCRIBER PREFERRED	Examines the incoming number and if seven digits are received or if a ten-digit number is received with an area code that matches the area code provisioned in the global parameters, the number is forwarded to the network as a seven-digit number defined as ISDN-Subscriber number plan and type. If the incoming number is ten digits, but with a different area code, it is forwarded to the network as ISDN-National preferred.
ISDN-NATIONAL DMS RESERVED PREFERRED	Ignores the incoming numbering plan and type and substitutes the ISDN/Telephony numbering plan and National number type. Ten digits are sent to the network. Leading ones, if present, are stripped out and the area code set in global parameters is added if only seven digits are supplied. This action may be required in areas with ten-digit local dialing.
ISDN-NATIONAL AS DIALED	Sends the digits provided as National number type.

When **SWITCH TYPE** *is set to* **4ESS**, *many installations require the National form where possible; this may also be the preferred form in 10-digit calling areas.*

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2, AND 3**) of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

NOTE

STRIP MSD *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > NETWORK SPECIFIC FACILITY VOICE AND DATA

Enables the sending of appropriate information to the PSTN. The default for this option is **NORMAL**, and in this case no Network Specific Facility Information Element is sent. Unless one of the services listed below is subscribed to, the selection should remain set to **NORMAL**.

The list below indicates services that may be subscribed to from the PSTN. These services require that specific information (such as a Network Specific Facility Information Element) be sent to the network during call setup.

- AT&T SDN (Switched Digital Network)
- AT&T Megacom 800
- AT&T Megacom
- AT&T Accunet
- AT&T Long Distance
- AT&T International-800
- AT&T Dial-It 900/Multiquest
- National ISDN INWATS
- Nortel Private Network
- Nortel InWats
- Nortel OutWats
- Nortel Foreign Exchange
- Nortel Tie Trunk

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > CALLED DIGITS TRANSFERRED

Some PRI switches may be provisioned to send only a portion of the called number (like DID). This menu item allows the ATLAS 830 to know how many digits to expect (choose from **NONE, THREE, FOUR, SEVEN,** and **ALL**). The default is **ALL** and would almost always be correct. If less than **ALL** digits are sent, then the **PREFIX** is defined as follows:

PREFIX Displays only if **CALLED DIGITS TRANSFERRED** is not set to **ALL**. Enter the prefix for the digits received.

Example: If the number of digits is four and the number called is 963-8615, the telco's PRI switch sends only 8615 and the prefix is set to 963. This entire number is then used to determine which ATLAS 830 user port endpoint should receive the call.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > OUTGOING CALLER ID

Defines the number to use to provide Caller ID to the network for outgoing calls sent through this endpoint. Choose from **SEND AS PROVIDED, SUBSTITUTE IF NOT PRESENT,** or **SUBSTITUTE ALWAYS.**

The Caller ID number must be specific (i.e., no wildcards).

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID.**

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > SWAP ANI/DNIS

Swaps the ANI and DNIS numbers received from the network. ANI (Automatic Number Identification) is the billing number of the calling party, and DNIS (Dialed Number Identification Service) is the called party number.

With this swap, the ATLAS 830 switchboard uses ANI to route the call. The accept number in the dial plan must use the ANI number, not the DNIS number.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > B CHANNEL SELECTION

Determines how the ATLAS 830 switchboard uses B channels for call routing. The Circular method can be used for call load balancing among the available B channels on this interface.

NORMAL	Always start with the last channel configured (i.e., for a full PRI channel 23 would be used if available).
CIRCULAR	Contiguous channels from last to first.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (PRI) > IFCE CONFIG (PRI) > BUSY OPTION

Defines the response propagated to the CPE upon receipt of a **DISCONNECT USER-BUSY** message from the network.

NORMAL	Send a progress message to the CPE and map busy tones.
PASS-THRU	Send a **DISCONNECT USER-BUSY** message to the User Term CPE device.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS)

This menu allows the user to define option parameters for ports which terminate an RBS T1 connection from the network.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS)

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > FIRST DS0

Defines to the ATLAS 830 the first DS0 for this endpoint.The ATLAS 830 uses DS0s, starting with this selection, to send and receive calls to and from the network. The outgoing calls which are allowed or restricted over these DS0s are set by **OUT#ACCEPT** (see *Dial Plan > Network Term > Out#Accept* on page 261) and **OUT#REJECT** (see *Dial Plan > Network Term > Out#Rej* on page 263).

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > NUMBER OF DS0S

Specifies the number of DS0s ATLAS 830 uses for this endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > DS0S AVAILABLE

Indicates which DS0s of the T1 have been defined in this switched endpoint (indicated by "! "), in another switched endpoint (indicated by "s"), or in a **DEDICATED MAP** (indicated by "n"). This field is read-only. The following characters may display in this field:

0-9	This DS0 is available. The digit that displays in this field represents the last digit of the DS0 number.
*****	This port is requesting this DS0 for this connection, but the DS0 is not yet activated.
!	This DS0 is used by this endpoint.
s	This DS0 is used elsewhere in the switched **DIAL PLAN**.
S	This DS0 is in the switched dial plan and conflicts with this endpoint.
n	This DS0 is used in one or more **DEDICATED MAPS**.
N	This DS0 is in one or more **DEDICATED MAPS,** and conflicts with this endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > SIGNALING METHOD

Defines to the ATLAS 830 the type of signaling to be used across this trunk. The signaling selected needs to match the signaling being provided by the network (PSTN). The following choices are available:

- E&M Immediate
- E&M Wink
- Loop Start
- Ground Start
- Feature Group D

The ATLAS 830 converts signaling types between network and user terminations.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > FGD TX SEQUENCE

Displayed only if **SIGNALING METHOD** is configured for **FEATURE GROUP D**. Defines to the ATLAS 830 the format in which to present the outgoing digits. Choices: **NORMAL** if no digits are to be sent; **ANI/DNIS** to send both ANI and DNIS; **DNIS** to send DNIS only; **ANI** to send ANI only.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > FGD RX SEQUENCE

Displayed only if **SIGNALING METHOD** is configured for **FEATURE GROUP D**. Defines to the ATLAS 830 the format in which to receive the incoming digits. Choices: **NORMAL** if no digits are to be received; **ANI/DNIS** to receive both ANI and DNIS; **DNIS** to receive DNIS only; **ANI** to receive ANI only.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > WINK AFTER ANI/DNIS

Displayed only if **SIGNALING METHOD** is configured for **FEATURE GROUP D**. When enabled, the ATLAS 830 will transmit a wink after ANI/DNIS digits are transmitted.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > DIGIT SUPPRESSION

When enabled, no digits will be sent toward the network/PBX after going off-hook on an outgoing call.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > DIRECT INWARD DIALING

Defines to the ATLAS 830 whether Direct Inward Dialing (**DID**) is being used by the network. If **DID** is **ENABLED**, then the following information must be defined.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > DID DIGITS TRANSFERRED

Defines the number of digits sent to ATLAS 830 from the network if **DID** is used. This option only displays if **DID** is set to **ENABLED**.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > DID PREFIX

Defines to the ATLAS 830 the prefix digits which are not received as a part of the DID number. The ATLAS 830 uses the combination of prefix and DID number to determine the user endpoint that should receive the incoming call. This option only displays if **DID** is set to **ENABLED**. If **DID** is **DISABLED**, then you must define the trunk number.

NOTE *If Feature Group D is used, DID only refers to DNIS digits.*

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > TRUNK NUMBER

When the network connection does not provide DID digits, the ATLAS 830 must be given a number to use to determine which user endpoint should receive the incoming call. **TRUNK NUMBER** displays only when **DID** is set to **DISABLED**.

NOTE *The trunk number must be specific (i.e., no wildcards).*

Example: To connect an incoming DS0 (trunk) to an endpoint with the accept number of 963-8615, set the trunk number to 963-8615.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3**) of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

NOTE **STRIP MSD** *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > SOURCE ID

Simplifies the creation of a **DIAL PLAN** in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (RBS) > IFCE CONFIG (RBS) > DS0 ALIGNMENT

DS0 ALIGNMENT is typically enabled when a user needs the ability to maintain alignment between T1s as if they were in dedicated map mode. This scenario requires **DS0 ALIGNMENT** enabled on both interfaces (usually on User Term and on Net Term). An interface that has **DS0 ALIGNMENT** enabled will only process a call from the switchboard on the same DS0 that the incoming call was received.

Example: The unit receives an incoming call on DS0 17. The switchboard looks for an interface who has matching accept criteria to the number it received. A match is found on interface "Z" that has **DS0 ALIGNMENT** enabled. This causes interface "Z" to only process the call if it has DS0 17 available. If all matching interfaces have **DS0 ALIGNMENT** enabled and none of those interfaces have DS0 17 available, then a busy or fast busy will be returned to the calling party.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS)

This menu allows the user to define option parameters for ports which terminate a PRI connection from the network.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS)

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > SECONDARY INTERFACES

Write security: 3; Read security: 5

Allows the user to define the slot and port locations of the secondary interfaces in the NFAS group.

#	Displays the entry number.
SLOT	Configures the slot that the interface is physically connected to.
PORT	Configures the port that the interface is physically connected to.
INTERFACE NUMBER	Configures the NFAS Interface ID associated with the interface. The configure ID must match the ID configured by the provider.
BACKUP D CHANNEL	Disables or enables backup D channel on the interface.

Only one backup D channel is supported in a single chassis.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > SWITCH TYPE

Defines the type of PRI switch to which the port is connected. If connected to another ATLAS 830, both need to be set to the same switch type. The following options are available:

- Lucent 5E
- Northern DMS 100
- National ISDN
- AT&T 4ESS

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > FIRST DS0

Defines the first DS0 for this endpoint.The ATLAS 830 uses DS0s, starting with this selection, to send and receive calls to and from the network. The outgoing calls which are allowed or restricted over these DS0s are set by **OUT#ACCEPT** (see *Dial Plan > Network Term > Out#Accept* on page 261) and **OUT#REJECT** (see *Dial Plan > Network Term > Out#Rej* on page 263).

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > NUMBER OF DS0S

Specifies the number of DS0s ATLAS 830 uses for this endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > OUTGOING NUMBER CONVERSION

Converts outgoing (towards the network) numbers to the selected numbering plan and type option.

AS DIALED	Sends the digits provided as an unknown number type.
ISDN-NATIONAL PREFERRED	Regardless of what type of number is received, the outgoing number is substituted with ISDN-National as the number plan and type. Ten digits are always sent to the network. Leading ones, if present, are stripped out and the area code (provisioned under **DIAL PLAN/GLOBAL PARAMETERS**) is added, if only seven digits are supplied. This action may be required in areas with ten-digit local dialing.
ISDN-SUBSCRIBER PREFERRED	Examines the incoming number and if seven digits are received or if a ten-digit number is received with an area code that matches the area code provisioned in the global parameters, the number is forwarded to the network as a seven-digit number defined as ISDN-Subscriber number plan and type. If the incoming number is ten digits, but with a different area code, it is forwarded to the network as ISDN-National preferred.
ISDN-NATIONAL DMS RESERVED PREFERRED	Ignores the incoming numbering plan and type and substitutes the ISDN/Telephony numbering plan and National number type. Ten digits are sent to the network. Leading ones, if present, are stripped out and the area code set in global parameters is added if only seven digits are supplied. This action may be required in areas with ten-digit local dialing.
ISDN-NATIONAL AS DIALED	Sends the digits provided as National number type.

When **SWITCH TYPE** *is set to* **4ESS***, many installations require the National form where possible; this may also be the preferred form in 10-digit calling areas.*

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3**) of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

STRIP MSD *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > NETWORK SPECIFIC FACILITY VOICE AND DATA

Enables the sending of appropriate information to the PSTN. The default for this option is **NORMAL**, and in this case no Network Specific Facility Information Element is sent. Unless one of the services listed below is subscribed to, the selection should remain set to **NORMAL**.

The list below indicates services that may be subscribed to from the PSTN. These services require that specific information (such as a Network Specific Facility Information Element) be sent to the network during call setup.

- AT&T SDN
- AT&T Megacom 800
- AT&T Megacom
- AT&T Accunet
- AT&T Long Distance
- AT&T International-800
- AT&T Dial-It 900/Multiquest
- National ISDN INWATS
- Nortel Private Network
- Nortel InWats
- Nortel OutWats
- Nortel Foreign Exchange
- Nortel Tie Trunk

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > CALLED DIGITS TRANSFERRED

Some PRI switches may be provisioned to send only a portion of the called number (like DID). This menu item allows the ATLAS 830 to know how many digits to expect (choose from **NONE, THREE, FOUR, SEVEN,** and **ALL**). The default is **ALL** and would almost always be correct. If less than **ALL** digits are sent, then the **PREFIX** is defined as follows:

PREFIX Displays only if **CALLED DIGITS TRANSFERRED** is not set to **ALL**. Enter the prefix for the digits received.

Example: If the number of digits is four and the number called is 963-8615, the telco's PRI switch sends only 8615 and the prefix is set to 963. This entire number is then used to determine which ATLAS 830 user port endpoint should receive the call.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > OUTGOING CALLER ID

Defines the number to use to provide Caller ID to the network for outgoing calls sent through this endpoint. Choose from **SEND AS PROVIDED, SUBSTITUTE IF NOT PRESENT,** or **SUBSTITUTE ALWAYS**.

NOTE *The Caller ID number must be specific (i.e., no wildcards).*

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > SWAP ANI/DNIS

Swaps the ANI and DNIS numbers received from the network. ANI (Automatic Number Identification) is the billing number of the calling party, and DNIS (Dialed Number Identification Service) is the called party number.

With this swap, the ATLAS 830 switchboard uses ANI to route the call. The accept number in the dial plan must use the ANI number, not the DNIS number.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > B CHANNEL SELECTION

Determines how the ATLAS 830 switchboard uses B channels for call routing. The Circular method can be used for call load balancing among the available B channels on this interface.

NORMAL	Always start with the last channel configured (i.e., for a full PRI channel 23 would be used if available).
CIRCULAR	Contiguous channels from last to first.

DIAL PLAN (DS3 AND DS3 D&I) > NETWORK TERM (NFAS) > IFCE CONFIG (NFAS) > BUSY OPTION

Defines the response propagated to the CPE upon receipt of a **DISCONNECT USER-BUSY** message from the network.

NORMAL	Send a Progress message to the CPE and map busy tones.
PASS-THRU	Send a **DISCONNECT USER-BUSY** message to the User Term CPE device.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI)

This menu allows the user to define option parameters for ports which emulate a PRI connection.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI)

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI) > SWITCH TYPE

Defines the type of PRI switch that the ATLAS 830 emulates. If connected to another ATLAS 830, both need to be set to the same switch type. The following options are available:

- Lucent 5E
- Northern DMS 100
- National ISDN
- AT&T 4ESS

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI) > FIRST DS0

Defines to the ATLAS 830 the first DS0 for this endpoint.The ATLAS 830 uses DS0s, starting with this selection, to send and receive calls to and from the network. The outgoing calls which are allowed or restricted over these DS0s are set by **OUT#ACCEPT** (see *Dial Plan > Network Term > Out#Accept* on page 261) and **OUT#REJECT** (see *Dial Plan > Network Term > Out#Rej* on page 263).

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI) > NUMBER OF DS0S

Specifies the number of DS0s ATLAS 830 uses for this endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI) > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3**) of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

STRIP MSD *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI) > NETWORK SPECIFIC FACILITY VOICE AND DATA

Enables the sending of appropriate information to the PSTN. The default for this option is **NORMAL,** and in this case no Network Specific Facility Information Element is sent. Unless one of the services listed below is subscribed to, the selection should remain set to **NORMAL**.

The list below indicates services that may be subscribed to from the PSTN. These services require that specific information (such as a Network Specific Facility Information Element) be sent to the network during call setup.

- AT&T SDN
- AT&T Megacom 800
- AT&T Megacom
- AT&T Accunet
- AT&T Long Distance
- AT&T International-800
- AT&T Dial-It 900/Multiquest
- National ISDN INWATS
- Nortel Private Network
- Nortel InWats
- Nortel OutWats
- Nortel Foreign Exchange
- Nortel Tie Trunk

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI) > CALLED DIGITS TRANSFERRED

Defines the number of digits to forward from the called number. When attached to a PBX, the PBX may be provisioned to expect to receive fewer than all of the called digits of the incoming call; however, this option would normally be set to **ALL**. Choose from **NONE, THREE, FOUR, SEVEN,** or **ALL**.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI) > OUTGOING CALLER ID

Defines the number to use to provide Caller ID to the Network for outgoing calls sent through this endpoint. Choose from **SEND AS PROVIDED, SUBSTITUTE IF NOT PRESENT,** or **SUBSTITUTE ALWAYS.**

NOTE *The Caller ID number must be specific (i.e., no wildcards).*

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI) > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be

switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI) > SWAP ANI/DNIS

Swaps the ANI and DNIS numbers received from the network. **ANI** (Automatic Number Identification) is the billing number of the calling party, and **DNIS** (Dialed Number Identification Service) is the called party number.

With this swap, the ATLAS 830 switchboard uses ANI to route the call. The accept number in the dial plan must use the ANI number, not the DNIS number.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI) > B CHANNEL SELECTION

Determines how the ATLAS 830 switchboard uses B channels for call routing. The Circular method can be used for call load balancing among the available B channels on this interface.

NORMAL	Always start with the last channel configured (i.e., for a full PRI channel 23 would be used if available).
CIRCULAR	Contiguous channels from last to first.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (PRI) > IFCE CONFIG (PRI) > BUSY OPTION

Defines the response propagated to the CPE upon receipt of a **DISCONNECT USER-BUSY** message from the network.

NORMAL	Send a Progress message to the CPE and map busy tones.
PASS-THRU	Send a **DISCONNECT USER-BUSY** message to the User Term CPE device.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS)

This menu allows the user to define option parameters for ports which emulate an RBS T1 connection from the network.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS)

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > FIRST DS0

Defines the first DS0 for this endpoint.The ATLAS 830 uses DS0s, starting with this selection, to send and receive calls to and from the network. The outgoing calls which are allowed or restricted over these DS0s are set by **OUT#ACCEPT** (see page 181) and **OUT#REJECT** (see page 183).

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > NUMBER OF DS0S

Specifies the number of DS0s ATLAS 830 uses for this endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > DS0S AVAILABLE

Indicates which DS0s of the T1 have been defined in this switched endpoint (indicated by "!"), in another switched endpoint (indicated by "s"), or in a **DEDICATED MAP** (indicated by "n"). This field is read-only. The following characters may display in this field:

0-9	This DS0 is available. The digit that displays in this field represents the last digit of the DS0 number.
*****	This port is requesting this DS0 for this connection, but the DS0 is not yet activated.
!	This DS0 is used by this endpoint.
s	This DS0 is used elsewhere in the switched **DIAL PLAN**.
S	This DS0 is in the switched dial plan and conflicts with this endpoint.
n	This DS0 is used in one or more **DEDICATED MAPS**.
N	This DS0 is in one or more **DEDICATED MAPS**, and conflicts with this endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > SIGNALING METHOD

Defines the type of signaling to be used across this trunk. The signaling selected needs to match the signaling being provided by the network. The following choices are available:

- E&M Immediate
- E&M Wink
- Loop Start
- Ground Start
- Feature Group D

The ATLAS 830 converts signaling types between network and user terminations.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > FGD TX SEQUENCE

Displayed only if **SIGNALING METHOD** is configured for **FEATURE GROUP D**. Defines the format in which to present the outgoing digits. Choices: **NORMAL** if no digits are to be sent; **ANI/DNIS** to send both ANI and DNIS; **DNIS** to send DNIS only; **ANI** to send ANI only.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > FGD RX SEQUENCE

Displayed only if **SIGNALING METHOD** is configured for **FEATURE GROUP D**. Defines the format in which to receive the incoming digits. Choices: **NORMAL** if no digits are to be received; **ANI/DNIS** to receive both ANI and DNIS; **DNIS** to receive DNIS only; **ANI** to receive ANI only.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > WINK AFTER ANI/DNIS

Displayed only if **SIGNALING METHOD** is configured for **FEATURE GROUP D**. When enabled, the ATLAS 830 will transmit a wink after ANI/DNIS digits are transmitted.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > DIRECT INWARD DIALING

Defines whether Direct Inward Dialing (**DID**) is being used by the network. If **DID** is **ENABLED**, then the following information must be defined.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > DID DIGITS TRANSFERRED

Defines the number of digits sent to ATLAS 830 from the network if **DID** is used. This option only displays if **DID** is set to **ENABLED**.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > DID PREFIX

Defines the prefix digits which are not received as a part of the DID number. The ATLAS 830 uses the combination of prefix and DID number to determine the user endpoint that should receive the incoming call. This option only displays if **DID** is set to **ENABLED**. If **DID** is **DISABLED,** then you must define the trunk number.

If **FEATURE GROUP D** *is used, DID only refers to DNIS digits.*

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > CALLER ID NUMBER

Defines the number the ATLAS 830 uses to provide caller ID to the network for outgoing calls sent through this endpoint. This item is optional.

The Caller ID number must be specific (i.e., no wildcards).

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3**) of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

STRIP MSD *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > SOURCE ID

Simplifies the creation of a **DIAL PLAN** in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > DIAL ON OFFHOOK

Defines a number that is automatically sent to the switchboard when a call on this endpoint is initiated (goes off hook).

The **DIAL ON OFFHOOK** *number must be specific (i.e., no wildcards).*

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (RBS) > IFCE CONFIG (RBS) > DS0 ALIGNMENT

DS0 ALIGNMENT is typically enabled when a user needs the ability to maintain alignment between T1s as if they were in dedicated map mode. This scenario requires **DS0 ALIGNMENT** enabled on both interfaces (usually on User Term and on Net Term). An interface that has **DS0 ALIGNMENT** enabled will only process a call from the switchboard on the same DS0 that the incoming call was received.

Example: The unit receives an incoming call on DS0 17. The switchboard looks for an interface who has matching accept criteria to the number it received. A match is found on interface "Z" that has **DS0 ALIGNMENT** enabled. This causes interface "Z" to only process the call if it has DS0 17 available. If all matching interfaces have **DS0 ALIGNMENT** enabled and none of those interfaces have DS0 17 available, then a busy or fast busy will be returned to the calling party.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS)

This menu allows the user to define option parameters for ports which emulate an NFAS connection.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS)

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > SECONDARY INTERFACES

Write security: 3; Read security: 5

Allows the user to define the slot and port locations of the secondary interfaces in the NFAS group.

#	Displays the entry number.
SLOT	Configures the slot that the interface is physically connected to.
PORT	Configures the port that the interface is physically connected to.
INTERFACE NUMBER	Configures the NFAS Interface ID associated with the interface. The configure ID must match the ID configured by the provider.
BACKUP D CHANNEL	Backup D channel is not supported on User Term NFAS interfaces.

Only one backup D channel can be configured per NFAS interface group.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > SWITCH TYPE

Defines the type of PRI switch to which the port is connected. If connected to another ATLAS 830, both need to be set to the same switch type. The following options are available:

- Lucent 5E
- Northern DMS 100
- National ISDN
- AT&T 4ESS

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > FIRST DS0

Defines to the ATLAS 830 the first DS0 for this endpoint. The ATLAS 830 uses DS0s, starting with this selection, to send and receive calls to and from the network. The outgoing calls which are allowed or restricted over these DS0s are set by **OUT#ACCEPT** (see *Dial Plan > Network Term > Out#Accept* on page 261) and **OUT#REJECT** (see *Dial Plan > Network Term > Out#Rej* on page 263).

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > NUMBER OF DS0S

Specifies the number of DS0s ATLAS 830 uses for this endpoint.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3**) of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

STRIP MSD *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > NETWORK SPECIFIC FACILITY VOICE AND DATA

Enables the sending of appropriate information to the PSTN. The default for this option is **NORMAL**, and in this case no Network Specific Facility Information Element is sent. Unless one of the services listed below is subscribed to, the selection should remain set to **NORMAL**.

The list below indicates services that may be subscribed to from the PSTN. These services require that specific information (such as a Network Specific Facility Information Element) be sent to the network during call setup.

- AT&T SDN
- AT&T Megacom 800
- AT&T Megacom
- AT&T Accunet
- AT&T Long Distance
- AT&T International-800
- AT&T Dial-It 900/Multiquest
- National ISDN INWATS
- Nortel Private Network
- Nortel InWats
- Nortel OutWats
- Nortel Foreign Exchange
- Nortel Tie Trunk

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > CALLED DIGITS TRANSFERRED

Some PRI switches may be provisioned to send only a portion of the called number (like DID). This menu item allows the ATLAS 830 to know how many digits to expect (choose from **NONE, THREE, FOUR, SEVEN,** and **ALL**). The default is **ALL** and would almost always be correct. If less than **ALL** digits are sent, then the **PREFIX** is defined as follows.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > OUTGOING CALLER ID

Defines the number for the ATLAS 830 to use to provide Caller ID to the network for outgoing calls sent through this endpoint. Choose from **SEND AS PROVIDED, SUBSTITUTE IF NOT PRESENT,** or **SUBSTITUTE ALWAYS**.

The Caller ID number must be specific (i.e., no wildcards).

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > SWAP ANI/DNIS

Swaps the ANI and DNIS numbers received from the network. ANI (Automatic Number Identification) is the billing number of the calling party, and DNIS (Dialed Number Identification Service) is the called party number.

With this swap, the ATLAS 830 switchboard uses ANI to route the call. The accept number in the dial plan must use the ANI number, not the DNIS number.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > B CHANNEL SELECTION

Determines how the ATLAS 830 switchboard uses B channels for call routing. The Circular method can be used for call load balancing among the available B channels on this interface.

NORMAL	Always start with the last channel configured (i.e., for a full PRI channel 23 would be used if available).
CIRCULAR	Contiguous channels from last to first.

DIAL PLAN (DS3 AND DS3 D&I) > USER TERM (NFAS) > IFCE CONFIG (NFAS) > BUSY OPTION

Defines the response propagated to the CPE upon receipt of a **DISCONNECT USER-BUSY** message from the network.

NORMAL	Send a Progress message to the CPE and map busy tones.
PASS-THRU	Send a **DISCONNECT USER-BUSY** message to the User Term CPE device.

DIAL PLAN (E1/PRA)

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA)

This menu allows the user to define option parameters for ports which terminate a PRA connection from the network.

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA) > IFCE CONFIG (PRA)

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA) > IFCE CONFIG (PRA) > SWITCH TYPE

Defines the type of PRA switch to which the port is connected. If connected to another ATLAS 830, both need to be set to the same switch type. The following option is available:

- ETSI/DSS1

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA) > IFCE CONFIG (PRA) > FIRST DS0

Defines the first DS0 for this endpoint.The ATLAS 830 uses DS0s, starting with this selection, to send and receive calls to and from the network (PSTN). The outgoing calls which are allowed or restricted over these DS0s are set by **OUT#ACCEPT** (see *Dial Plan > Network Term > Out#Accept* on page 261) and **OUT#REJECT** (see *Dial Plan > Network Term > Out#Rej* on page 263).

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA) > IFCE CONFIG (PRA) > NUMBER OF DS0S

Specifies the number of DS0s ATLAS 830 uses for this endpoint.

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA) > IFCE CONFIG (PRA) > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3**) of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

STRIP MSD *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA) > IFCE CONFIG (PRA) > NETWORK SPECIFIC FACILITY VOICE AND DATA

Enables the sending of appropriate information to the PSTN. Currently not supported for E1/PRA use.

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA) > IFCE CONFIG (PRA) > CALLED DIGITS TRANSFERRED

Some PRI switches may be provisioned to send only a portion of the called number (like DID). This menu item allows the ATLAS 830 to know how many digits to expect (choose from **NONE, THREE, FOUR, SEVEN,** and **ALL**). The default is **ALL** and would almost always be correct. If less than **ALL** digits are sent, then the **PREFIX** is defined as follows:

PREFIX — Displays only if **CALLED DIGITS TRANSFERRED** is not set to **ALL**. Enter the prefix for the digits received.

Example: If the number of digits is four and the number called is 963-8615, the telco's PRI switch sends only 8615 and the prefix is set to 963. This entire number is then used to determine which ATLAS 830 user port endpoint should receive the call.

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA) > IFCE CONFIG (PRA) > OUTGOING CALLER ID

Defines the number to use to provide Caller ID to the network for outgoing calls sent through this endpoint. Choose from **SEND AS PROVIDED, SUBSTITUTE IF NOT PRESENT,** or **SUBSTITUTE ALWAYS**.

NOTE *The Caller ID number must be specific (i.e., no wildcards).*

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA) > IFCE CONFIG (PRA) > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA) > IFCE CONFIG (PRA) > SWAP ANI/DNIS

Swaps the ANI and DNIS numbers received from the network. ANI (Automatic Number Identification) is the billing number of the calling party, and DNIS (Dialed Number Identification Service) is the called party number.

NOTE *With this swap, the ATLAS 830 switchboard uses ANI to route the call. The accept number in the dial plan must use the ANI number, not the DNIS number.*

DIAL PLAN (E1/PRA) > NETWORK TERM (PRA) > IFCE CONFIG (PRA) > B CHANNEL SELECTION

Determines how the ATLAS 830 switchboard uses B channels for call routing. The Circular method can be used for call load balancing among the available B channels on this interface.

NORMAL	Always start with the last channel configured (i.e., for a full PRI channel 23 would be used if available).
CIRCULAR	Contiguous channels from last to first.

DIAL PLAN (E1/PRA) > USER TERM (PRA)

This menu allows the user to define option parameters for ports which emulate a PRA connection.

DIAL PLAN (E1/PRA) > USER TERM (PRA) > IFCE CONFIG (PRA)

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (E1/PRA) > USER TERM (PRA) > IFCE CONFIG (PRA) > SWITCH TYPE

Defines the type of PRA switch that the ATLAS 830 emulates. If connected to another ATLAS 830, both need to be set to the same switch type.

The following option is available:

- ETSI/DSS1

DIAL PLAN (E1/PRA) > USER TERM (PRA) > IFCE CONFIG (PRA) > FIRST DS0

Defines the first DS0 for this endpoint.The ATLAS 830 uses DS0s, starting with this selection, to send and receive calls to and from the network. The outgoing calls which are allowed or restricted over these DS0s are set by **OUT#ACCEPT** (see *Dial Plan > Network Term > Out#Accept* on page 261) and **OUT#REJECT** (see *Dial Plan > Network Term > Out#Rej* on page 263).

DIAL PLAN (E1/PRA) > USER TERM (PRA) > IFCE CONFIG (PRA) > NUMBER OF DS0S

Specifies the number of DS0s ATLAS 830 uses for this endpoint.

DIAL PLAN (E1/PRA) > USER TERM (PRA) > IFCE CONFIG (PRA) > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3**) of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

STRIP MSD *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (E1/PRA) > USER TERM (PRA) > IFCE CONFIG (PRA) > NETWORK SPECIFIC FACILITY VOICE AND DATA

Enables the sending of appropriate information to the PSTN. Currently not supported for E1/PRA use.

DIAL PLAN (E1/PRA) > USER TERM (PRA) > IFCE CONFIG (PRA) > CALLED DIGITS TRANSFERRED

Defines the number of digits to forward from the called number. When attached to a PBX, the PBX may be provisioned to expect to receive fewer than all of the called digits of the incoming call; however, this option would normally be set to **ALL.** Choose from **NONE, THREE, FOUR, SEVEN,** or **ALL**.

DIAL PLAN (E1/PRA) > USER TERM (PRA) > IFCE CONFIG (PRA) > OUTGOING CALLER ID

Defines the number to use to provide Caller ID to the network for outgoing calls sent through this endpoint. Choose from **SEND AS PROVIDED, SUBSTITUTE IF NOT PRESENT,** or **SUBSTITUTE ALWAYS**.

NOTE *The Caller ID number must be specific (i.e., no wildcards).*

DIAL PLAN (E1/PRA) > USER TERM (PRA) > IFCE CONFIG (PRA) > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (E1/PRA) > USER TERM (PRA) > IFCE CONFIG (PRA) > SWAP ANI/DNIS

Swaps the ANI and DNIS numbers received from the network. ANI (Automatic Number Identification) is the billing number of the calling party, and DNIS (Dialed Number Identification Service) is the called party number.

NOTE *With this swap, the ATLAS 830 switchboard uses ANI to route the call. The accept number in the dial plan must use the ANI number, not the DNIS number.*

DIAL PLAN (E1/PRA) > USER TERM (PRA) > IFCE CONFIG (PRA) > B CHANNEL SELECTION

Determines how the ATLAS 830 switchboard uses B channels for call routing. The Circular method can be used for call load balancing among the available B channels on this interface.

NORMAL	Always start with the last channel configured (i.e., for a full PRI channel 23 would be used if available).
CIRCULAR	Contiguous channels from last to first.

DIAL PLAN (V35NX)

DIAL PLAN (V35NX) > USER TERM

This menu allows the user to define option parameters for ports configured for V.35 connections.

DIAL PLAN (V35NX) > USER TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (V35NX) > USER TERM > IFCE CONFIG > PORTS AVAILABLE

Indicates which ports of the selected Quad Nx 56/64 Option Module have been defined in this switched endpoint (indicated by "!"), in another switched endpoint (indicated by "s"), or in a **DEDICATED MAP** (indicated by "n"). This field is read-only. The following characters may display in this field:

0-4	This port is available.
*****	This port is requesting this port for this connection, but the port is not yet activated.
!	This port is used by this endpoint.
s	This port is used elsewhere in the switched **DIAL PLAN**.
S	This port is in the switched dial plan and conflicts with this endpoint.
n	This port is used in one or more **DEDICATED MAPS**.
N	This port is in one or more **DEDICATED MAPS**, and conflicts with this endpoint.

DIAL PLAN (V35NX) > USER TERM > IFCE CONFIG > NUMBER OF PORTS

Specifies the number of V.35 ports ATLAS 830 uses for this endpoint.

DIAL PLAN (V35NX) > USER TERM > IFCE CONFIG > NUMBER TO DIAL

Specifies the number to dial on an outgoing call.

DIAL PLAN (V35NX) > USER TERM > IFCE CONFIG > CALL TYPE

Configures the call type (either **56K** or **64K**) used for outgoing calls from this endpoint.

DIAL PLAN (V35NX) > USER TERM > IFCE CONFIG > DIAL CALL AS

Allows the outgoing call to be treated as the selected call type. Options include **DIGITAL** (for 56K or 64K data calls), **VOICE** (for speech calls), and **AUDIO** (for 3.1kHz audio calls).

DIAL PLAN (V35NX) > USER TERM > IFCE CONFIG > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoint and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (V35NX) > USER TERM > IFCE CONFIG > MIN DS0'S

Set this to 1 for typical single-call connections. Setting this greater than 1 will restrict connections to endpoints supporting aggregation (e.g., BONDING) of the specified number of DS0s.

DIAL PLAN (V35NX) > USER TERM > IFCE CONFIG > MAX DS0'S

Set this to 1 for typical single-call connections. Setting this greater than 1 will accommodate connections to endpoints supporting aggregation (e.g., BONDING) of up to the specified number of DS0s. This also sets the number of DS0s presented in the negotiation of outgoing aggregate calls.

DIAL PLAN (USSI)

DIAL PLAN (USSI) > USER TERM

This menu allows the user to define option parameters for ports configured for USSI interface connections.

DIAL PLAN (USSI) > USER TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (USSI) > USER TERM > IFCE CONFIG > PORTS AVAILABLE

Indicates which ports of the selected Quad USSI Option Module have been defined in this switched endpoint (indicated by "!"), in another switched endpoint (indicated by "s"), or in a **DEDICATED MAP** (indicated by "n"). This field is read-only. The following characters may display in this field:

0-4	This port is available.
*****	This port is requesting this port for this connection, but the port is not yet activated.
!	This port is used by this endpoint.
s	This port is used elsewhere in the switched dial plan.
S	This port is in the switched dial plan and conflicts with this endpoint.
n	This port is used in one or more dedicated maps.
N	This port is in one or more dedicated maps, and conflicts with this endpoint.

DIAL PLAN (USSI) > USER TERM > IFCE CONFIG > NUMBER OF PORTS

Specifies the number of USSI interface ports ATLAS 830 uses for this endpoint.

DIAL PLAN (USSI) > USER TERM > IFCE CONFIG > NUMBER TO DIAL

Specifies the number to dial on an outgoing call.

DIAL PLAN (USSI) > USER TERM > IFCE CONFIG > CALL TYPE

Configures the call type (either **56K** or **64K**) used for outgoing calls from this endpoint.

DIAL PLAN (USSI) > USER TERM > IFCE CONFIG > DIAL CALL AS

Allows the outgoing call to be treated as the selected call type. Options include **DIGITAL** (for 56K or 64K data calls), **VOICE** (for speech calls), and **AUDIO** (for 3.1kHz audio calls).

DIAL PLAN (USSI) > USER TERM > IFCE CONFIG > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (USSI) > USER TERM > IFCE CONFIG > MIN DS0'S

Set this to 1 for typical single-call connections. Setting this greater than 1 will restrict connections to endpoints supporting aggregation (e.g., BONDING) of the specified number of DS0s.

DIAL PLAN (USSI) > USER TERM > IFCE CONFIG > MAX DS0'S

Set this to 1 for typical single-call connections. Setting this greater than 1 will accommodate connections to endpoints supporting aggregation (e.g., BONDING) of up to the specified number of DS0s. This also sets the number of DS0s presented in the negotiation of outgoing aggregate calls.

DIAL PLAN (OCTAL BRI/U)

DIAL PLAN (U-BRI) > NETWORK TERM

This menu allows the user to define option parameters for ports which terminate a BRI connection from the network.

DIAL PLAN (U-BRI) > NETWORK TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (U-BRI) > NETWORK TERM > IFCE CONFIG > SWITCH TYPE

Defines the type of BRI switch to which the port is connected. If connected to another ATLAS 830, both need to be set to the same switch type. The following options are available:

- Lucent 5E
- Northern DMS 100
- National ISDN

DIAL PLAN (U-BRI) > NETWORK TERM > IFCE CONFIG > SPID LIST

To properly operate with a network ISDN switch, the BRI interface must have Service Profile Identifiers (SPIDs) and phone number(s) that match the SPID(s) and phone number(s) programmed into the ISDN switch for this line. Each BRI may have one or more phone numbers and SPIDs. The **SPID LIST** submenu defines these parameters to ATLAS.

PHONE NUMBER	The phone number(s) assigned to this BRI phone line.
SPID NUMBER	This entry must match the SPID number(s) which has been set in the network's ISDN switch (or in the PBX) for this BRI line. A SPID must be entered for each phone number.
CALLS	The number of calls (1 or 2) which can be received or sent on this number/SPID.
D64, D56, AUDIO, SPEECH	These options reflect the network provisions for this SPID. If the BRI was purchased with different services provisioned for the SPIDs, then the call must match the services supported.

DIAL PLAN (U-BRI) > NETWORK TERM > IFCE CONFIG > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3**) of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

STRIP MSD *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (U-BRI) > NETWORK TERM > IFCE CONFIG > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (U-BRI) > NETWORK TERM > IFCE CONFIG > SWAP ANI/DNIS

Swaps the ANI and DNIS numbers received from the network. ANI (Automatic Number Identification) is the billing number of the calling party, and DNIS (Dialed Number Identification Service) is the called party number.

DIAL PLAN (U-BRI) > USER TERM

This menu allows the user to define option parameters for ports which emulate a BRI connection.

DIAL PLAN (U-BRI) > USER TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (U-BRI) > USER TERM > IFCE CONFIG > SWITCH TYPE

Defines the type of BRI switch the ATLAS 830 emulates. If connected to another ATLAS 830, both need to be set to the same switch type. The following options are available:

- Lucent 5E
- Northern DMS 100
- National ISDN

DIAL PLAN (U-BRI) > USER TERM > IFCE CONFIG > SPID LIST

The port, acting as the network, must use a Service Profile Identifier (SPID) and phone number(s) in order to satisfy the ISDN connection protocol expected by the user's terminal adapter (TA).

PHONE NUMBER The phone number(s) assigned to this BRI phone line.

SPID NUMBER Defines the SPID number(s) used for this BRI line. Although the value of the SPID is not significant, a SPID must be entered for each phone number. For convenience, the SPID can be set to be identical to the phone number.

NOTE *The ATLAS 830 does not support autoSPID detection software which some terminal adapters offer.*

CALLS For user termination, the number of calls which can be received or sent on this number/SPID is fixed at 2.

D64, D56, AUDIO, SPEECH These options reflect the network provisions for this SPID. If the BRI was purchased with different services provisioned for the SPIDs, then the call must match the services supported.

DIAL PLAN (U-BRI) > USER TERM > IFCE CONFIG > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3)** of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

NOTE **STRIP MSD** *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (U-BRI) > USER TERM > IFCE CONFIG > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (U-BRI) > USER TERM > IFCE CONFIG > SWAP ANI/DNIS

Swaps the ANI and DNIS numbers received from the network. ANI (Automatic Number Identification) is the billing number of the calling party, and DNIS (Dialed Number Identification Service) is the called party number.

DIAL PLAN (U-BRI) > USER TERM > IFCE CONFIG > OUTGOING CALLER ID

Defines the number for the ATLAS 830 to use to provide Caller ID to the Network for outgoing calls sent through this endpoint. Choose from **SEND AS PROVIDED, SUBSTITUTE IF NOT PRESENT,** or **SUBSTITUTE ALWAYS**.

NOTE *The Caller ID number must be specific (i.e., no wildcards).*

DIAL PLAN (OCTAL BRI S/T)

DIAL PLAN (S/T BRI) > USER TERMINATION

The Octal BRI S/T Module acts like the network while interfacing to user equipment (terminal adapters). When you are working in the network termination section of the **DIAL PLAN** menu and **SLT** is defined as a S/T BRI module, the following interface configuration options are available:

NOTE *Using the Octal BRI S/T Module on a User Term endpoint requires the use of a straight-through ISDN S/T cable.*

DIAL PLAN (S/T BRI) > USER TERMINATION > IFCE CONFIG > SWITCH TYPE

Write security: 2; Read security: 5

Defines the type of ISDN switch that the port will simulate. If connected to another ATLAS, both need to be set to the same type. The following options are available:

- Lucent 5E
- Northern DMS 100
- National-ISDN
- Euro-ISDN

DIAL PLAN (S/T BRI) > USER TERMINATION > IFCE CONFIG > SPID LIST

Write security: 2; Read security: 5

The port, acting as the network, must use a SPID and a phone number in order to satisfy the ISDN connection protocol expected by the user's Terminal Adapter (TA).

PHONE NUMBER	The phone number(s) assigned to this BRI phone line.
SPID NUMBER	Defines the SPID number(s) used for this BRI line. Although the value of the SPID is not significant, a SPID must be entered for each phone number. For convenience, the SPID can be set to be the same as the phone number. Octal BRI S/T Module does not support autoSPID detection software which some terminal adapters offer.

No SPID Number is needed for the Euro-ISDN Switch Type.

CALLS	For User terminations, the number of calls is fixed at 2.
D64, D56, AUDIO, SPEECH	These options reflect what the network has provisioned for this SPID. If the BRI was purchased with different services provisioned for the SPIDs, then the call must match the services supported.

DIAL PLAN (FXS-8)

DIAL PLAN (FXS-8) > USER TERM

This menu allows the user to define option parameters for ports which emulate an analog FXS connection from the Network (PSTN).

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG > PORTS AVAILABLE

Indicates which ports of the Octal E&M Option Module have been defined in this switched endpoint (indicated by "! "), in another switched endpoint (indicated by "s"), or in a **DEDICATED MAP** (indicated by "n"). This field is read-only. The following characters may display in this field:

0-9	This port is available.
*****	This port is requesting this port for this connection, but the port is not yet activated.
!	This port is used by this endpoint.
s	This port is used elsewhere in the switched **DIAL PLAN**.
S	This port is in the switched dial plan and conflicts with this endpoint.
n	This port is used in one or more **DEDICATED MAPS.**
N	This port is in one or more **DEDICATED MAPS,** and conflicts with this endpoint.
•	This port is the wrong kind of port for this endpoint.

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG > NUMBER OF PORTS

Specifies the number of ports ATLAS 830 uses for this endpoint.

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG > SIGNALING METHOD

Defines to the ATLAS 830 the type of signaling to be used across this trunk. The signaling selected needs to match the signaling being provided by the network (PSTN). The following choices are available:

- Loop Start
- Ground Start

The ATLAS 830 converts signaling types between two endpoints (network or user terms).

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG > FORWARD DISCONNECT

In Loop Start applications, **FORWARD DISCONNECT** configures the length of time loop current will stop flowing once the far end has terminated the call. Applications requiring Forward Disconnect are Fax Servers and ACDs.

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG > DIRECT INWARD DIALING

Defines to the ATLAS 830 whether Direct Inward Dialing (**DID**) is being used by the network. If **DID** is **ENABLED**, then the following information must be defined:

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG > DID DIGITS TRANSFERRED

Defines the number of digits sent to ATLAS 830 from the network if **DID** is used. This option only displays if **DID** is set to **ENABLED**.

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG > CALLER ID NUMBER

Defines the number the ATLAS 830 uses to provide caller ID to the network for outgoing calls sent through this endpoint. This item is optional.

NOTE *The Caller ID number must be specific (i.e., no "wild cards").*

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3**) of the Most Significant Digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

NOTE *Strip MSD does not affect Call Accept criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG > SOURCE ID

Simplifies the creation of a **DIAL PLAN** in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. The default ID for all endpoints is 0 and all accept numbers is 0. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG > DIAL ON OFFHOOK

Defines a number that is automatically sent to the switchboard when a call on this endpoint is initiated (goes off hook).

NOTE *The Dial on Offhook number must be specific (i.e., no "wild cards").*

DIAL PLAN (FXS-8) > USER TERM > IFCE CONFIG > ANI TO CALLER ID

Use this option to generate (FSK) Caller ID out the FXS user term port to the subscriber. The ATLAS 830 generates Caller ID from the calling party number (typically when the call is terminated from a PRI). The calling party number may also come from a Trunk Number on a network term entry, or from the Caller ID field on a user term entry (if the call comes from one of these sources).

Additional CPE equipment is needed to receiver Caller ID, such as a Caller ID box. To receive Calling Name information, this equipment must support Multiple Data Message Format (MDMF).

Calling Name will only be delivered (with the number) if a call is received from a PRI that has been provisioned to provide Calling Name information. Otherwise, only the Calling Party Number will be generated.

DIAL PLAN (ASYNC232)

DIAL PLAN (ASYNC232) > USER TERM

This menu allows the user to define option parameters for ports configured for Async-232 connections.

DIAL PLAN (ASYNC232) > USER TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (ASYNC232) > USER TERM > IFCE CONFIG > PORTS AVAILABLE

Indicates which ports of the selected Async-232 Option Module have been defined in this switched endpoint (indicated by "!") or in another switched endpoint (indicated by "s"). This field is read-only. The following characters may display in this field:

0-9	This port is available. The digit that displays in this field represents the last digit of the port number.
*****	This port is requesting this port for this connection, but the port is not yet activated.
!	This port is used by this endpoint.
s	This port is used elsewhere in the switched dial plan.
S	This port is in the switched dial plan and conflicts with this endpoint.

DIAL PLAN (ASYNC232) > USER TERM > IFCE CONFIG > NUMBER OF PORTS

Specifies the number of Async-232 ports ATLAS 830 uses for this endpoint.

DIAL PLAN (ASYNC232) > USER TERM > IFCE CONFIG > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (ASYNC232) > USER TERM > IFCE CONFIG > BUSY OUT

Number of milliseconds that passes before this Async-232 endpoint is set to permanently busy and will no longer be available for use.

DIAL PLAN (ASYNC232) > USER TERM > IFCE CONFIG > IDLE TIME

Number of seconds that passes before this Async-232 endpoint is set to idle status.

DIAL PLAN (PKT ENDPT)

DIAL PLAN (PKT ENDPT) > USER TERM

This menu allows the user to define option parameters for ports configured as packet endpoints.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > OUTDIAL NUMBER

Defines the number dialed to originate a call.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > OUTGOING CALL TYPE

Selects the terminating resource type, either **DIGITAL 64K** or **DIGITAL 56K**.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > REDIAL TIMER

Selects the time delay in seconds between redial attempts.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > RANDOMIZE TIMER

Enables/disables random delay added to the redial timer to avoid glare.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > RETRY COUNT

Defines the number of redials to attempt.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > OUTGOING CALLER ID

Defines the presentation of the calling party number for this endpoint.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > SOURCE ID

Simplifies the creation of a **DIAL PLAN** in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default value for all endpoints and all accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

Example: An application requires that all calls that originate from Port 1 of the ATLAS 830 in Slot 1 be switched to Port 2 of that same module. Assign a unique **SOURCE ID** (e.g., 7) to Port 1 of the module, and then configure Port 2 to only accept calls from that unique **SOURCE ID** (7).

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > ROUTE INCOMING CALL

DBU HANDSHAKE *must be disabled for DBU between two ATLAS products.*

Used to define the method which incoming calls are associated to the packet endpoints. This item has three options:

USING INCOMING NUM	Endpoint selection based on the incoming number.
USING CALLING PARTY NUM	Selection based on the Caller ID as presented by the calling party. If this option is selected, the **CALL PARTY NUMBER** field is made available to the interface configuration. This number allows you to configure the calling part number used to select this packet endpoint.
USING DBU HANDSHAKE	Selection based on a proprietary protocol. This option is only available to packet endpoints with backup sublinks. **DBU HANDSHAKE** is required to interoperate with ADTRAN IQ and Express family products. It enables the association of incoming calls with packet endpoints in cases where there is a single call-in number (hunt group) and no Caller ID information available.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > SUPPORT DBU HANDSHAKE

> **NOTE** **DBU HANDSHAKE** *must be disabled for DBU between two ATLAS products.*

This option is only available when the packet endpoint selected in the **PORT/PEP** field has backup sublinks. **SUPPORT DBU HANDSHAKE** enables/disables the generation and acceptance of ADTRAN frame relay handshake upon connection. If the endpoint is configured to route incoming calls based on the handshake information, this option is automatically enabled. If another call routing method is in effect, however, this option can be enabled to support the use of handshake information at the far end of the link.

DLCI TRANSLATION Controls contents of the ADTRAN frame-relay handshake upon connection of a backup PVC. Normally this field should be set to **AUTO**. The **FORCED** mode is present for compatibility with older IQ units.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > MIN DS0'S

Set this to 1 for typical single-call connections. A value greater than **1** will restrict connections to endpoints supporting aggregation (e.g., BONDING) of the specified number of DS0s.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > MAX DS0'S

Set this to 1 for typical single-call connections. A value greater than **1** will accommodate connections to endpoints supporting aggregation (e.g., BONDING) of up to the specified number of DS0s. This also sets the number of DS0s presented in the negotiation of outgoing aggregate calls.

DIAL PLAN (PKT ENDPT) > USER TERM > IFCE CONFIG > CALL ROUTING TABLE

This table is only visible if **GROUP** is selected in the **PRT/PEP** field. The table format changes, based on the selected routing option. For each case, **CALL PARAMS** contain **OUTDIAL#, CALLER ID, SOURCE ID,** and **MIN/MAX DS0S**, as described above.

DIAL PLAN (CKT BACKUP)

DIAL PLAN (CKT BACKUP) > USER TERM

This menu allows the user to define option parameters for ports configured as backup endpoints.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > ORIGINATE/ANSWER

The following selections are available for the **ORIGINATE/ANSWER** menu item:

ORIGINATE	The endpoint will originate the backup call.
ANSWER	The endpoint will answer any incoming calls, but will only go into backup if an error is detected.
ANSWER ANY	The endpoint will answer any incoming calls and go immediately into backup.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > OUTGOING CALL TYPE

This only applies to originating endpoints.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > OUTDIAL NUMBER

This only applies to originating endpoints. This is the number dialed when the endpoint goes into backup.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > FORCE MODE

This forces the backup state of this endpoint. This is a configuration setting, so it will retain its value until it is changed. To temporarily force an endpoint into backup, or to force a restore, try the Manual activator.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > BACKUP CRITERIA

Criteria for automatic backup. Note that this setting affects the available options for **RESTORE CRITERIA.**

NET/DATA FAIL	DBU is initiated when either the network fails (possible causes include Red, Yellow, Blue, or LOS alarms) or when the Nx56/64 module detects a loss of data transitions on the V.35 interface. If Net/Data Fail is selected, the V.35 Nx INBAND option must be ON. The remote TSU INBAND option must also be enabled.

NOTE

*When **BACKUP CRITERIA** is configured for **NET/DATA FAIL**, the **RESTORE CRITERIA** must be **MANUAL ONLY**.*

NET FAIL	DBU is initiated when there is a network failure. Possible causes include LOS, RED, Yellow, or Blue alarms.
MANUAL	The ATLAS will never initiate DBU until it is manually set to do so.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > RESTORE CRITERIA

This only applies to originating endpoints. These are criteria for automatically coming out of backup. Note that **NETWORK SUCCESS** is only available when a backup criterion is not **NET/DATA FAIL.**

NET SUCCESS	When network is out of alarm
MANUAL ONLY	Only by the Manual activator

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > STARTUP DELAY

The amount of time to wait after creating or changing the endpoint before allowing backup.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > BACKUP DELAY

The amount of time to delay after detecting an alarm before going into backup. This only applies to originating endpoints. If the circuit comes out of alarm before this time has expired, the endpoint will not go into backup.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > RESTORE DELAY

The amount of time to delay after clearing an alarm before coming out of backup. This only applies to originating endpoints. If the circuit goes into alarm before this time has expired, the endpoint will remain in backup.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > MAX NUM REDIALS

The backup endpoint will attempt this many retries before giving up and declaring a backup failure. This only applies to originating endpoints.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > REDIAL TIMER

The amount of time delayed between a failed backup call and the redial. This only applies to originating endpoints.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > ENABLE SCHEDULE

Use this menu to schedule the times when backup is enabled. The following selections are available for the **ENABLE SCHEDULE** menu item.

ENABLE TIME	This is the time of day to enable dial backup.
DISABLE TIME	This is the time of day to disable dial backup. If the disable time is earlier than the enable time, backup monitoring will be active across midnight.

DAYS ENABLED Use this record to enable/disable backup monitoring on particular days of the week.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > TEST CALL

This only applies to originating endpoints. Use this menu to schedule regularly occurring test calls. The following selections are available for the **TEST CALL** menu item.

PERIOD How often test calls are to be made

NEXT TEST TIME The date of the next scheduled test call

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > MIN NUM DS0S

This option will specify the number of DS0s to use for this switched call. If this number is **1**, all calls will be directed to the endpoint, and not use a BONDING resource. Any number other than **1** will use BONDING resources to inverse multiplex the multiple switched channels together.

DIAL PLAN (CKT BACKUP) > USER TERM > IFCE CONFIG > MAX NUM DS0S

This option will specify the number of DS0s to use for this switched call. If this number is **1**, all calls will be directed to the endpoint, and not use a BONDING resource. Any number other than **1** will use BONDING resources to inverse multiplex the multiple switched channels together.

DIAL PLAN (PKT VOICE)

DIAL PLAN (PKT VOICE) > NETWORK TERM

This menu allows the user to define option parameters for ports configured as network packet voice endpoints.

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > DLCI

Selects the appropriate DLCI for this dial plan entry.

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > VOICE PORT

Identifies the voice port address of the remote unit. FSU 5622s support ports 1 and 2. A remote ATLAS supports ports 1 through 255.

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > CONFLICT REPORT

Describes existing conflicts. Potential problems include DLCI unavailable or Voice port already in use.

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > VOICE COMPRESSION

Selects the voice compression algorithm used by this endpoint. ADTRAN FSU 5622 and Express 5200 Series FRADs use CCITT **G.723.1** compression at 6.3 kbps. The Express 5200 Series FRADs also support the proprietary **NETCODER** algorithm at 6.4 kbps. Both endpoints must agree about the compression algorithm choice.

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > SILENCE SUPPRESSION

Reduces the total system bandwidth load by preventing ATLAS from sending frames containing a special silence code during periods of silence. Both endpoints must agree to use silence suppression. By default, silence suppression is Disabled. To prohibit silence frames from transmitting and to decrease the total system bandwidth, **ENABLE** this feature.

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > SIGNALING METHOD

Selects the type of signaling that the remote port is configured to expect. Available options include **E&M IMMEDIATE, E&M WINK,** and **LOOP START**.

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > DIRECT INWARD DIALING

Defines whether Direct Inward Dialing (**DID**) is used by the remote equipment. If **DID** is enabled, then the following options must be configured:

CALLER ID	Defines the number ATLAS uses to provide Caller ID to the network for outgoing calls sent through this endpoint. Setting this menu item is optional.
SOURCE ID	Defines the **SOURCE ID**. Setting this menu item is optional.

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > DID DIGITS TRANSFERRED

Defines the number of digits sent to ATLAS from the network if **DIRECT INWARD DIALING** is **ENABLED.**

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > DID PREFIX

Defines to ATLAS the prefix digits which are not received as a part of the DID number. ATLAS uses the combination of prefix and DID number to determine the user endpoint that should receive the incoming call.

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > TRUNK NUMBER

Determines which user endpoint should receive the incoming call when the network connection does not provide DID digits. This field only displays if **DIRECT INWARD DIALING** is set to **DISABLED**.

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3**) of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

STRIP MSD *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (PKT VOICE) > NETWORK TERM > IFCE CONFIG > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. Zero is the default ID for all endpoints and accept numbers. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

DIAL PLAN (PKT VOICE) > USER TERM

This menu allows the user to define option parameters for ports configured as user packet voice endpoints.

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG

Write security: 3; Read security: 5

Specifies the configuration parameters for the endpoint.

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG > DLCI

Selects the appropriate DLCI for this dial plan entry.

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG > VOICE PORT

Identifies the voice port address of the remote unit. FSU 5622s support ports 1 and 2. A remote ATLAS supports ports 1 through 255.

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG > CONFLICT REPORT

Describes existing conflicts. Potential problems include DLCI unavailable or Voice port already in use.

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG > VOICE COMPRESSION

Selects the voice compression algorithm used by this endpoint. ADTRAN FSU 5622 and Express 5200 Series FRADs use CCITT **G.723.1** compression at 6.3 kbps. The Express 5200 Series FRADs also support the proprietary **NETCODER A**lgorithm at 6.4 kbps. Both endpoints must agree about the compression algorithm choice.

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG > SILENCE SUPPRESSION

Reduces the total system bandwidth load by preventing ATLAS from sending frames containing a special silence code during periods of silence. Both endpoints must agree to use silence suppression. By default, silence suppression is **DISABLED**. To prohibit silence frames from transmitting and to decrease the total system bandwidth, **ENABLE** this feature.

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG > SIGNALING METHOD

Selects the type of signaling that the remote port is configured to expect. Available options include the following: **E&M IMMEDIATE, E&M WINK,** and **LOOP START**.

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG > DIRECT INWARD DIALING

Defines whether or not Direct Inward Dialing (**DID)** is used by the remote equipment. If **DID** is enabled, then the following options must be configured:

CALLER ID	Defines the number ATLAS uses to provide Caller ID to the network for outgoing calls sent through this endpoint. Setting this menu item is optional.
SOURCE ID	Defines the **SOURCE ID**. Setting this menu item is optional.

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG > DID DIGITS TRANSFERRED

Defines the number of digits ATLAS 830 send to the user equipment.This field only displays if **DIRECT INWARD DIALING** is **ENABLED**.

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG > CALLER ID NUMBER

Defines the number ATLAS uses to provide Caller ID to the network for outgoing calls sent through this endpoint. This field only displays if **DIRECT INWARD DIALING** is set to **DISABLED**, and **USER TERM** is selected. Setting this menu item is optional.

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG > STRIP MSD

Strips a selected quantity (choose from **NONE, 1, 2,** and **3**) of the most significant digits (MSD) of a dialed number prior to being forwarded out of the port.

Example: A network port could be set to accept all calls beginning with 9 (9$), and then with **STRIP MSD** set to **1**, all digits would be sent toward the network except the leading 9.

STRIP MSD *does not affect* **CALL ACCEPT** *criteria. All of the digits (including the MSDs that are subsequently stripped) are used as accept criterion.*

DIAL PLAN (PKT VOICE) > USER TERM > IFCE CONFIG > SOURCE ID

Simplifies the creation of a dial plan in applications where the criterion for switching calls to a certain endpoint is a function of which endpoint originated the call.

DEFAULT VALUE = 0. The default ID for all endpoints is 0 and all accept numbers is 0. With default values, all calls are routed based only on the dialed number.

Multiple endpoints can have the same **SOURCE ID**.

When creating the **CALL ACCEPT** list, specify a **SOURCE ID**(s) as well as a dialed number or range of dialed numbers to accept.

DETAIL LEVEL PROCEDURES

CONNECTING THE TERMINAL OR PC TO THE ADMIN OR CRAFT PORT

Introduction

ATLAS 830 shelf management and provisioning is facilitated by a series of intuitive menus that are accessible on a computer screen. Connecting either a VT100 terminal or a PC emulating a VT100 terminal to the **ADMIN** port on the rear of the unit or the **CRAFT** interface on the unit faceplate allows access to the menus and management features of ATLAS 830. This section specifies how to connect the VT100 terminal or PC to the ATLAS 830.

The front **CRAFT** interface for the ATLAS 830 is located on the faceplate of the unit and is a DB-9 connector. Access can also be made to the ATLAS 830 from the back of the unit through the port labeled **ADMIN**. It is also a DB-9 connector, and is located on the back of the unit.

Prerequisite Procedures

The ATLAS 830 must be powered for terminal communication to function.

Tools and Materials Required

- Data cable to connect a VT100 terminal or a PC configured as a VT100 terminal.
- VT100 terminal or PC configured as a VT100 terminal.

Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

WARNING

To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.

DLP-001

Perform Steps Below in the Order Listed

1. Connect a VT100 terminal to ATLAS 830.

- Set the parameters of the VT100 terminal to:
  - 9600 baud rate
  - 8 data bits
  - No parity
  - 1 stop bit
  - No flow control
- If the terminal has a parallel setting, disable it and use serial port.
- Plug the DB-9 male end of the data cable into the ATLAS 830. Make the connection to the VT100 terminal as appropriate for your equipment.

2. Connect a PC emulating a VT100 terminal to ATLAS 830.

Most personal computers or laptops can run communications software that will emulate a VT100 terminal. Windows programs such as Terminal© or Hyperterminal© are two such examples in the Windows format. However, there are many other adequate, commercially available software packages which will allow your PC or laptop to emulate a VT100 terminal. Certain configuration items must be set on a PC or laptop to act as a VT100 terminal for the ATLAS 830.

- Set the parameters of the communications software to:
  - 9600 baud rate
  - 8 data bits
  - No parity
  - 1 stop bit
  - No flow control
- Set the PC for direct connect on the appropriate com port (instead of dial-up connection).
- Plug the DB-9 male end of the data cable into the ATLAS 830. Make connection to the PC or laptop as appropriate for your equipment.

You are now ready to login to ATLAS 830, as described in DLP-002*, Logging in to the System*.

Follow-up Procedures

Once this procedure is complete, return to the procedure which referred you to this DLP and continue with the tasks indicated there.

LOGGING IN TO THE SYSTEM

Introduction

Once connected to the ATLAS 830 via either a VT100 terminal or PC configured as a VT100 terminal, it is necessary to login to the system to gain access to the management and provisioning functions. This DLP provides specific steps for logging in to the system and accessing the various management and provisioning functions.

You can also connect to the unit through Telnet if the IP has been provisioned (see DLP-003).

Prerequisite Procedures

Complete DLP-001, *Connecting the Terminal or PC to the ADMIN or CRAFT Port*, before logging in to ATLAS 830.

Tools and Materials Required

- Data cable to connect to a VT100 terminal or a PC configured as a VT100 terminal.
- VT100 terminal or PC configured as a VT100 terminal

WARNING *To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.*

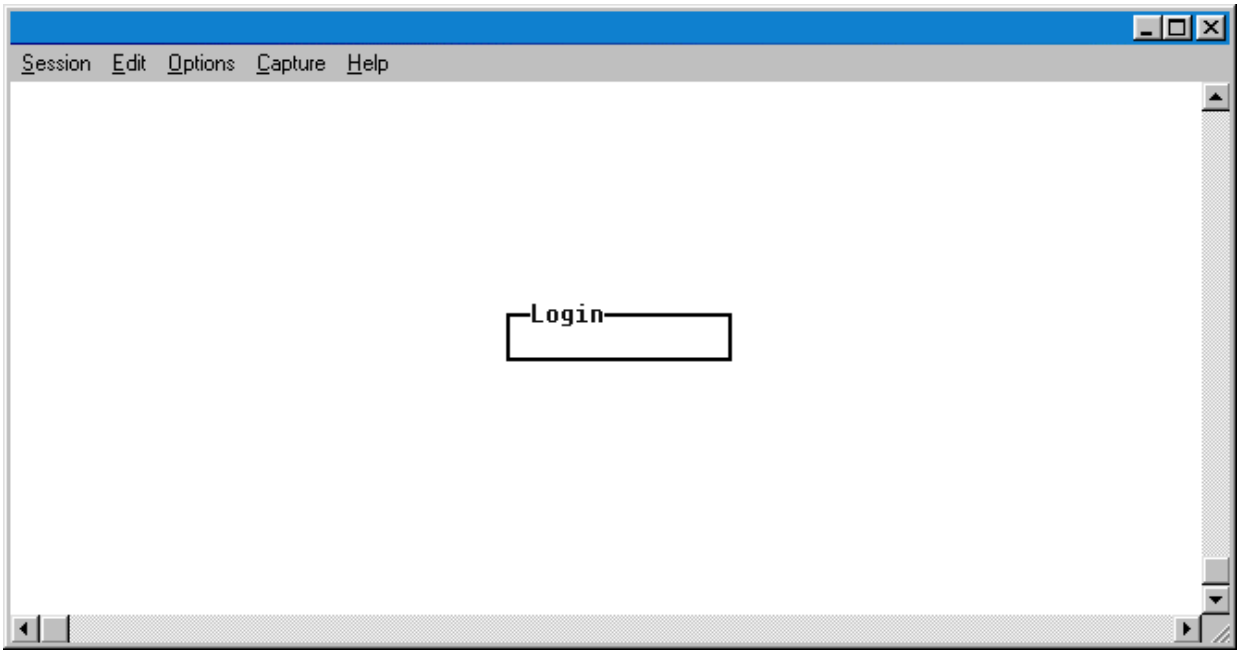
Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

DLP-002

Perform Steps Below in the Order Listed

1. **After connecting to the system, a blank screen will appear.**

   Pressing any key will display the login screen shown below.



   The cursor will blink at the **LOGIN** field, waiting for a password to be entered.

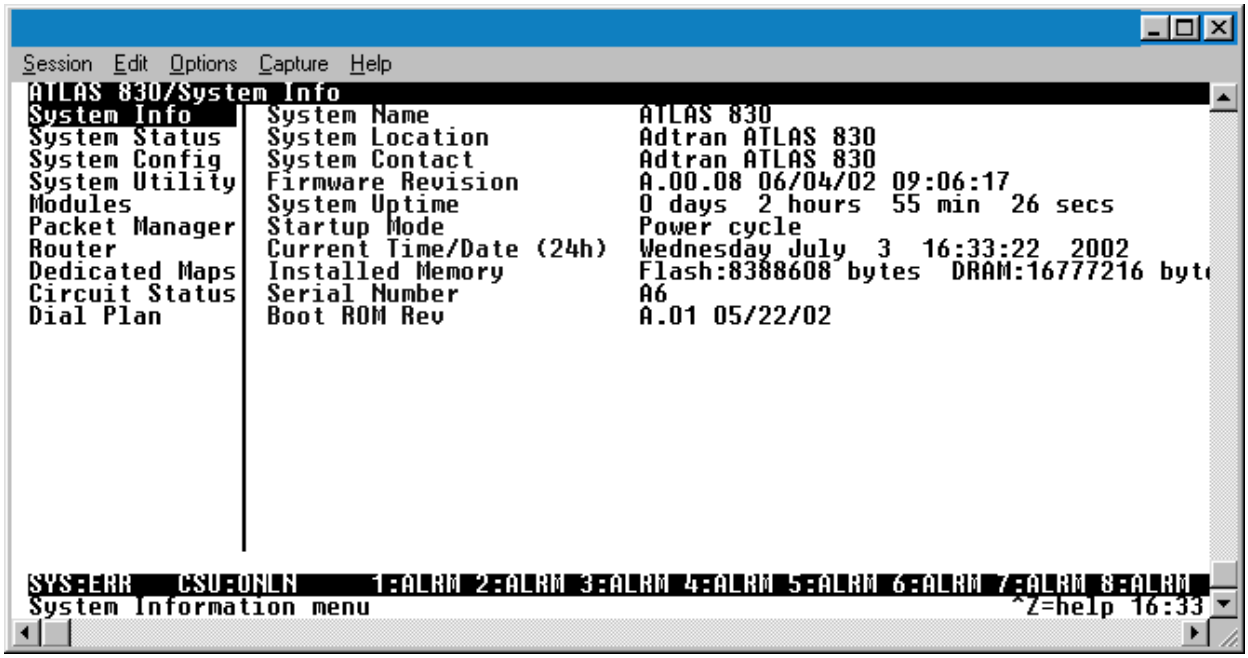
2. **At the LOGIN field, enter the password for the ATLAS 830.**

   The manufacturer's default password for the ATLAS 830 system is "**password**" in lowercase letters.

   The ATLAS 830 has five levels of access granted to a user. The lowest level of access (Level 5) is read-only, and allows a user to see, but not change, the current configuration of the system. The top level of access (Level 0) is read-write and allows the user to both see and change system configuration parameters.

   After initial login, the System Administrator is now able to define levels of access for various users. (See DLP-005, *Adding/Removing Users and Changing Password Security Levels* for more details.)

3. **Upon entering the correct password, the ATLAS 830 MAIN MENU is displayed as shown below.**



4. **You are now logged in to the ATLAS menu system.**

> NOTE
>
> *You can also connect to the unit via Telnet if the IP parameters have been provisioned as discussed in DLP-003.*

Follow-up Procedures

Once this procedure is complete, return to the procedure which referred you to this DLP and continue with the tasks indicated there.

SETTING IP PARAMETERS FOR THE ATLAS 830

Introduction

If the ATLAS 830 is connected to an IP network for Telnet, TFTP, or SNMP management, there are several IP parameters that must be set in order for the unit to communicate with the network. These parameters are described in this DLP along with the procedures for setting them.

Please see your Network Administrator for the proper assignment of the following parameters: IP address, Subnet Mask, and Default Gateway.

Prerequisite Procedures

This procedure assumes that the ATLAS 830 unit is connected to an IP network and is powered up.

Tools and Materials Required

- Data cable to connect to either a VT100 terminal or a PC configured as a VT100 terminal
- VT100 terminal or PC configured as a VT100 terminal

WARNING *To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.*

Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

DLP-003

Perform Steps Below in the Order Listed

1. **Connect the ATLAS 830 unit to your VT100 system (details found in DLP-001).**
2. **Login to the system with maximum rights (details for logging in are in DLP-002).**
3. **From the SYSTEM CONFIG menu, select the ETHERNET PORT option and press <Enter > .**

The next three steps will require confirmation after each change.

4. **From the SYSTEM CONFIG/ETHERNET menu, select the IP ADDRESS option and press <Enter > .**

   Enter the appropriate IP address.
5. **From the SYSTEM CONFIG/ETHERNET menu, select the SUBNET MASK option and press <Enter > .**

   Enter the appropriate Subnet Mask.
6. **From the SYSTEM CONFIG/ETHERNET menu, select the DEFAULT GATEWAY option and press <Enter > .**

   Enter the appropriate Default Gateway.
7. **Left arrow to highlight the ETHERNET submenu to save changes.**
8. **Escape out to the SYSTEM CONFIG menu and logoff by pressing <Ctrl + L > .**

Follow-up Procedures

Once this procedure is complete, return to the procedure which referred you to this DLP and continue with the tasks indicated there.

VERIFYING COMMUNICATIONS OVER AN IP LAN

Introduction

When an Ethernet Port is connected to a local area network (LAN), test steps must be performed on the ATLAS 830 to ensure that the unit is communicating properly over the network. This procedure outlines those steps.

Prerequisite Procedures

Before beginning this procedure, the unit should be physically connected to the LAN and the provisioning tasks detailed in DLP-003 should be complete.

Tools and Materials Required

- Access to a PC or other computer connected to the LAN

WARNING

To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.

Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

DLP-004

Perform Steps Below in the Order Listed

1. Ascertain the ATLAS 830 IP address.

If you do not already have the IP Address for the ATLAS 830, either obtain it from the Network Administrator or manually check for the address in the **SYSTEM CONFIG/ETHERNET PORT/IP ADDRESS** menu of the Network Management interface.

NOTE *You must login with maximum rights to modify the IP parameters on the ATLAS 830.*

2. Ping the ATLAS 830 unit from a remote computer on the network.

Using a remote computer system connected to the LAN, perform an ICMP Ping on the IP Address of the ATLAS 830. Verify that the unit responds properly.

If the ATLAS 830 fails to respond, try the following:

- Verify that the proper IP Address, Subnet Mask, and Default Gateway are provisioned in the unit (see DLP-003 for details).
- Verify that the ATLAS 830 is properly cabled into the LAN and that the ethernet cable is properly seated in the RJ-45 jack on the rear of the unit.
- If the ATLAS 830 is connected to a hub or other network device that provides a carrier sense light for each port, verify that the carrier sense light for the port to which the ATLAS 830 is connected is lit. If this light is not lit, check the cabling between the hub and the shelf.
- Verify the IP Address, Subnet Mask, and Default Gateway on the remote computer system.

If none of these steps are successful, contact the LAN Administrator for assistance.

NOTE *Refer to the documentation of the computer system if you are unsure how to perform a Ping command. Most computers running a networked version of Microsoft Windows™ or UNIX allow a Ping to be performed by simply typing "ping <IP Address > " at a command line prompt. Typically, the Ping program will respond by indicating that the remote IP Address has responded in a certain amount of time or that no response was received.*

NOTE *Some versions of Ping will continue running until you explicitly tell them to stop. If the program does not terminate on its own, type* **<Ctrl+C >** *to get the program to stop.*

3. Telnet to the ATLAS 830.

From the same computer used in the previous step, Telnet to the ATLAS 830 and verify that the Telnet session is properly opened (see DLP-002 for logging in to a system and establishing a Telnet session.) Once the Telnet session is established, press **<Ctrl+L >** to logout and close the session.

Refer to the documentation of the computer system if you are unsure how to perform a Telnet. Most computers running a networked version of Microsoft Windows™ or UNIX allow a Telnet to be performed by simply typing "Telnet <IP Address > " at a command line prompt. Telnet is a utility common on many local area networks that allows remote access to another computer or piece of equipment.

Follow-up Procedures

Once this procedure is complete, return to the procedure which referred you to this DLP and continue with the tasks indicated there.

ADDING/REMOVING USERS AND CHANGING PASSWORD SECURITY LEVELS

Introduction

All menu items in the ATLAS 830 are protected by passwords of varying security levels. By assigning different passwords to different security levels, the ATLAS 830 System Administrator can control which users can view or change various menu items. You can assign multiple passwords at the same access level. This way, different users with the same access privileges can have different passwords. This procedure details the steps which must be performed to add/remove user profiles and assign password security levels in the ATLAS 830.

Tools and Materials Required

- VT100 terminal or PC with VT100 terminal emulation software

WARNING *To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.*

Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

DLP-005

Perform Steps Below in the Order Listed

1. **Connect to the ATLAS 830 using either the 10/100 BASET, ADMIN, or CRAFT interfaces.**

   If you are not already connected to the unit's **ADMIN** or **CRAFT** interfaces (either with a VT100 compatible terminal or with a PC running VT100 emulation software), follow the procedure in DLP-001.

   Alternately, if the unit is part of a management cluster connected to the local network, you may use a PC connected to the network to Telnet into the unit. Use the procedures in DLP-003 and DLP-004 to connect to the **10/100 BASET** interface.

2. **Login to the unit.**

   Login to the unit using the read-write password (see DLP-002 for details).

3. **Go to the SYSTEM CONFIG menu and select the ACCESS PASSWORDS menu and press <Enter > .**

4. **To add a new user profile and password, select the first column (0) and press I (for insert).**

5. **Give the new user profile a name by selecting the LABEL field, pressing <Enter > , and typing the user defined name.**

6. **Personalize the password for the appropriate label by selecting the PASSWORD field, pressing <Enter > , then typing the desired password.**

   Passwords for the ATLAS 830 system are case sensitive. The default password for a new user profile is "**password**". The current password displays as a series of asterisks (********).

7. **Determine the password level for the corresponding label.**

   The ATLAS 830 contains six different password levels. The table below gives a brief description of each level.

Select level...	If you want the user to....
5	Have read-only permission for all menu items - **minimum rights**
4	Have read permission for all menu items and permission to use test commands
3	Have access to all commands except passwords, flash download, authentication methods, and interface configurations
2	Have access to all commands except passwords, flash download, and authentication methods
1	Have access to all commands except passwords
0	Have permission to edit every menu item, including creating and editing passwords -- **maximum rights**

8. **Assign the password level to the appropriate level by selecting the ACCESS RIGHTS field and choosing the level decided upon in step 7.**

Follow-up Procedures

Once this procedure is complete, return to the procedure which referred you to this DLP and continue with the tasks indicated there.

UPDATING THE FIRMWARE OF AN ATLAS 830 USING TFTP

Introduction

The ATLAS 830 supports firmware updates via the **10/100 BASET** Ethernet port using either TFTP from a network server or the **ADMIN** or **CRAFT** interfaces using XMODEM. This DLP provides the steps to follow for a successful firmware upgrade using the **10/100 BASET** ethernet port and a TFTP Server.

Tools and Materials Required

- A PC with a Telnet client software
- A TFTP Server accessible on the local network (A TFTP server is provided with the unit as part of the ADTRAN Utilities software.)

WARNING *To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.*

Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

DLP-006

Perform Steps Below in the Order Listed

1. **Connect to the ATLAS 830 using the 10/100 BASET interface.**

   If you are not already connected to the unit's **ETHERNET** port using Telnet client software, use the procedure in DLP-003 to connect to the unit.

2. **Login to the unit.**

   Login to the unit using the read-write password (see DLP-002 for details).

3. **Go to the SYSTEM UTILITY menu and select the UPDATE FIRMWARE menu; press <Enter > .**

4. **Select the MODULE SLOT menu and press <Enter > .**

   Select the appropriate module slot to update. Select **SLOT 0** to update the System Controller.

5. **Go to the TRANSFER METHOD menu and select TFTP.**

6. **Enter the IP address of the network TFTP server into the TFTP SERVER IP ADDRESS field.**

7. **Enter the full path name and filename of the update file into the TFTP SERVER FILENAME field.**

8. **From the RESTART SCHEDULE menu, select the time for the module to perform a restart after completing the update process.**

   RESTART IMMEDIATELY AFTER UPDATE restarts the system immediately after the update is complete. **RESTART AT SPECIFIED DATE AND TIME** allows you to select when the updated system will restart. If you select this option, a new field called **RESTART DATE AND TIME** displays below the current field. To use that option, enter the time in 24-hour format (such as 23:00:00 for 11:00 pm). Enter the date in mm-dd-yyyy format (for example, 09-30-2000).

9. **View CURRENT UPDATE STATUS to verify the progress of the current firmware update or any errors encountered during the download process.**

   Refer to the table in step 10 for a detailed description of messages found in this field.

10. **Select BEGIN FIRMWARE UPDATE to start the update process. Enter Y to confirm the transfer and to set up the module to receive the TFTP Upload.**

During the TFTP upload process, various status messages display in **CURRENT UPDATE STATUS** to indicate progress. The following table describes these messages.

Message	Meaning
Contacting Server	Indicates communication with the TFTP network server is trying to be established with the specified server address in the **TFTP SERVER IP ADDRESS** field.
Beginning TFTP Transfer	Indicates communication with the TFTP network server has been established and the update file is being transferred between the ATLAS 830 and the TFTP network server.
Completed	Indicates the ATLAS 830 successfully received the update file.
Error: File Not Found	Indicates the TFTP network server was unable to locate the specified file name or path in the **TFTP SERVER FILENAME** field.
Error: Access Violation	Indicates the TFTP network server denied the ATLAS 830 access to the given update filename and path. Please verify appropriate user rights are selected for the specified path.

11. When the update process has successfully completed, IDLE displays in the CURRENT UPDATE STATUS field and MODULE UPDATE COMPLETE displays in the PREVIOUS UPDATE STATUS field.

The ATLAS 830 will either restart immediately and resume operation, or will restart at the specified time and day of the week—depending on your selection.

Follow-up Procedures

Once this procedure is complete, return to the procedure which referred you to this DLP and continue with the tasks indicated there.

UPDATING THE FIRMWARE OF AN ATLAS 830 USING XMODEM

Introduction

The ATLAS 830 supports firmware updates via the **ETHERNET** port using either TFTP from a network server or the **ADMIN** or **CRAFT** interfaces using XMODEM. This procedure outlines the steps for a successful firmware upgrade using the **ADMIN** or **CRAFT** interfaces and XMODEM software.

Tools and Materials Required

- VT100 terminal or PC with VT100 terminal emulation software
- XMODEM software

WARNING *To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.*

Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

DLP-007

Perform Steps Below in the Order Listed

1. **Connect to the ATLAS 830 using the DB-9 ADMIN or CRAFT interface.**

   If you are not already connected to the shelf's **ADMIN** or **CRAFT** interface (either with a VT100 compatible terminal or with a PC running VT100 emulation software), follow the procedure in DLP-001. Connecting to the **ADMIN** or **CRAFT** interface limits the upgrade procedure to XMODEM Only.

2. **Login to the unit.**

   Login to the unit using the read-write password (see DLP-002 for details).

3. **Go to the SYSTEM UTILITY menu and select the UPDATE FIRMWARE menu; press <Enter > .**

4. **Select the MODULE SLOT menu and press <Enter > .**

   Select the appropriate module slot to update. Select **SLOT 0** to update the System Controller.

> NOTE *Selecting **ALL MODULES OF A TYPE** and **SYS CTRL** will force a controller reboot during the update process.*

5. **Go to the TRANSFER METHOD menu and select XMODEM.**

6. **From the RESTART SCHEDULE menu, select the time for the module to perform a restart after completing the update process.**

   RESTART IMMEDIATELY AFTER UPDATE restarts the system immediately after the update is complete. **RESTART AT SPECIFIED DATE AND TIME** allows you to select when the updated system will restart. If you select this option, a new field called **RESTART DATE AND TIME** displays below the current field. To use that option, enter the time in 24-hour format (such as 23:00:00 for 11:00 pm). Enter the date in mm-dd-yyyy format (for example, 09-30-2000).

7. **View CURRENT UPDATE STATUS to verify the progress of the current firmware update or any errors encountered during the download process.**

8. **Select BEGIN FIRMWARE UPDATE to start the update process. Enter Y to confirm the transfer and set up the module to receive the XMODEM Upload.**

   When the ATLAS 830 is ready to receive the XMODEM upload, the menu screen will clear and display **Awaiting XMODEM Upload....<Ctrl-X > to Cancel.** If this does not appear, please review the steps above for possible configuration errors.

9. **From the terminal emulation software, begin the XMODEM upload by using the appropriate command sequence. This may take several minutes.**

   If necessary, refer to the terminal emulation software documentation for help. Also, when specifying the filename, ensure that the file transferred is the one provided by ADTRAN. Otherwise, the update will not complete successfully.

Because XMODEM data is being transferred in-band through the menu interface, the VT100 menus of the ATLAS 830 will be inoperable from the **ADMIN** or **CRAFT** interfaces. You can cancel the update at any time within the terminal emulation software. (Please consult the documentation provided by the terminal emulation software to determine how to do this.)

10. **When the update process has successfully completed, IDLE displays in the CURRENT UPDATE STATUS field and MODULE UPDATE COMPLETE displays in the PREVIOUS UPDATE STATUS field.**

    The ATLAS 830 will either restart immediately and resume operation or restart at the specified time and day of the week, depending on your selection.

    Alternately, if the unit is part of a management cluster connected to the local network, you may use a PC connected to the network to Telnet into the unit. By utilizing the **ETHERNET** port, the ATLAS 830 may be quickly upgraded using TFTP, provided there is a TFTP server on the local network. The ATLAS 830 ships with ADTRAN Utilities software, which includes a TFTP server. See DLP-006, *Updating the Firmware of an ATLAS 830 using TFTP* for more details.

Follow-up Procedures

Once this procedure is complete, return to the procedure which referred you to this DLP and continue with the tasks indicated there.

SAVING THE CURRENT CONFIGURATION USING TFTP

Introduction

The ATLAS 830 supports configuration transfers from the unit (via the **10/100 BASET** Ethernet port) to a TFTP server located on the network. This DLP provides the steps to follow for a successful configuration transfer using the **10/100 BASET** Ethernet port and a TFTP Server.

Tools and Materials Required

- A PC with a Telnet client software
- A TFTP Server accessible on the local network (A TFTP server is provided with the unit as part of the ADTRAN Utilities software.)

WARNING *To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.*

Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

DLP-008

Perform Steps Below in the Order Listed

1. **Connect to the ATLAS 830 using the 10/100 BASET interface.**

   Telnet to the unit.

> NOTE *The procedures in* DLP-003 *must be completed prior to the Telnet login.*

2. **Login to the unit.**

   Login to the unit using the read-write password (see DLP-002 for details).

3. **Go to the SYSTEM UTILITY menu and select the CONFIGURATION TRANSFER menu; press <Enter > .**

4. **Set the TFTP SERVER IP ADDRESS to the IP address of the machine running the TFTP Server Program.**

> CAUTION *If you are using the ADTRAN TFTP server, the IP address displays in the* ***STATUS*** *field. For other TFTP servers, please refer to the appropriate documentation.*

5. **Change TFTP SERVER FILENAME to a unique filename. This will be the name of the configuration file saved to the remote server.**

   Some TFTP servers constrain the format of the filename depending on the operating system of the server. For example, a TFTP server running on a PC under Windows 3.1 may only permit 8.3 format filenames (8 characters, period and three extension characters).

6. **Select the SAVE CONFIG REMOTELY menu field and press <Enter > .**

   Enter **Y** to confirm the request.

7. View CURRENT TRANSFER STATUS to verify the progress of the current transfer.

8. **When the transfer process has successfully completed, IDLE displays in the CURRENT TRANSFER STATUS field and TFTP DOWNLOAD COMPLETE displays in the PREVIOUS TRANSFER STATUS field.**

> WARNING *TFTP is* ***not*** *secure. No passwords are required for client access. Anyone can access files through the IP port on the server machine if they know the target filename.*

Follow-up Procedures

Once this procedure is complete, return to the procedure which referred you to this DLP and continue with the tasks indicated there.

CONNECTING THE ATLAS 830 TO AN EXTERNAL MODEM

Introduction

The ATLAS 830 can be accessed and managed via modem, allowing the same capabilities to the user as if connected to the local **ADMIN** port. Access is provided by a female DB-9 connector, labeled **ADMIN**, located on the back of the unit.

Prerequisite Procedures

The ATLAS 830 should be mounted in its permanent location before connecting to an external modem.

Tools and Materials Required

- Modem
- Null Modem, Full Handshake Cable

WARNING *To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.*

Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

DLP-009

Perform Steps Below in the Order Listed

1. Mount the modem in its permanent position.
2. Connect power to the modem using manufacturer instructions.
3. Configure the modem as follows:

Speed	9600 bps
Data bits	8
Parity	none
Stop bits	1
Flow control	HARDWARE
Auto answer	ON
DTR	IDLE (when Off/normal on the modem with 830 in dial mode)

NOTE

The unit may be left in direct mode with **DTR** *set to* **IGNORE***, but automatic disconnect on logoff and authentication failure will be lost.*

4. Connect the male DB-9 connector of the data cable to the female DB-9 connector, labeled **ADMIN**, located on the back of the unit.
5. Route the data cable to the modem.
6. Connect the other end of the cable to the DB-9 end of the connector (DB-9 to male DB-25). Then, connect the DB-25 end of the connector to the modem, configured as described above.
7. Connect the modem to the POTS line as required by the manufacturer.
8. Login to the ATLAS 830 system. (Refer to DLP-002 for detailed instructions.)
9. From the **MAIN MENU**, select the **SYSTEM CONFIG** menu and press the right arrow key to enter the right-pane menus.
10. From the **SYSTEM CONFIG** menu, select the **ADMIN PORT** menu and press <Enter > . Once in the **ADMIN PORT** menus, press the right arrow key to enter the right-pane menus.

NOTE *The Admin port may be configured via Telnet or the Craft port.*

11. From the **CHAIN PORT** menus, select the **PORT TYPE** menu and select **DIAL**.

WARNING *If you are connected to the ATLAS 830 using the **ADMIN** interface, changing the **PORT TYPE** mode to **DIAL** will terminate your session. You MUST have Ethernet access to the ATLAS 830 to change the **PORT TYPE** back to **DIRECT** and restore your terminal session.*

NOTE *To complete the connection to the shelf, the ATLAS 830 must now be called from a PC that is configured to emulate a VT100 terminal, with communication software set as in step 3 and configured for dial mode.*

Follow-Up Procedures

Once this procedure is complete, return to the procedure which referred you to this DLP and continue with the tasks indicated there.

USING THE ADTRAN UTILITY SYSLOG WITH THE ATLAS 830

Introduction

The ATLAS 830 Event Log is used to log various message types at settable threshold levels. The Event Log is a useful tool for troubleshooting switchboard (or call connection) activities including the viewing of digits received, digits transferred, and ISDN Messages. The Event Log can maintain the most recent 350 lines of data in a first in/first out buffer. To ensure that important data is not lost, saving the Event Log messages to an external Syslog server is advised. The ATLAS 830 ships with an ADTRAN provided Syslog server

Prerequisite Procedures

This procedure assumes that the ATLAS 830 unit is connected to an IP network and is powered up.

Tools and Materials Required

- Syslog Server (provided on ATLAS 830 System CD in ADTRAN Utilities)

WARNING *To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.*

Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

DLP-010

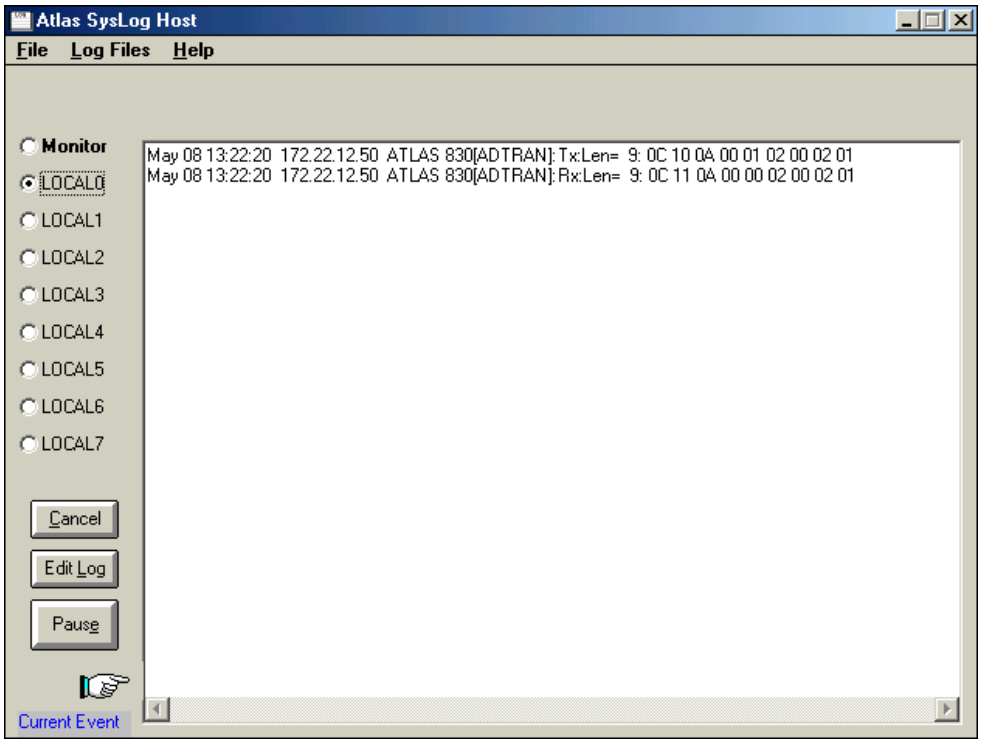
Setting Up the ATLAS 830 to use the Syslog

1. **Login to the system with maximum rights (details for login in are in DLP-002). Once you have logged in to the** ATLAS 830**, go to SYSTEM CONFIG/SYSLOG SETUP. The options should be set as follows:**

   •**TRANSMISSION**: **Enabled**
   •**HOST IP ADDRESS**: Enter the IP address of the PC where the Syslog host resides
   •**HOST FACILITY**: Specifies the facility destination of log events;
   Options are **LOCAL0** to **LOCAL7**

Setting Up the Syslog Host

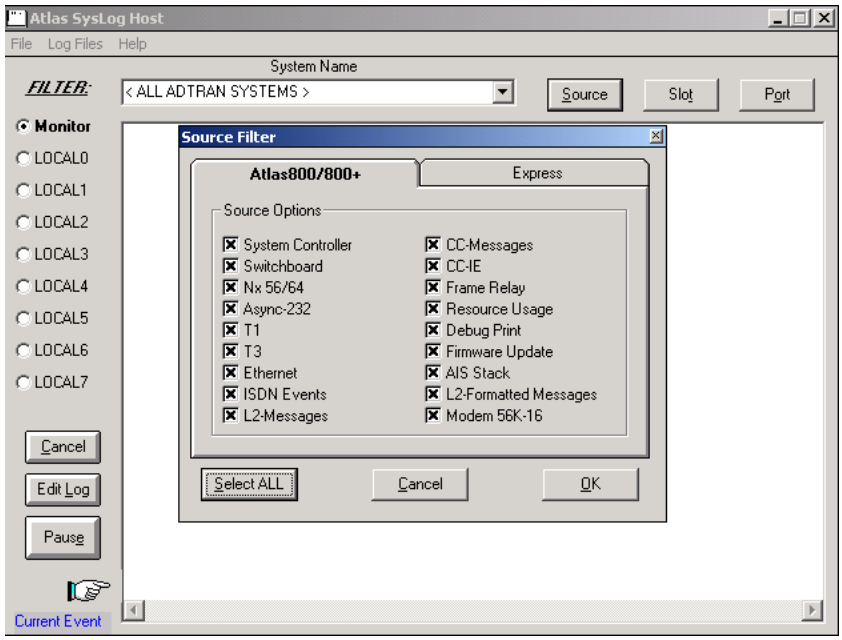
On your PC, go to **START/PROGRAMS/ADTRAN UTILITIES/SYSLOG**. When the Syslog window opens, you will see **LOCAL0** through **LOCAL7** listed on the left. This should correspond with the **HOST FACILITY** specified in the ATLAS 830. The Syslog program must be open on your PC in order for it to record ATLAS 830 information. The Syslog files can be viewed through the Syslog window. They are also available under the ADTRAN Utilities folder, **LOCALX.TXT**, where X can equal 0 through 7. You can also view the **LOCALX.TXT** file by clicking on **EDIT LOG**.



Any event logged in the ATLAS 830 Event Log (**SYSTEM STATUS/EVENT LOG**) should also appear in the Syslog.

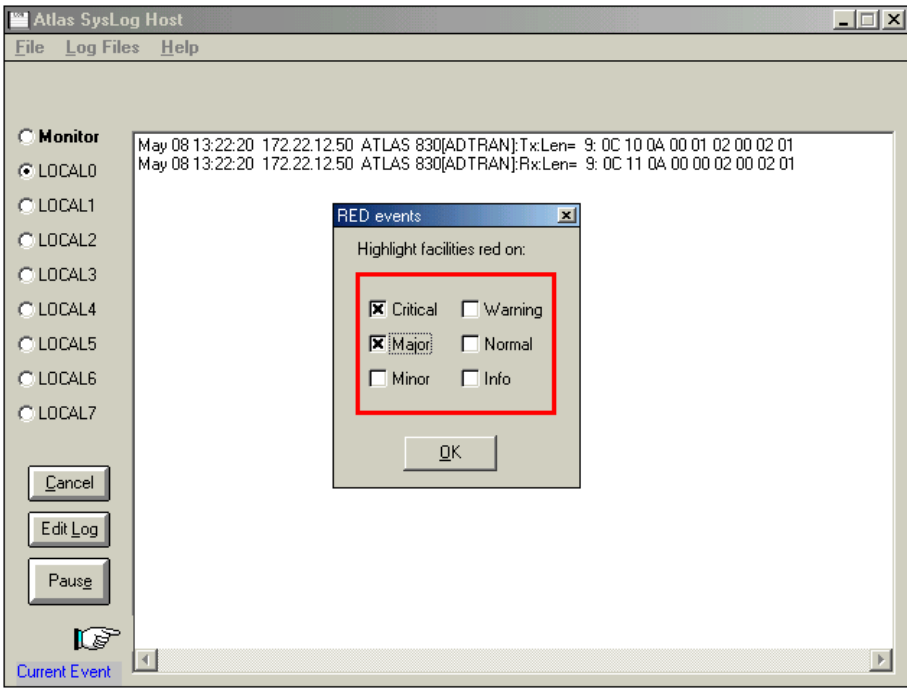
Additional Syslog Features

- The **MONITOR** feature allows all Syslog messages to be pre-filtered by **SYSTEM NAME**, **SOURCE**, **SLOT**, and **PORT** before displaying these messages to the user and logging the message to the predesignated monitor log file. Various filter options may be defined by selecting **SOURCE**. The figure below shows the **SOURCE FILTER** window. When the **MONITOR** button is selected, the file will be logged to **LOCAL8.TXT**. To look at the text file, click on the **EDIT LOG** button on the left side of the Syslog screen.

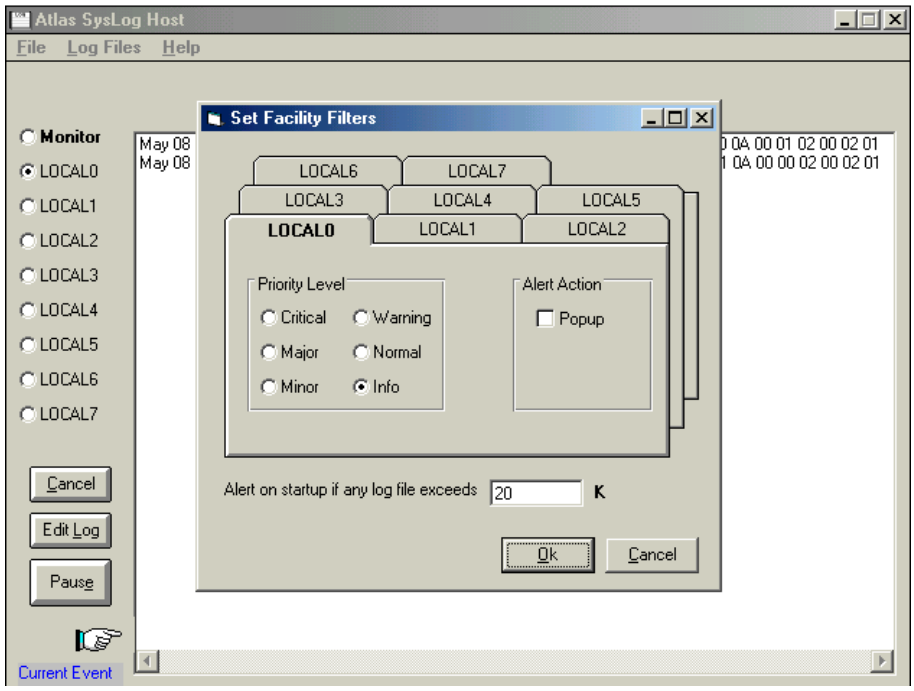


Only source options selected with an 'X' will be displayed in the Syslog file. In this example, all options will be displayed.

- Under the **LOG FILES** menu option, the user may erase log files, define Red events, set priorities and clear Red events. The **ERASE LOG FILES** option will erase the specified txt log file. **DEFINE RED EVENTS** allows the user to predefine a message priority condition so that if the condition occurs, the file is highlighted in red. In the figure below, any **CRITICAL** or **MAJOR** conditions will cause any **LOCAL0** through **LOCAL7** facility to become highlighted in red if it receives a critical or major alarm.



- The **PROPERTIES** menu allows the user to specify what types of messages will be logged to an ASCII text file. Mark the lowest priority Event Log message you want to log to the Syslog server text file. For example, the figure below shows that all messages will be logged to the text file.



- The **HELP** menu also explains these features. Click on **HELP/CONTENTS/SYSLOG HOST DAEMON** for further explanation of Syslog features.

CONNECTING THE ALARM CONTACTS

Introduction

This DLP explains how to connect the alarm contacts on the ATLAS 830.

Prerequisite Procedures

Before making alarm connections, the unit should be mounted in its permanent location.

Tools and Materials Required

- Wire strippers
- Small, straight slot screwdriver
- 22 or 24 AWG 2-conductor twisted pair cross connect wire

WARNING *To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.*

Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

DLP-011

Connect Alarm Relay Contacts

1. **For the alarm relay contacts labeled ALARM on the rear of the ATLAS 830 as shown in Figure 1, determine whether the external alarm reporting device uses normally open (NO) or normally closed (NC) relay contacts to sense an alarm condition.**
2. **Using standard Telco cross connect wire or equivalent, determine and cut the length required to reach from the alarm header to the alarm-reporting device(s).**
3. **Using wire strippers, strip ¼-inch from both ends of each wire.**
4. **Remove the alarm relay (4 pin) terminal block.**
5. **Using the small, straight slot screwdriver, loosen the screws in the terminal block.**
6. **Insert one strand into the COM connection from the ATLAS 830 and tighten the screw.**
7. **Insert another strand into either the NC or NO connections and tighten the screw. A chassis ground connection is also provided. Replace the terminal block.**

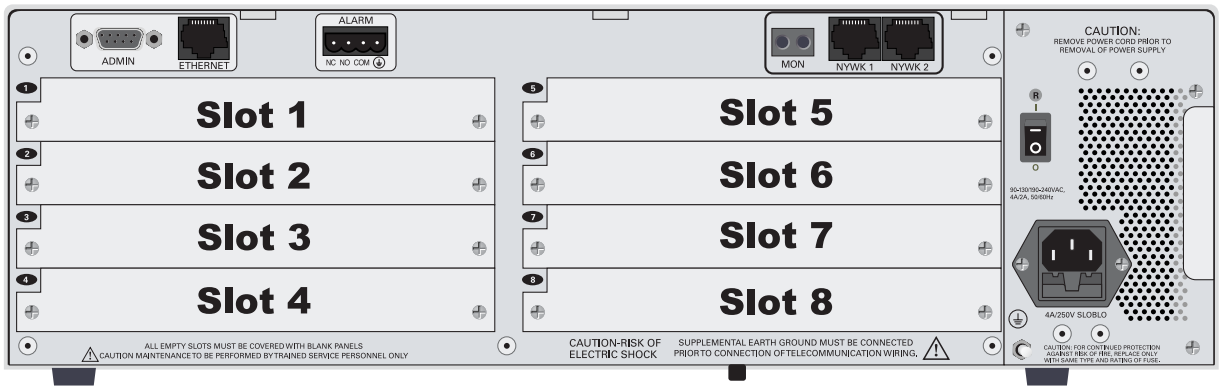


Figure 1. ATLAS 830 Rear View

Table 1. Alarm Relay Connector Pinout

Pin	Name	Description
1	Normally Closed (NC)	Opens when a selected alarm condition is present.
2	Normally Open (NO)	Closes when a selected alarm condition is present.
3	Common (COM)	Common connection between external circuitry and NC or NO terminal.
4	Chassis Ground (GND)	

Follow-up Procedures

Once this procedure is complete, return to the procedure which referred you to this DLP and continue with the tasks indicated there.

USING THE ALARM CONNECTIONS AND ACO BUTTON

Introduction

The alarm connections alert the user when a selected alarm condition exists. The alarm may be cleared by pressing the Alarm Cut-Off (ACO) switch located on the front panel of the ATLAS 830. This procedure details the steps which must be performed to use the ATLAS 830 alarm connections and ACO switch.

This procedure should be performed at installation on each ATLAS 830 shelf that is wired out to external office alarm equipment.

Prerequisite Procedures

Before beginning this procedure, the ATLAS 830 should be mounted in its permanent location and the alarm contacts should be connected (see DLP-011).

Tools and Materials Required

- VT100 terminal or PC with VT100 terminal emulation software

WARNING *To prevent electrical shock, do not install equipment in a wet location or during a lightning storm.*

Electronic modules can be damaged by static electrical discharge. Before handling modules, wear an antistatic discharge wrist strap to prevent damage to electronic components. Place modules in antistatic packing material when transporting or storing. When working on modules, always place them on an approved antistatic mat that is electrically grounded.

DLP-012

Perform Steps Below in the Order Listed

To Begin

1. **Connect to the ATLAS 830 using either the 10/100 BASET, ADMIN, or CRAFT interfaces.**

   If you are not already connected to the unit's **ADMIN** or **CRAFT** interfaces (either with a VT100 compatible terminal or with a PC running VT100 emulation software), use the procedure in DLP-001 to connect to the **ADMIN** or **CRAFT** interface.

   Alternately, if the unit is part of a management cluster connected to the local network, you may use a PC connected to the network to Telnet into the unit. Use the procedures in DLP-003 and DLP-004 to connect to the **10/100 BASET** interface.

2. **Login to the unit.**

   Login to the unit using the read-write password (see DLP-002 for details).

Configure the Alarm Relay

1. **Go to the SYSTEM CONFIG menu and press the right arrow key to access the right-pane menus. Select the ALARM RELAY THRESHOLD menu and choose the appropriate threshold level.**

   The **ALARM RELAY** will set for this threshold and all other alarms of greater importance. Refer to the section called *System Event Logging* in this system manual for a listing of all alarms and levels of importance.

> NOTE *Setting the threshold to **NORMAL** will not set the **ALARM RELAY** for **NORMAL** events. No **NORMAL** events set the **ALARM RELAY**.*

Clearing the Alarm Relay Remotely

1. **Go to the SYSTEM CONFIG menu and press the right arrow key to access the right-pane menus. Then, select the ALARM RELAY RESET field and press <Enter > .**

> NOTE *The **ALARM RELAY** may be cleared locally by pressing the ACO switch.*

Follow-up Procedures

Once this procedure is complete, return to the procedure which referred you to this DLP and continue with the tasks indicated there.

SYSTEM EVENT LOGGING

The ATLAS 830 Event Log is used to log various message types at settable threshold levels. This section describes the entries that may be logged by the system Event Log.The Event Log **CATEGORY** threshold is particularly important – this is the minimum severity level that an event must have associated with it in order that the event be logged.

*Use caution when changing **CATEGORY** values from their default levels. If too many sources have their **CATEGORY** values set too low, the number of messages being logged in a given period can be very large. If too many messages are being logged too rapidly, system performance can be adversely affected.*

The Event Log is a useful tool for troubleshooting switchboard (or call connection) activities including the viewing of digits received, digits transferred, and ISDN Messages. Since most of the events discussed in the following tables are used primarily during troubleshooting, they should be turned off in normal operation.

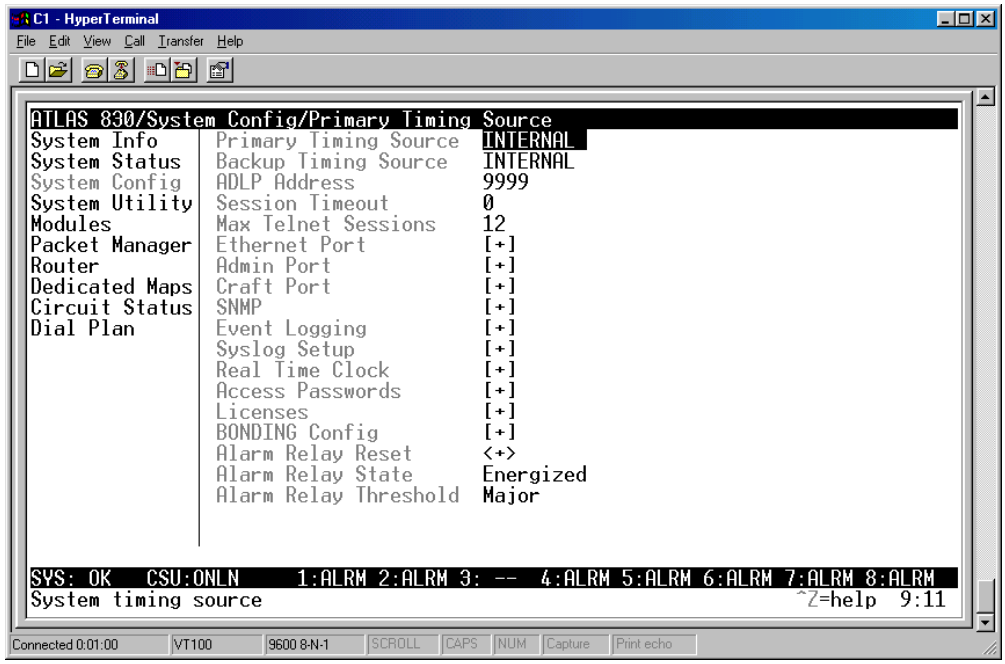
CONTENTS

TABLES

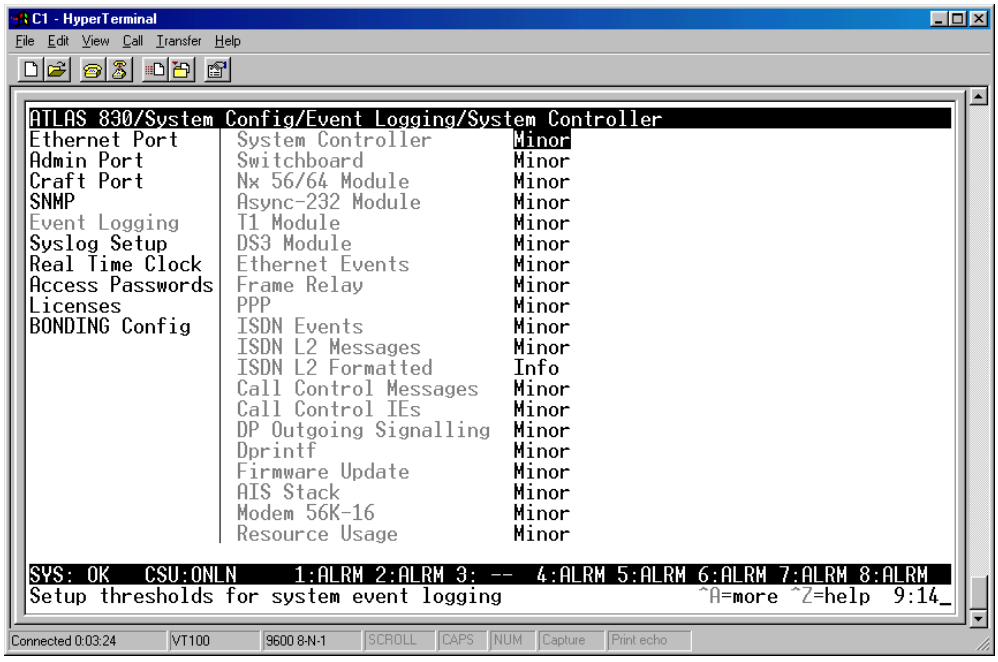
1. SETTING THE EVENT LOG CATEGORY

The following steps outline the procedure for setting up the event **CATEGORY** thresholds for the Event Log.

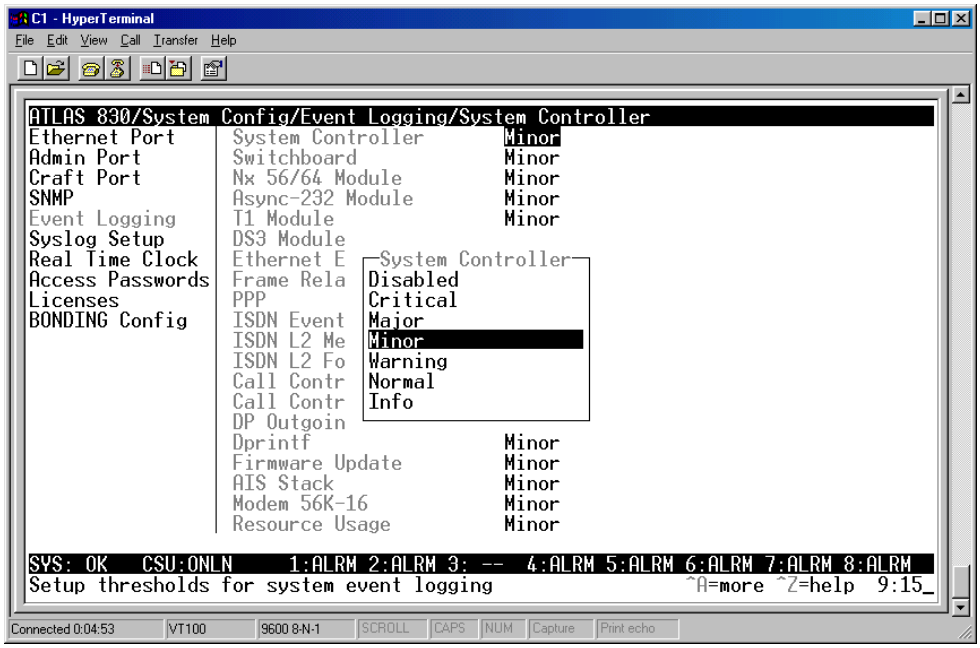
1. From the **MAIN MENU**, go to the **SYSTEM CONFIG** menu and press the right arrow key to enter the right-pane menus.



2. Select the **EVENT LOGGING** field and press <Enter > . Once in the **EVENT LOGGING** menus, press the right arrow key to access the right-pane menus.



3. Refer to the tables in this section to determine the desired **CATEGORY** thresholds.
4. To change the **CATEGORY**, select the appropriate field and press <Enter > . This will provide a list of available options. Highlight the desired threshold and press <Enter > to select it.



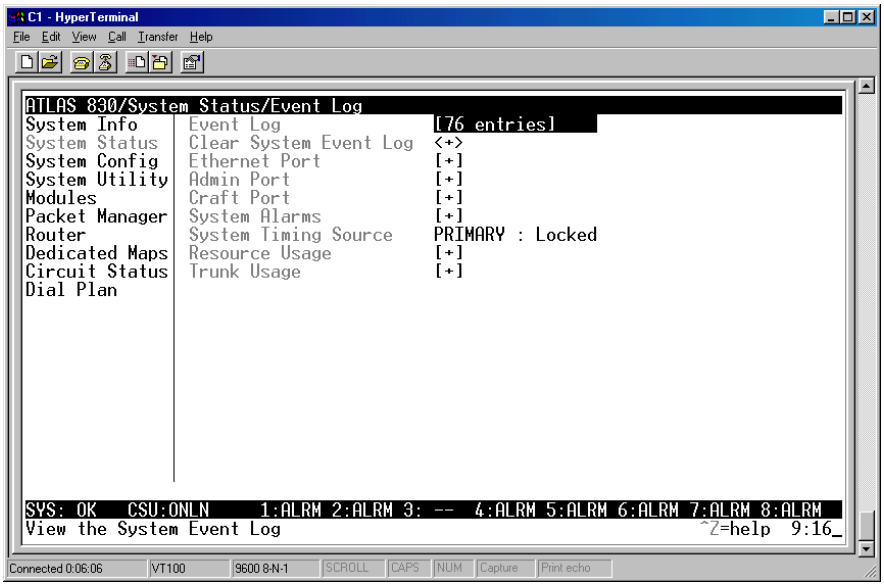
CAUTION

*Use caution when changing **CATEGORY** values from their default levels. If too many sources have their **CATEGORY** values set too low, the number of messages being logged in a given period can be very large. If too many messages are being logged too rapidly, system performance can be adversely affected.*

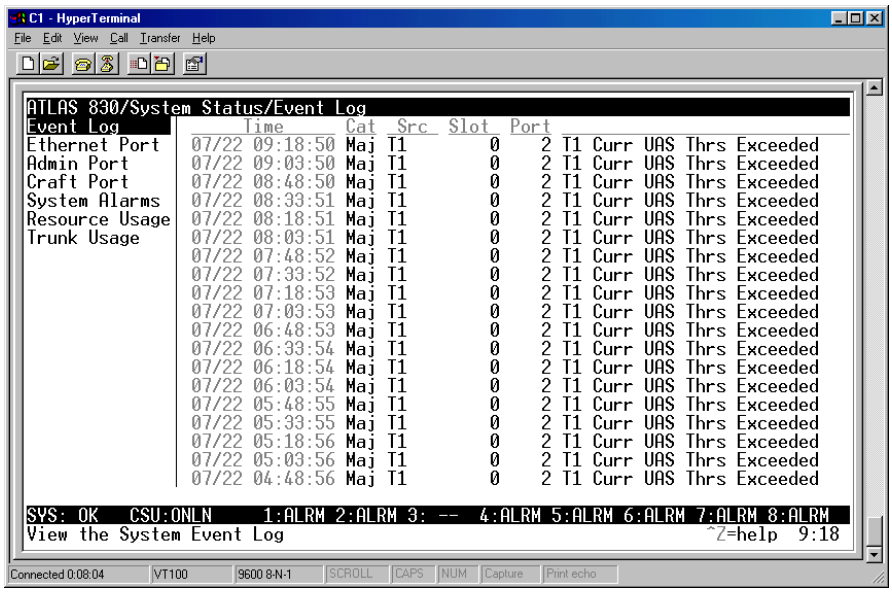
2. VIEWING THE EVENTS

The following steps outline the procedure for viewing **EVENT LOG** messages.

1. From the **MAIN MENU**, go to the **SYSTEM STATUS** menu and press the right arrow key to enter the right-pane menus.



2. Select the **EVENT LOG** field and press <Enter > . Once in the **EVENT LOG**, press the right arrow key to access the actual messages.



NOTE *The **EVENT LOG** messages are stored in a first-in/first-out table. Therefore, the most recent log entry is found at the top of the log.*

NOTE ***EVENT LOG** messages may be sent to an external Syslog server for storage. Refer to DLP-010, "Using the ADTRAN Utility Syslog with the ATLAS 830," for more details.*

3. SYSTEM EVENTS

Table 1 through Table 8 provides a listing of ATLAS system events. This includes tables of events for each category, according to the order they appear in the **EVENT LOG** setup screen.

Table 1. System Controller Events

Console Log String	Category	Event
AC Power Supply has Recovered	CRITICAL	AC power supply is functioning normal again
AC Power Supply has Failed	CRITICAL	AC power supply is not operating properly
AC Power Supply has Exceeded Temperature Limit	CRITICAL	Internal system temperature has exceeded safe operating limit
AC Power Supply is Under Temperature Limit	CRITICAL	Internal temperature has cooled to safe operating limit
DC Power Supply has Recovered	CRITICAL	DC power supply is functioning normally again
DC Power Supply has Failed	CRITICAL	DC power supply is not operating properly
DC Power Supply has Exceeded Temperature Limit	CRITICAL	Internal system temperature has exceeded safe operating limit
DC Power Supply is Under Temperature Limit	CRITICAL	Internal temperature has cooled to safe operating limit
Firmware invalid	CRITICAL	Corrupted firmware
Firmware update failed	CRITICAL	Flash download failed
System Configuration Uploaded	CRITICAL	ATLAS configuration file loaded into the system and activated
Module Not Responding	WARNING	Module removed or not responding
ACO Switch pressed	MINOR	ACO switch pressed
Login Failure	MINOR	Console login failure[1]
Timing source changed to Internal	MINOR	Neither the primary nor the backup are valid

Table 1. System Controller Events (Continued)

Console Log String	Category	Event
Timing source changed to Backup	MINOR	The primary source is invalid; backup source valid and selected.
Timing source changed to Primary	MINOR	The timing source changed to primary
Not responding to programming	MINOR	Unable to program module
Cold	NORMAL	System cold start[2]
Firmware update completed	INFO	Flash download successful
Module Found	INFO	Module found
SNMP Authentication Failure	INFO	SNMP authentication failure[3]

1 Three consecutive logins were attempted and failed.

2 Generated five seconds after the completion of system initialization.

3 Generated if the ATLAS receives an SNMP request from an SNMP manager defined in the ATLAS SNMP communities list but with a community name that does not match the community name defined in the SNMP communities list.

Table 2. Switchboard Events

Console Log String	Category	Event
<number > rejected: No such number	WARNING	Call rejected[1]
<number > rejected: Outgoing reject list	NORMAL	Call rejected[2]
<number > rejected: Busy	NORMAL	Call rejected[3]
<number > accepted: <slot > <port >	NORMAL	Call successfully routed

1 No such number in dial plan.

2 Number is on outgoing reject list.

3 All endpoints busy.

Table 3. Nx 56/64 Events

Console Log String	Category	Event
Nx 56/64 511 Test Pattern Active	WARNING	511 Test Pattern Activated
Nx 56/64 511 Test Pattern Cleared	WARNING	511 Test Pattern Deactivated
Nx 56/64 Bilateral Loopback Active	WARNING	Bilateral Loopback Activated
Nx 56/64 Bilateral Loopback Cleared	WARNING	Bilateral Loopback Deactivated

Table 3. Nx 56/64 Events (Continued)

Console Log String	Category	Event
Nx 56/64 Excessive Zeros Alarm	WARNING	Excessive Zeros from DTE
Nx 56/64 Excessive Zeros Alarm Cleared	WARNING	Excessive Zeros condition cleared
Nx 56/64 Clock Slip Alarm Active	MAJOR	Clock Slip Alarm Active
Nx 56/64 Clock Slip Alarm Cleared	MAJOR	Clock Slip Alarm Cleared
Nx 56/64 External Clock Alarm Active	MAJOR	External Clock Alarm
Nx 56/64 External Clock Alarm Cleared	MAJOR	External Clock Alarm Cleared
Nx 56/64 PLL Alarm Active	MAJOR	PLL Alarm Active
Nx 56/64 PLL Alarm Cleared	MAJOR	PLL Alarm Cleared
Nx 56/64 CTS Asserted	INFO	CTS Asserted
Nx 56/64 CTS Dropped	INFO	CTS Dropped
Nx 56/64 DCD Asserted	INFO	DCD Asserted
Nx 56/64 DCD Dropped	INFO	DCD Dropped
Nx 56/64 DTR Asserted	INFO	DTR Asserted
Nx 56/64 DTR Dropped	INFO	DTR Dropped
Nx 56/64 RTS Asserted	INFO	RTS Asserted
Nx 56/64 RTS Dropped	INFO	RTS Dropped

Table 4. T1 Events

Console Log String	Category	Event
T1 Curr CSS Thrs Exceeded	WARNING	Current T1 Controlled Slip Seconds Threshold Exceeded
T1 Curr ES Thrs Exceeded	WARNING	Current T1 Errored Seconds Threshold Exceeded
T1 Curr LCV Thrs Exceeded	WARNING	Current T1 Line Code Violations Threshold Exceeded
T1 Curr LES Thrs Exceeded	WARNING	Current T1 Line Errored Seconds Threshold Exceeded
T1 Curr PCV Thrs Exceeded	WARNING	Current T1 Path Code Violations Threshold Exceeded
T1 Curr SEFS Thrs Exceeded	WARNING	Current T1 Severely Errored Framing Seconds Threshold Exceeded
T1 Curr SES Thrs Exceeded	WARNING	Current T1 Severely Errored Seconds Threshold Exceeded

Table 4. T1 Events (Continued)

Console Log String	Category	Event
T1 Curr UAS Thrs Exceeded	WARNING	Current T1 Unavailable Seconds Threshold Exceeded
T1 Line Loopback Active	WARNING	Line Loopback Active
T1 Loopback Cleared	WARNING	Loopback Cleared
T1 Payload Loopback Active	WARNING	Payload Loopback Active
T1 Total CSS Thrs Exceeded	WARNING	Total T1 Controlled Slip Seconds Threshold Exceeded
T1 Total ES Thrs Exceeded	WARNING	Total T1 Errored Seconds Threshold Exceeded
T1 Total LCV Thrs Exceeded	WARNING	Total T1 Line Code Violations Threshold Exceeded
T1 Total LES Thrs Exceeded	WARNING	Total T1 Line Errored Seconds Threshold Exceeded
T1 Total PCV Thrs Exceeded	WARNING	Total T1 Path Code Violations Threshold Exceeded
T1 Total SEFS Thrs Exceeded	WARNING	Total T1 Severely Errored Framing Seconds Threshold Exceeded
T1 Total SES Thrs Exceeded	WARNING	Total T1 Severely Errored Seconds Threshold Exceeded
T1 Total UAS Thrs Exceeded	WARNING	Total T1 Unavailable Seconds Threshold Exceeded
T1 Blue Alarm Cleared	MAJOR	Blue Alarm Cleared
T1 Blue Alarm Active	MAJOR	Blue Alarm Set
T1 D Channel Alarm Cleared	MAJOR	D Channel Alarm Cleared
T1 D Channel Alarm Active	MAJOR	D Channel Alarm Set
T1 LOS Cleared	MAJOR	LOS Alarm Cleared
T1 LOS Active	MAJOR	LOS Alarm Set
T1 Red Alarm Cleared	MAJOR	Red Alarm Cleared
T1 Red Alarm Active	MAJOR	Red Alarm Set
T1 Tx Blue Alarm Cleared	MAJOR	Tx Blue Alarm Cleared
T1 Tx Blue Alarm Active	MAJOR	Tx Blue Alarm Set
T1 Tx Yellow Alarm Cleared	MAJOR	Tx Yellow Alarm Cleared
T1 Tx Yellow Alarm Active	MAJOR	Tx Yellow Alarm Set
T1 Yellow Alarm Cleared	MAJOR	Yellow Alarm Cleared
T1 Yellow Alarm Active	MAJOR	Yellow Alarm Set

Table 5. Ethernet Events

Console Log String	Category	Event
Out of memory	CRITICAL	Not enough memory for Ethernet driver

Table 6. ISDN Events

Console Log String	Category	Event
BRI configuration failed: No ISDN resources are available	CRITICAL	No BRI resources available
PRI configuration failed: No ISDN resources are available	CRITICAL	No PRI resources available
No SPID matches the call profile: <called number > <call type >	WARNING	No Matching SPID found
No SPID with free B channels matches call type: <call type >	WARNING	No Matching SPID found
LT: Tried to call unregistered SPID <spid >	WARNING	SPID Unregistration attempted
D channel is DOWN	MAJOR	D Channel Down
<message > : Incorrectly formatted cause IE	MAJOR	Incorrectly formatted IE
BRI NT: Spid <spid > was rejected	MAJOR	SPID Failed
BRI NT: SPID Negotiations failed - resetting the link	MAJOR	SPID Negotiation failed
BRI LT: SPID <spid > received - NOT IN LIST	MAJOR	Unknown SPID received
BRI NT: SPID Negotiations failed - Retrying	MINOR	SPID Retry in progress
Configured BRI as LT	NORMAL	BRI LT configuration successful
Configured BRI as NT	NORMAL	BRI NT configuration successful
Rejected an incoming call for an unregistered SPID	NORMAL	Call Rejected
D channel is UP	NORMAL	D Channel Up
Released: No longer an ISDN line	NORMAL	ISDN line released
No outgoing B channel available for call to <number >	NORMAL	No B channels for call
Configured PRI as central office emulator	NORMAL	PRI CO configuration successful
Configured PRI as CPE	NORMAL	PRI CPE configuration successful
BRI NT: Spid <spid > registered	NORMAL	SPID registered
BRI LT: All SPIDs registered	NORMAL	SPID Registration complete

Table 6. ISDN Events (Continued)

Console Log String	Category	Event
BRI NT: All SPIDs registered	NORMAL	SPID Registration complete
BRI LT: Registering SPID <spid >	NORMAL	SPID Registration in progress
BRI NT Registering SPID <spid >	NORMAL	SPID Registration in progress
Call to <called number > declared busy after leaving ATLAS	INFO	Call busy
Call to <called number > refused: Busy	INFO	Call busy
Call to <called number > cleared from ATLAS end	INFO	Call cleared
Call to <called number > connected	INFO	Call connected
Call to <called number > disconnected by far end	INFO	Call disconnected
Call not accepted to <called number > : No channel available	INFO	Call not accepted
Call to ATLAS: <called number > received	INFO	Call received
Call to <called number > ringing	INFO	Call ringing
Dialing <called number >	INFO	Dialing number
Incoming call to <called number > accepted	INFO	Incoming call accepted
Incoming call to <called number > refused	INFO	Incoming call refused

Table 7. Circuit Backup Events

Console Log String	Category	Event
Circuit Backup Attempt Failed	MAJOR	Outgoing backup call was unsuccessful
Circuit Backup Test Call Failed	MAJOR	Outgoing backup test call was unsuccessful
Attempting Circuit Backup	MINOR	Circuit Backup call attempted to restore data circuit
Circuit Backup Active	MINOR	Port is currently in backup
Circuit Backup Deactivated, Primary Restored	MINOR	Port was in backup, but primary data function was restored
Circuit Backup Data Alarm Active	MINOR	Inband keep alive messages were disrupted or corrupted
Circuit Backup Data Alarm Cleared	MINOR	Inband keep alive messages are functioning properly
Circuit Backup Test Call Originated	INFO	Circuit Backup test call was attempted by the unit

Table 7. Circuit Backup Events (Continued)

Console Log String	Category	Event
Circuit Backup Test Call Connected	INFO	Circuit Backup test call was successfully connected to backup site
Circuit Backup Test Call Passed	INFO	Circuit Backup test call was successfully maintained for test period

Table 8. DP Outgoing Signaling Events

Console Log String	Category	Event
TX Set Rx ABCD < > Tx ABCD < > [1]	INFO	ATLAS changed signal bits on port
RX Change Rx ABCD < > Tx ABCD < >	INFO	Equipment connected to port changed signal bits

1 The ATLAS 830 uses only AB signaling bits. The CD signaling bits are a copy of the AB values. These values are shown in hexadecimal notation. For example, if AB signal bits are 01, then the total signal bits would be 01 01. Putting that in hexadecimal notation results in an event of Tx set Rx ABCD 0x 05.

4. ISDN CAUSE CODES

In addition to the above events, certain recognized ISDN cause codes are sent to the Event Log from the ISDN message facility during **ISDN EVENTS**, **L2 MESSAGES**, and **L2 FORMATTED** event categories. Table 9 lists the codes applicable to the ATLAS 830 and the minimum category required for logging the cause code event.

Table 9. ISDN Cause Code Events

Cause Code Event	Category	Code
ACCESS_INFO_DISCARDED	WARNING	43
BAD_INFO_ELEM	MAJOR	99
BEAR_CAP_NOT_AVAIL	MINOR	58
CALL_REJECTED	INFO	21
CAP_NOT_IMPLEMENTED	MINOR	65
CHAN_NOT_IMPLEMENTED	MINOR	66
CHANNEL_UNACCEPTABLE	INFO	6
DEST_OUT_OF_ORDER	INFO	27
FACILITY_NOT_IMPLEMENTED	MAJOR	69
FACILITY_NOT_SUBSCRIBED	MINOR	50
FACILITY_REJECTED	INFO	29
INCOMING_CALL_BARRED	MINOR	54

Table 9. ISDN Cause Code Events (Continued)

Cause Code Event	Category	Code
INCOMPATIBLE_DEST	MAJOR	88
INTERWORKING_UNSPEC	WARNING	127
INVALID_CALL_REF	MAJOR	81
INVALID_ELEM_CONTENTS	MAJOR	100
INVALID_MSG_UNSPEC	MAJOR	95
INVALID_NUMBER_FORMAT	INFO	28
MANDATORY_IE_LEN_ERR	MAJOR	103
MANDATORY_IE_MISSING	MAJOR	96
NETWORK_CONGESTION	WARNING	42
NETWORK_OUT_OF_ORDER	WARNING	38
NO_CIRCUIT_AVAILABLE	WARNING	34
NO_ROUTE	INFO	2
NO_USER_RESPONDING	INFO	18
NONEXISTENT_MSG	MAJOR	97
NORMAL_CLEARING	INFO	16
NUMBER_CHANGED	INFO	22
OUTGOING_CALL_BARRED	MINOR	52
PRE_EMPTED	WARNING	45
PROTOCOL_ERROR	MAJOR	111
REQ_CHANNEL_NOT_AVAIL	WARNING	44
RESP_TO_STAT_ENQ	INFO	30
SERVICE_NOT_AVAIL	MINOR	63
TEMPORARY_FAILURE	WARNING	41
TIMER_EXPIRY	MAJOR	102
UNASSIGNED_NUMBER	INFO	1
UNSPECIFIED_CAUSE	INFO	31
USER_BUSY	INFO	17
WRONG_MESSAGE	INFO	98
WRONG_MSG_FOR_STATE	MAJOR	101

5. CAUSE CODE LOG ENTRIES

Cause Code IEs that are non-Q.931 (i.e., the Coding Standard field is not 0) are logged with the following format:

<message > : <coding standard > code <cause code >

The coding standard field is one of the following: Reserved, National, or Local. Each Cause Code IE log entry ends with a location designation. Table 10 shows these designations. Table 11 through Table 13 provides a listing of system events.

Table 10. Cause Code Log Entry Location Designations

Code	Location
IN0TL	International network
INWK	Network beyond internetworking point
LN	Public network serving the local user
LPN	Private network serving the local user
RLN	Public network serving the remote user
RPN	Private network serving the remote user
TN	Transit network
U	User

Table 11. ISDN L2 Messages

Console Log String	Category	Event
<message contents >	INFO	ISDN Layer 2 (LAPD) Message[1]

1 Provides a hex dump of the entire LAPD frame.

Table 12. ISDN Call Control Messages

Console Log String	Category	Event
Host > > CC <tag > <call ID > <message >	INFO	ISDN Call Control Messages
CC > > Host <tag > <call ID > <message >	INFO	ISDN Call Control Messages

Table 13. Source: ISDN Information Elements

Console Log String	Category	Event
<message contents >	INFO	ISDN Information Element[1]

1 Provides a hex dump of the ISDN IE sent with a call control message.

ADTRAN UTILITIES

ADTRAN delivers several PC software utilities along with the ATLAS 830. These utilities are located on the CD-ROM that came with your shipment. They also include MIB files (located in the MIB directory).

> NOTE *Review the readme file (Readme.txt) for the latest information about the utilities.*

The utilities make it easier to interface with the terminal menu and transfer configuration files to and from TFTP servers. The utilities all run on Microsoft Windows 3.1 or higher. The following sections describe the Syslog, Telnet, VT 100, and TFTP Server utilities.

CONTENTS

FIGURES

1. TELNET UTILITY

The Telnet utility delivered with the ATLAS 830 provides enhancements to standard Telnet programs that make it easier to work with ATLAS 830 options.

Access the Telnet program remotely through the 10/100BaseT Ethernet port. For a detailed description of how to work with the Telnet program, refer to *Navigating the Terminal Menus* in the User Interface Guide section of this manual. If you need help setting up the ATLAS 830 for a Telnet session, refer to the Detailed Level Procedures section of this manual.

The Telnet menus include **SESSION**, **EDIT**, **OPTIONS**, **CAPTURE**, and **HELP** (see the menu tree in Figure 1).

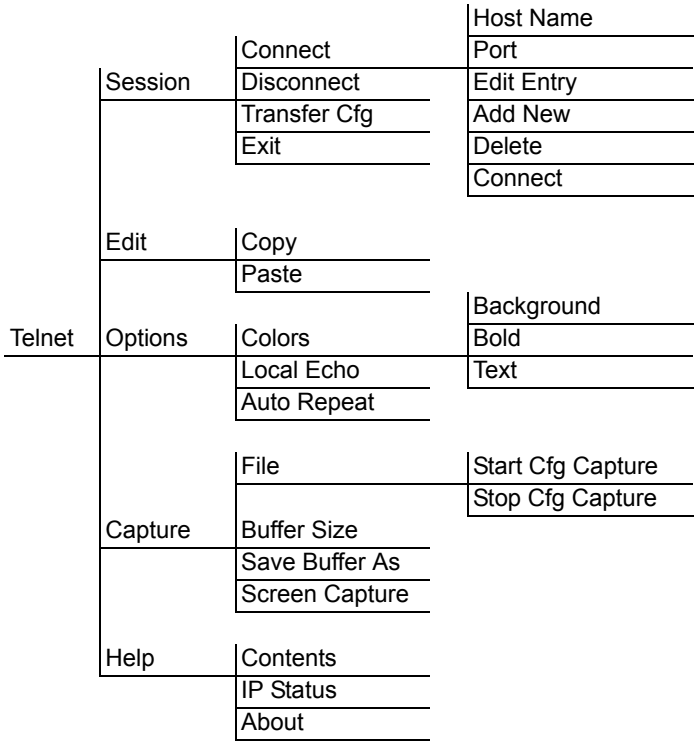


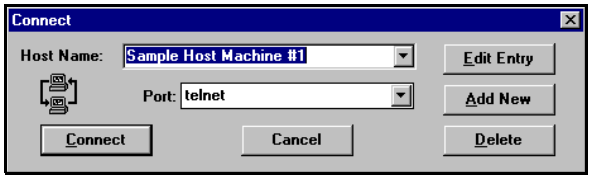
Figure 1. Telnet Menu Tree

Session Menu

Click on **SESSION** to open the Telnet session.

Connect

Opens dialog box for setting **HOST NAME** and **PORT** parameters for a Telnet session. Also lets you **EDIT ENTRY**, **ADD NEW** entry, and **DELETE** stored entries. When the parameters are set, click **CONNECT** to make the connection. Click **CANCEL** to end the session.



Host Name

Accepts and stores host names. You may either enter a descriptive name, an IP address, or a domain name directly from this field. Click on the drop-down arrow to display a complete list of previously stored host names.

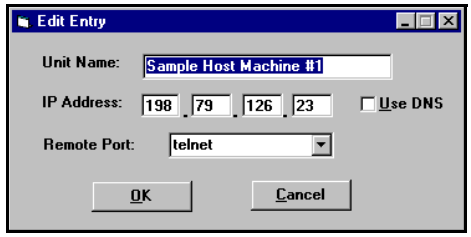
Port

Provides several port options. You may enter port numbers directly into this field to connect to non-standard ports or select the drop-down combo-box to display the following options:

TELNET	establishes a Telnet session
ECHO	provides a loopback for troubleshooting
DISCARD	bit bucket; discards data
DAYTIME	returns the time
CHARGEN	displays as a unique character stream; used for self-tests

Edit Entry

Changes either the unit name or the IP address of each host. Press either **Tab, Return,** or a **period (.)** after each number in the IP address to move to the next field. If you press **Return** or **(.)** while the cursor is located in each IP field, the next field is cleared and the cursor advanced into it.



Add New

Prompts you for the same information as the **EDIT ENTRY** dialog box for new host. When enabled, the **USE DNS** (Domain Name Server) feature allows users to request **DOMAIN LOOK UP** via a DNS server on the network, rather than specifying an IP address. The name then appears in the **HOST NAME** field.

Delete

Removes a host name from the list; simply select the host name you want to remove, and, at the prompt, click **DELETE**.

Connect
Establishes the Telnet session.

Disconnect
Terminates the Telnet session.

To re-establish the session, select **CONNECT** from **SESSION MENU** or press **ENTER** three times. This action restores the previous connection.

Transfer Cfg
This feature is used with ADTRAN products primarily for sending configuration files to the unit.

Exit
Ends the Telnet session and closes the Telnet screen.

Edit Menu
Provides **COPY** and **PASTE** commands.

Options Menu
Provides viewing alternatives for the terminal screen.

Colors
Three options change the color of the background window (**BACKGROUND**), bold highlights (**BOLD**), and text (**TEXT**).

Local Echo
Echoes each character that you enter.

AutoRepeat
Repeats characters you select from the keyboard, if you hold down the key.

Capture Menu
Provides options for capturing screen images.

File
Sends screen options data to a file in the format options listed below:

Start Cfg Capture
Used with the ADTRAN product line to start sending the scrolling screen capture to a file storage location.

Stop Cfg Capture
Used with the ADTRAN product line to stop sending the scrolling screen capture to a file storage location.

Buffer Size
Disables terminal window scroll bars when set to zero. (This is the normal setting for ATLAS 830.) This number represents the number of lines to capture in the memory buffer.

Save Buffer As
Save screen capture to a file.

Screen Capture
Copies the text on the current Telnet screen to the clipboard. You can open any word processor and paste the clipboard contents into the program. This option is helpful when debugging.

Help Menu

Provides on-line help for using the ADTRAN Utilities.

Contents
Opens the on-line help.

IP Status
Displays the local port address and the status of the connection.

About
Displays version and owner information.

2. VT 100 UTILITY

Use the VT 100 to configure an ATLAS 830 which is directly connected to a PC. The VT 100 display is almost identical to the Telnet display.

For a detailed description of how to work within the terminal menu, refer to *Navigating the Terminal Menus* in the User Interface Guide section of this manual. If you need help setting up the ATLAS 830 for a VT 100 session, refer to the Detailed Level Procedures section of this manual.

VT 100 menus include **SESSION**, **EDIT**, **PORT**, **OPTIONS**, **CAPTURE**, and **HELP** (see the menu tree in Figure 2).

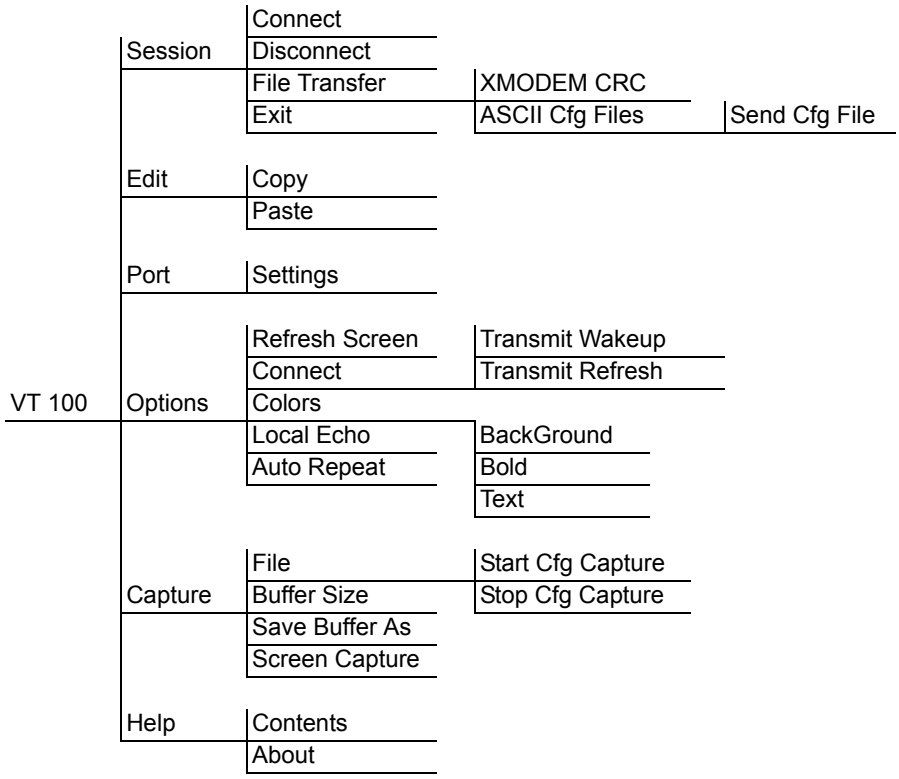


Figure 2. VT 100 Menu Tree

Session Menu

Opens VT 100 terminal emulation session.

Connect

Opens a specified serial port for a VT 100 session.

Disconnect

Closes a specified serial port at the end of a VT 100 session.

File Transfer

Uploads and downloads files to and from an ATLAS 830.

XMODEM CRC

Selects the XMODEM file transfer protocol.

ASCII Cfg Files

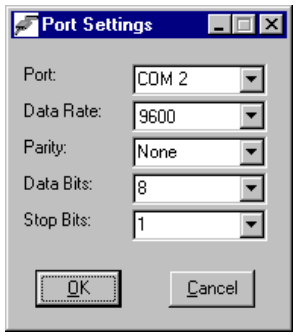
Selects ASCII transfer mode. Primarily useful for configuration transfers for the ADTRAN products.

Edit Menu

Identical to the Telnet **EDIT MENU** (see *Edit Menu* on page 380).

Port Menu

Changes serial COM port **SETTINGS**. Provides data rate settings from 300—57600 bps.



Options Menu

Provides terminal screen commands.

Refresh Screen

Redraws the screen.

Connect

Provides the options **TRANSMIT WAKEUP** and **TRANSMIT REFRESH**.

Transmit Wakeup

Provides a control sequence that puts the ATLAS 830 Control Port online in terminal mode.

Transmit Refresh

Provides a control sequence to refresh the screen automatically when connecting. (This is the default setting for the ATLAS 830.)

Colors

Identical to Telnet **COLORS MENU** (see *Colors* on page 380).

Local Echo

Echoes each character that you enter.

AutoRepeat

Repeats characters you select from the keyboard if you hold down the key.

Capture Menu

Identical to the Telnet **CAPTURE MENU** (see *Capture Menu* on page 380).

Help Menu

Provides on-line help and information about the version number.

Contents

Opens on-line help.

About

Displays version and owner information.

3. TFTP SERVER

The TFTP Server utility transfers ATLAS 830 configuration files to and from a TFTP server. You can install this program on a PC running any version of Microsoft Windows. The configuration of an ATLAS 830 can be saved offline as a backup file. The saved file may also be used to send the same configuration to multiple ATLAS 830 units. Transfer configuration files using the TFTP protocol (a TCP/IP user protocol) via the 10/100BaseT Ethernet port. The ATLAS 830 must have a valid IP address, subnet mask, and default gateway (if required), and be connected to an Ethernet network before proceeding. Figure 4 shows the TFTP server interface. For information on transferring and saving configurations using TFTP, refer to the Detailed Level Procedures section of this manual.

NOTE

Files must be placed in the Application directory where you installed the product. Received files are also placed here.

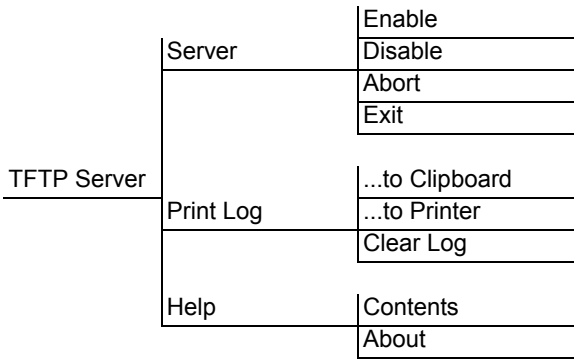


Figure 3. TFTP Server Interface Menu Tree

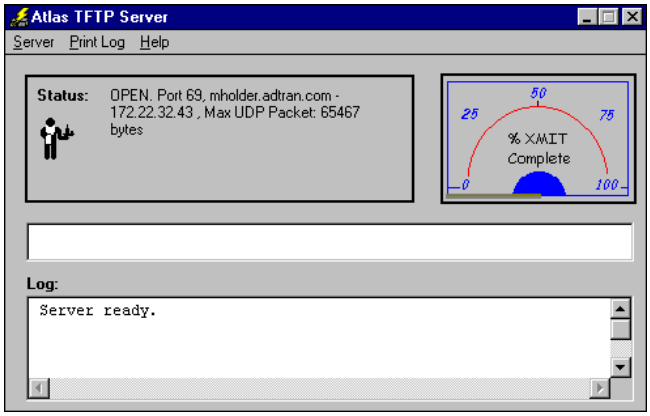


Figure 4. TFTP Server Interface

Only one configuration transfer session (upload or download) may be active at a time. The TCP/IP parameters are not saved or overwritten as part of an ATLAS 830 unit's transferred configuration to allow sending identical configurations to multiple units. When you start this program, a port is automatically opened.

Server Menu

Provides enable, disable, abort, and exit options.

Enable
Enables the TFTP server. The IP address displays in the Status field and Server Ready displays in the Log field.

Disable
Disables the TFTP server. When you select this option, the message PORT CLOSED displays in the Status field and Port Closed displays in the Log field.

Abort
Terminates a transfer that is in progress.

Exit
Terminates active transfers and closes the TFTP window.

Print Log

Provides print options.

...to Clipboard
Copies the information in the Log field to the clipboard. You can then open any word processor and paste the information into the program for review.

...to Printer
Sends the information in the Log field to the default printer.

Clear Log
Deletes the information stored in the Log field.

Help

Provides on-line help and version information.

Contents
Opens on-line help.

About
Displays version and owner information.

Status Field

This field displays general information about port and transfer status. This field is read-only. The unlabeled field in the center of the screen displays prompts about the status of active transfers, such as bytes transferred and received.

Meter Field

The **XMIT** meter provides a visual record of the transfer process.

Log Field

This field displays a record of all of the events that occur during the time the TFTP Server is enabled. Use the scroll bar to move up and down the list. To clear the information in this field, select **CLEAR LOG** from the **PRINT LOG** menu. Save this information to a file before deleting it with the **...TO CLIPBOARD** command.