

3

Command Descriptions

This chapter describes the commands used to configure the ATM-NI module. Each description includes the command syntax, a list of characteristics, if any, and an example of how the command is used.

Command Types

Figure 3-2 categorize many of the ATM-NI commands by their functionality.

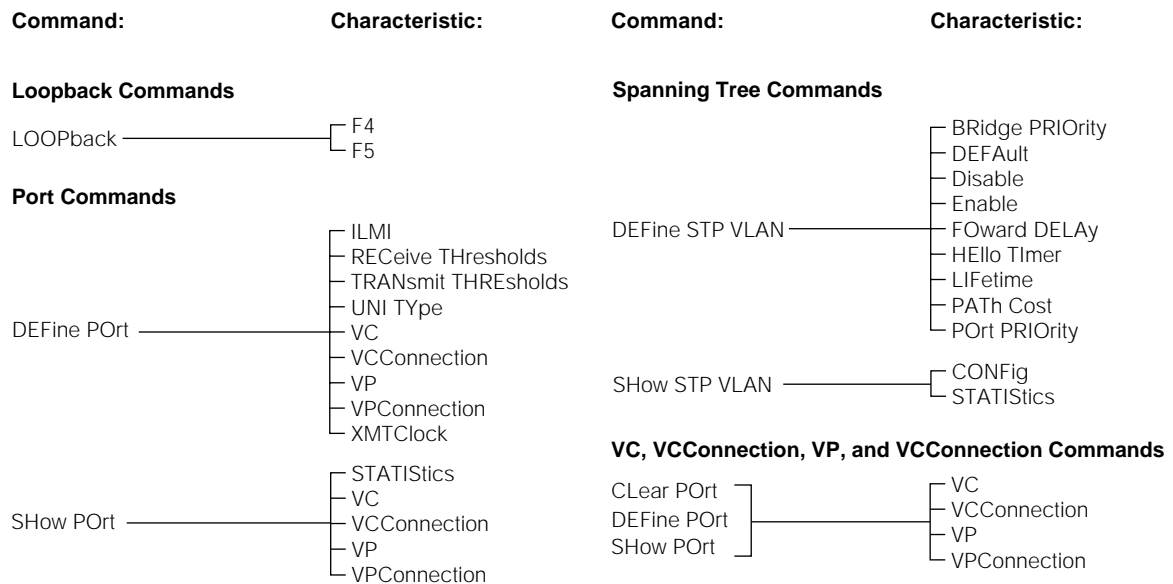


Figure 3-2 User Commands Categorized by Functionality

Command Entry

The following sections provide information needed for entering commands from the keyboard.

Conventions and Shortcuts

Whether you enter commands through the console port, the auxiliary port, or via Telnet, the following conventions and shortcuts apply:

- Commands can be entered by using keywords. For example, if a command is described as `CLear MODule ARp`, you can enter the following keywords:

```
c1 mod ar
```

- Words in the command line must be separated by a space.
- A command line can contain up to 132 characters, including a Return.
- A command is executed when you press the Return key.
- If a command line contains multiple characteristics and an error is detected in one of them, the command executes up to where the error occurs.

Table 3-1 lists special keys or key combinations. (Hex equivalents are provided to confirm the key definitions for all keyboards.)

Table 3-1 Special Command-Line Keys

Key	Hex	Function
Backspace	8	Deletes the last character entered
Delete	7f	Deletes the last character entered
Control-U	15	Deletes the entire command line
Return	d	Ends the command line and executes the command
Control-R	12	Recalls the previous command

Table 3-2 describes variables which frequently appear in the command syntax.

Table 3-2 Command Syntax Variables

Variable	Meaning
<i>characteristic</i>	Enter one or more of the characteristics listed in the command description.
<i>port</i>	Enter one or more port numbers. Specify port numbers 1, 2, or S (for the SAR port, if allowed by that command).
<i>vpi</i>	Enter the virtual path identifier.
<i>vci</i>	Enter the virtual connection identifier.

Command Syntax

The command descriptions in this chapter list all syntax variations for each command, and use the following conventions:

- UPPERCASE letters indicate the minimum characters required
- *Italicized* words indicate variables

This example lists the syntax variations for the DEFine SNMP command:

```
DEFine SNMP MANager
DEFine SNMP AUthentication
```

When the command has multiple syntax variations, the command syntax section often lists the command name followed by the word *characteristics*, as shown:

```
DEFine MODule characteristics
```

For this kind of example, read the command description table and the examples to determine the possible syntax variations.

Online Help

The Help command provides context-sensitive help for all ATM-NI commands. Use it for displaying correct syntax and a brief description of each command.

When you enter the Help command at the system prompt, the system displays a list of available commands. You are then prompted for a topic, as shown in the following screen display:

```
Help
```

```
Online HELP allows you to access information about the
WCI ATM Network Interface Module (ATM-NI). Choose a HELP
topic from the following list:
```

```
Additional help available for option(s):
```

```
CLear          DEFine          EXit
Help           INItialize MODule  LOGout
LOOPBack      PIng           SHow
TELnet
```

```
Topic?
```

For more detailed information about online help, see the Help command description later in this chapter.

To exit Help, press Control-Z.

CLear MODule

Syntax

CLear MODule *characteristic*

Description

The CLear MODule command removes the information stored in the module's run-time memory. Using this command, you can clear information from the indicated log, parameter, or system counters. Use the SHow MODule command to display set parameters. Table 3-3 explains the meaning of each characteristic.

Table 3-3 CLear MODule Command Characteristics

Characteristics	Selection	Description
ARp	<i>ipaddress</i>	Removes the ARP cache entry for a specified address or removes all addresses.
	ALL	
CONtact		Removes the module's contact information.
DOMain		Removes the domain suffix used for resolving a host name.
DNS		Removes the Domain Name Server address.
IP		Removes the module's IP Address. This command cannot be used if accessing the module via Telnet.
LOCation		Removes the module's location information.
NAme		Removes the module's name information.
NEtmask		Removes the module's IP mask.
PRIMary ROUter		Removes the module's primary router entry.
RESet LOG		Removes all entries from the reset log.
SECOndary ROUter		Removes module's secondary router entry.
STATISTICS		Clears all statistics and counters maintained by the ATM-NI module.

Example 1

This command removes IP address 129.47.1.12 from the ARP cache:

```
cl mod ar 129.47.1.12
```

Example 2

This command removes all addresses from the ARP cache:

```
cl mod ar all
```

Example 3

This command removes module contact information:

```
cl mod cont
```

Example 4

This command removes the domain suffix information:

```
cl mod dom
```

Example 5

This command removes the Domain Name Server address:

```
cl mod dns
```

Example 6

This command removes the module IP address:

```
cl mod ip
```

Example 7

This command removes the module location information:

```
cl mod loc
```

Example 8

This command removes the reset log:

```
cl mod res lo
```

Example 9

This command removes the module name information:

```
cl mod na
```

Example 10

This command removes the module IP mask:

```
cl mod ne
```

Example 11

This command removes the primary router entry:

```
cl mod prim rou
```

Example 12

This command removes the secondary router entry:

```
cl mod sec rou
```

Example 13

This command resets all counters and statistics maintained by the module:

```
cl mod statis
```

Related Commands

DEFine MODule

SHow MODule

CLear POrt

Syntax

```

CLear POrt port VC vpi vci
CLear POrt port VP vpi
CLear POrt port VCConnection vpi vci
CLear POrt port VPConnection vpi
CLear POrt port VC ALL
CLear POrt port VP ALL
CLear POrt port VCConnection ALL
CLear POrt port VPConnection ALL

```

Description

The CLear POrt command clears a specific virtual connection to the specified UNI port or clears ALL virtual connections. Specify either port 1 or port 2 and the connection type (VC, VCC, VP, or VPC), followed by either the connection identifier or ALL. Be sure to clear the VCC before a VC, and clear the VPC before a VP.

Ranges for the vpi are 0-255; ranges for the vci are 256-65535.

Example 1

The following commands clears VC 25,423 from UNI port 1:

```

cl po 2 vcc 25 423
cl po 2 vc 25 423

```

Example 2

The following command clears VP 25 from UNI port 1:

```

cl po 1 vpc 25
cl po 1 vp 25

```

Example 3

The following commands clear all VPCs (hardware setup) on UNI port 2, then clear all the NVRAM contents:

```

cl po 2 vpc all
cl po 2 vp all

```

(You may also use just the first command, then use the already-defined VPs for setting up VPCs.)

Related Commands

```

DEFine POrt
SHow POrt

```

CLear SNMP MANager

Syntax

CLear SNMP MANager *ALL*
CLear SNMP MANager *index*
CLear SNMP MANager *ipaddress*

Description

The CLear SNMP MANager command deletes one or all of the SNMP managers previously defined by the DEFine SNMP MANager command. Specify the index or IP address of the SNMP manager to be deleted, or enter the command with ALL to delete all SNMP managers.

Example 1

The following command deletes all SNMP managers from the module:

```
cl snmp man all
```

Example 2

The following command deletes the SNMP manager defined previously as Index 4:

```
cl snmp man 4
```

Example 3

The following command deletes the SNMP manager defined previously as IP address 129.47.1.11:

```
cl snmp man 129.47.1.11
```

Related Commands

DEFine SNMP MANager
Show MODule

DEFine MODule

Syntax

DEFine MODule *characteristics*

Description

The DEFine MODule command is used to change defaults or set parameters in the module's configuration. Table 3-4 lists the characteristics of this command. View current settings by using the SHow MODule command.

Table 3-4 DEFine MODule Command Characteristics

Characteristic	Selection		Default	Description
ARp TIMEOut	<i>minutes</i>		1	Sets the ARP timeout in minutes. Acceptable range is from 1 to 60 minutes.
BOoTp	Enable		Enable	The module downloads its configuration from the BootP Server if this command is enabled. If disabled, the module uses the configuration stored in NVRAM.
	Disable			
CLOcksupply	<i>value</i> (1 to 4)		4	Determines whether the ATM-NI module is supplying NET SYNC clock to the hub via the ATM backplane. Specify one of the following values: 1 = ATM-NI module does not supply clock. 2 = Clock is supplied by ATM-NI port 1. 3 = Clock is supplied by ATM-NI port 2. 4 = Clock is supplied by local oscillator. (Refer to "Physical Clocking" in Chapter 4 for additional information about clocking.)
CONFig file	<i>filename</i>		none	Sets the configuration file name (including the full pathname) to be downloaded from the TFTP server to the module or UNIX machine. The file name can be up to 64 characters long.
CONtact	<i>"string"</i>		null	Specifies contact information (for example, the network administrator's name and phone number). The string can be up to 32 characters long and must be enclosed in quotes.
DATE	<i>mm-dd-yy</i>		01-01-90	Sets the current module date.
DOMain	<i>name</i>		none	Defines the domain suffix used to resolve a host name. The name can be up to 32 characters long.
DNS	<i>ipaddress</i>		none	Specifies the Domain Name Server address.
IP	<i>ipaddress</i>		none	Specifies the IP address of this module.

Table 3-4 DEFINE MODULE Command Characteristics (Continued)

Characteristic	Selection		Default	Description
LOCation	<i>"string"</i>		null	Specifies location information for the module. The string can be up to 20 characters in length.
NAME	<i>"string"</i>		null	Specifies the host name for the module. The string can be up to 32 characters long and must be enclosed in quotes.
NETmask	<i>ipaddress</i>		value in BootP file	Specifies the netmask for the module. The netmask is used to decide if a destination IP host is on the same network as the module. If the IP host is on another network, packets forwarded to that destination are sent to the defined router and routed to the IP host.
P3CLOCKarbitrate	Enable		Enable	Specifies whether the module will participate in the P3 Clock Master Arbitration process. When enabled, the arbitration process determines which module provides clocking; when disabled, the module does not supply clocking. This value is stored in NVRAM, and takes effect upon reset. If there is no other module acting as P3 Clock Master, the module drives the clock even when this setting is disabled.
	Disable			
PASsword	NONE		none	Specifies the administrative password. The password is case-sensitive and can be up to 12 characters long. Entering the keyword NONE indicates that a password is not used to access the module.
	<i>"string"</i>			
PRIMary ROUter	<i>ipaddress</i>		value in BootP file	Defines the IP address of the primary router that is used by the module to forward packets to other networks.
PROMpt	<i>"string"</i>		908 ->	Defines the console prompt. The string can be up to 32 characters long.
REQuest	<i>filename</i>		h908	Specifies the file name to be used to send a request to the BootP server for a customized configuration file. The file name can be up to 64 characters long.
SECondary ROUter	<i>ipaddress</i>		value in BootP file	Defines the IP address of the secondary router that is used by the module to forward packets to other networks.
TFtp	<i>ipaddress</i>		value in BootP file	Defines the IP address of the TFTP server from which the module downloads software.
TIME	<i>hh:mm:ss</i>		00:00:00	Sets the current time of the module based on a 24-hour clock.
TIMEOut	<i>minutes</i> (0 to 60)		5	Sets the console timeout value. Range is 0 to 60 minutes. A value of 0 disables the timeout.

Example 1

This command sets the ARP timeout to three minutes:

```
def mod ar timeo 3
```

Example 2

This command tells the module to download its configuration from the BootP server:

```
def mod bo enable
```

Example 3

This command tells the module to provide a clock source from the ATM-NI module port 2 to the hub's P3 Net Synch clock bus:

```
def mod clo 2
```

Example 4

This command sets "test.new" as the configuration file name:

```
def mod conf test.new
```

Example 5

This command defines the contact as john carlton x2321:

```
def mod cont "john carlton x2321"
```

Example 6

This command sets the date to August 1, 1995:

```
def mod date 08-01-95
```

Example 7

This command defines the domain suffix as "MtnView":

```
def mod dom MtnView
```

Example 8

This command defines the Domain Name Server address as 129.47.1.11:

```
def mod dns 129.47.1.11
```

Example 9

This command defines the module's IP address as 129.47.14.12:

```
def mod ip 129.47.14.12
```

Example 10

This command specifies the location of the module as BLDG1:

```
def mod loc "BLDG1"
```

Example 11

This command defines the module name as ATMNI.4:

```
def mod na "ATMNI.4"
```

Example 12

This command sets the netmask as address 255.255.0.0:

```
def mod ne 255.255.0.0
```

Example 13

This command disables the P3 Clock Master Arbitration process on this card (effective after the next reset):

```
def mod p3cl d
```

Example 14

This command defines the password as SESAME:

```
def mod pas "SESAME"
```

Example 15

This command defines the primary router as address 129.47.11.1:

```
def mod prim rou 129.47.11.1
```

Example 16

This command defines the console prompt to HI THERE:

```
def mod prom "HI THERE"
```

Example 17

This command defines the file name "h908.sue" as the Request File:

```
def mod req h908.sue
```

Example 18

This command defines the secondary router as address 129.47.1.14:

```
def mod sec rou 129.47.1.14
```

Example 19

This command defines the TFTP server IP address as 129.47.1.17:

```
def mod tf 129.47.1.17
```

Example 20

This command sets the time to 1:30 p.m.:

```
def mod time 13:30:00
```

Example 21

This command sets the console timeout value to 15 minutes:

```
def mod timeo 15
```

Related Commands

CLear MODule

SHow MODule

DEFine POrt

Syntax

DEFine POrt *port characteristics*

Description

The DEFine POrt command configures a UNI port or a specific Virtual connection on a port and changes the characteristics in the ATM-NI's permanent configuration.

Table 3-5 lists the characteristics of this command.

Table 3-5 DEFine POrt Command Characteristics

Characteristic	Selection	Default	Description
ILMI	<i>vci</i> (1 to 1024)	16	Defines the VCI value for the ILMI channel. (VPI remains fixed at 0.) ILMI provide a standard VCC for SNMP management. Changes to the ILMI VCI take effect only after a reset.
RECEive THresholds	QMon <i>cells</i> (Ports 1, 2 range is 1 to 9890)	1000	Defines the receive thresholds for queue monitoring.
	STart <i>cells</i> (Ports 1, 2 range is 1 to 9889)	2340	Defines the receive thresholds for the discard of CLP=1.
	ENd <i>cells</i> (Ports 1, 2 range is 1 to 9890)	2000	Defines the receive thresholds for the discard of low priority cells.
TRANsmit THresholds	QMon <i>cells</i> (Ports 1, 2 range is 1 to 9890)	80	Defines the transmit thresholds for queue monitoring.
	STart <i>cells</i> (Ports 1, 2 range is 1 to 9889)	140	Defines the transmit thresholds for the discard of CLP=1.
	ENd <i>cells</i> (Ports 1, 2 range is 1 to 9890)	120	Defines the transmit thresholds for the discard of low priority cells.
XMTClock	REC	P3	Determines the clock source used to clock out the transmit data. REC. The transmit clock is phase-locked to the receive data on the port. P3. The transmit clock is from the Net Synch line on the ATM backplane.
	P3		

Table 3-5 DEFine PORT Command Characteristics (Continued)

Characteristic	Selection	Default	Description
UNI TYpe	PUBlic	PRIVate	The UNI type of the port.
	PRIVate		<p>When the UNI port is configured as public, the first four bits in the cell are assigned to generic flow control and are set to 0.0.0.0.</p> <p>When the UNI port is configured as private, the first four bits are available for expanding the VPI range.</p>
VP	<p><i>vpi TYpe type</i></p> <p><i>vpi TYpe MM STPVC vpi vci</i> (<i>vpi</i> range is 0-255) (<i>vci</i> range is 3586-3839 and 3841-4095)</p>	none	<p>Sets up the VP connection type in NVRAM. If the connection is multipoint-to-multipoint (MM), the UNI VP and VCI for STP is stored in NVRAM and is used when the VPConnection is defined.</p> <p><i>type</i>. Specify PP or MM for point-to-point or multipoint-to-multipoint, respectively.</p> <p>A PP (point-to-point) connection is bidirectional between a UNI port and the ATM backplane.</p> <p>A MM (multipoint-to-multipoint) connection is bidirectional between a UNI port and the ATM backplane. This type of connection must include the STPVC (Spanning Tree) option.</p> <p>For additional information about connection types, see “Connection Types” in Chapter 4.</p>
VPConnection	<p><i>uni-vpi p3-vpi</i> (<i>uni-vpi</i> range is 0-255) (<i>p3-vpi</i> range is 3585-3839 and 3841-4095)</p>		Sets up the hardware to switch the specified multicast VPI. If the type defined (via the DEFine PORT VP command) is MM, then STP is started for the VP connection and uses the VPI VCI STPVC connection for Spanning Tree messages.
VC	<p><i>vpi vci TYpe type</i> (<i>uni-vpi</i> range is 1-255) (<i>uni-vci</i> range is 256-65535)</p>	Default Root direction is from P3 to UNI	Sets up the VC connection type in NVRAM.
	<i>vpi vci TYpe PM ROOTDirection</i> (optional)		The default direction for a point-to-multipoint connection is from UNI to P3 backplane. The ROOTDirection option is used with point-to-multipoint connections only, and reverses the direction.

Table 3-5 DEFINE PORT Command Characteristics (Continued)

Characteristic	Selection	Default	Description
VCCONNECTION	<i>vpi vci p3-vpi p3-vci</i> (<i>uni-vpi</i> range is 0-255) (<i>p3-vpi</i> can be either 3584 or 3840 only) (<i>uni-vci</i> range is 256-65535)		Sets up the hardware to switch the VC connection.

Example 1

This command defines 16 (the standard value) as the VCI value for the ILMI channel used for SNMP management:

```
def po 1 ilmi 16
```

Example 2

This command defines the receive thresholds for port 2:

```
def po 2 rec th qm 1200 st 2100 en 2000
```

This defines the following values:

- Queue monitoring = 1200
- Discard of CLP=1/low priority cells starts at 2100
- Discard of CLP=1/low priority cells ends at 2000

Example 3

This command selects the P3 backplane as the transmit clocking source for UNI port 2:

```
def po 2 xmtc p3
```

Example 4

This command sets UNI port 1 for use in a private network:

```
def po 1 ty pri
```

Example 5

This command sets up a VP on UNI port 1 and defines the VP as a point-to-point connection. This command works in conjunction with the DEFINE PORT VPC command shown in Example 6:

```
def po 1 vp 20 ty pp
```

Example 6

This command maps the virtual VLAN 4000 from the P3 backplane to the vpi 20 established in Example 5:

```
def po 1 vpc 20 4000
```

Example 7

This command maps UNI VP 40 to UNI port 1 and defines it as a multipoint-to-multipoint connection; the command also enables STP, defining the uni port STP control channel vpi as 1 and the vci as 260 for this VLAN. This command works in conjunction with Example 8:

```
def po 1 vp 40 ty mm stpvc 1 260
```

Example 8

This command maps VLAN 4040 from the P3 backplane to the vpi 40 established in Example 7:

```
def po 1 vpc 40 4040
```

Example 9

This command sets up a PVC (a permanent virtual connection) as a point-to-point connection, and defines the uni-vpi as 101 and the uni vci as 301. This command works in conjunction with the DEFine POrt VCC command shown in Example 10:

```
def po 1 vc 101 301 ty pp
```

Example 10

This command maps the VC connection vpi 101 vci 301 (established in Example 9) on the UNI port to vpi 3585 vci 301 on the P3 backplane:

```
def po 1 vcc 101 301 3584 301
```

Related Commands

CLear POrt

SHow POrt

DEFine SNMP

Syntax

```
DEFine SNMP AUTHentication string
DEFine SNMP MANager index ipaddress
```

Description

The DEFine SNMP command defines the community string and SNMP manager's IP address. Table 3-5 lists the characteristics of this command.

Table 3-6 DEFine SNMP Command Characteristics

Characteristic	Selection	Description
AUTHentication	Community	Specifies the module's SNMP authentication.
	None	Community. This sets the SNMP authentication to require the module's password for access. None. Allows open access to SNMP, with no authentication required.
MANager	<i>index</i>	Defines the IP addresses for up to 4 SNMP managers. The index is from 1 to 4.
	<i>ipaddress</i>	

Example 1

This command specifies that the community name (that is, the module's password) be used for authentication:

```
def snmp auth community
```

Example 2

This command defines the IP address of the second SNMP manager:

```
def snmp man 1 129.47.1.11
```

DEFine STP VLAN

Syntax

DEFine STP VLAN *vlan-id characteristics*

Description

The DEFine STP VLAN command defines or modifies the Spanning Tree parameters of a multicast VP on the P3 backplane. This command can customize a VP prior to establishing a connection (changing from defaults) or it can modify a connection that is already established.



Note: No cell-switching connections are established as a result of this command. To establish cell-switching connections, use the DEFine PORT VPCConnection command.

Table 3-7 lists and describes the characteristics available for this command.

Table 3-7 DEFine STP VLAN Command Characteristics

Characteristic	Selection	Default	Description
BRidge PRIORity	<i>value</i> (1 - 65535)	32758	Sets the module's STP priority value for a multicast VPC.
DEFault			Returns all ATM-NI STP parameters to their default values for a multicast VPC.
Disable			Disables the Spanning Tree for the specified VLAN. Note: <i>This command completely disables UNI traffic on the specified VLAN.</i>
Enable		Enable	Enables the Spanning Tree for the specified VLAN.
FORward DELAY	<i>value</i> (4 to 30 seconds)	15	Sets the ATM-NI STP forwarding delay value for a multicast VPC. This is the time spent in the listening state while moving from the blocking state to the learning state; this is also the time spent in the learning state.
HELlo TImeR	<i>value</i> (1 to 10 seconds)	2	Sets the ATM-NI STP hello timer value for a multicast VPC. This timer sets the interval between periodic transmissions of BPDUs by the ATM-NI when it is the Root or attempting to become the Root.
LIFetime	<i>value</i> (6 to 29 seconds)	20	Sets the ATM-NI STP lifetime timer value for a BPDU if this station is the Root. This determines the maximum age of received protocol information before it is discarded.

Table 3-7 DEFINE STP VLAN Command Characteristics (Continued)

Characteristic	Selection	Default	Description
PATH Cost	<i>port</i>	<i>port</i> default = none	Sets the module's STP port path cost. A path cost with the lowest possible value would be considered by Spanning Tree to be the most desirable. The ATM-NI assumes you are specifying the ATM Backplane if you do not specify a port. Specify port paths individually. <i>port</i> . Specify 1 or 2 for a UNI port. <i>value</i> . Specify a value from 1 to 65535.
	<i>value</i>	<i>value</i> default = 100 for UNI port or 1 for the P3 backplane	
POrt	<i>port</i>		Use to specify either the port path cost or the port priority for the indicated UNI ports. When specifying the port path cost or port priority for the ATM backplane port associated with the given virtual LAN, this keyword is not used.
POrt PRIOrity	<i>value</i>	128 for UNI port or 10 for the backplane	Sets the module's STP port priority value for a multicast VPC. Assign this value to each port of the ATM-NI module to select which port is the forwarding path to the designated ATM-NI module. The ATM-NI assumes you are specifying the ATM Backplane if you do not specify a port. Specify port paths individually. <i>port</i> . Specify 1 or 2 for a UNI port. <i>value</i> . Specify a value from 0 to 255.

Example 1

This command sets the STP bridge priority value of 3500 to the Spanning Tree instance for VLAN 3594:

```
def stp vlan 3594 br prio 3500
```

Example 2

This returns the STP instance for VLAN 3585 to default values:

```
def stp vlan 3585 defa
```

Example 3

This disables STP for VLAN 3585:

```
def stp vlan 3585 d
```

Example 4

This enables STP for VLAN 3799:

```
def stp vlan 3799 e
```

Example 5

This returns the STP forwarding delay value to 20 seconds for VLAN 3799:

```
def stp vlan 3799 fo dela 20
```

Example 6

This sets the STP hello timer value to 4 seconds for VLAN 3820:

```
def stp vlan 3820 he ti 4
```

Example 7

This sets the STP lifetime timer value to 10 seconds for VLAN 3812:

```
def stp vlan 3812 lif 10
```

Example 8

This sets the STP path cost value for the ATM backplane to 10 for VLAN 3720:

```
def stp vlan 3720 pat c 10
```

Example 9

This sets the STP port priority value for UNI port 2 to 150 for VLAN 4420:

```
def stp vlan 4420 po prio 150 po 2
```

Example 10

This sets the STP port priority value for the P3 backplane to 210 for VLAN 4560:

```
def stp vlan 4560 po prio 210
```

Related Commands

SHow STP VLAN

Help

Syntax

Help
Help *topic*
Help *topic subtopic*

Description

The Help command provides a description and the correct syntax for each module command and command characteristic. If you enter “help” or “h” at the system prompt, the system responds with a topic menu of commands and prompts for a topic. For a description of the characteristics of a command, enter the characteristic keyword when the system prompts for a subtopic.

Example

This is an example of the screen that appears when you enter the Help command:

```
Help
```

```
Online HELP allows you to access information about the  
WCI ATM Network Interface Module (ATM-NI). Choose a HELP  
topic from the following list:
```

```
Additional help available for option(s):
```

```
CLear           DEFine           EXit  
Help           INItialize MODule  LOfout  
LOOPBack       PIng            SHow  
TELnet
```

```
Topic?
```

You can select any of the listed topics for further information.

Getting Help for Help

For example, if you were to enter Help again at the topic prompt, more information about the Help command would be displayed:

```
Topic? h
```

```
The Help command gives you online information about the WCI ATM-NI  
commands. For additional information about these commands, refer to  
the ATM-NI Users Guide.
```

```
Help lets you progress through a series of Help menus, or request specific  
Help topics.
```

```
Help [topic] [subtopic]
```

Specify a topic or subtopic when you need information about specific parts of commands (for example, `Help SHow POrt STATUS`).

The following conventions are used in the Help descriptions:

- * Lowercase words in command syntax (for example, `portlist`) mean that you enter a value.
- * Uppercase keywords in command syntax (for example, `SHow DATAbase WORking`) mean you enter these keywords as shown.
- * Brackets around a keyword or value, for example, `[S]`, indicate optional values. Choose one or none of the options.
- * Braces around keywords or values, for example, `{port | clear}`, mean you must choose one and only one of the included words, which are separated by a `|`.
- * Minimum abbreviations are the minimum letters recognized by the command interpreter. For example, to execute the `SHow MODule` command, you can enter instead the minimum abbreviation: `sh mod`.

You may perform any of the following actions while using online Help:

- * Type a question mark (`?`) to redisplay the help text associated with that prompt.
- * Press the RETURN key to return to the previous (sub)topic level. If you are at the `Topic?` prompt level, you return to the command prompt.
- * Enter Control-Z to exit Help.

Topic?

Getting Help for Specific Topics

When you enter a command keyword from the list provided in a Help topic, Help gives you a brief description of the function performed by the command and lists associated subtopics. Help then prompts for a subtopic. For example, if you enter `DEFine` as your first Help topic, Help lists all `DEFine` options and prompts:

`DEFine`

This command changes operational characteristics of the ATM-NI

Additional help available for option(s):

`MODule`
`POrt`

`STP VLAN`

`SNMP`

`DEFine SubTopic?`

Looking at Subtopics

AT the DEFine SubTopic prompt, you can enter one of the listed subtopics, for example, MODule:

```
DEFine MODule
```

This command configures module parameters.

Additional help available for option(s):

ARp TIMEOut	BOotp	CLocksupply
CONFig	CONFact	DATE
DNS	DOMain	IP
LOCation	NAme	NETmask
PASsword	PRIMary ROUter	PROMpt
REQuest	SECOndary ROUter	P3CLOCKarbitrate
TFTp	TIME	TIMEOut

Using the Help Command in a Command Line

You can get help for commands at any time during a command session by simply preceding the command keyword with the Help command. Doing so allows you to bypass the initial Help screen and go directly to the topic or subtopic you want to know about. To get direct Help, you must know the command names and their subtopics before you enter the command line. For example, enter the following command:

```
h def mod req
```

The system responds with the following display:

```
DEFine MODule REQuest [File] {file name}
```

This command creates a file name which the module uses to send a request to a server for a customized configuration file. The default file name is h908.

```
DEFine MODule SubTopic?
```

To redisplay the list of available options, enter a question mark (?) and press the Return key. To move to the previous help level prompt, press the Return key at any prompt.

To exit Help, press Control-Z.

INitialize MODule

Syntax

INitialize MODule LEVel *level characteristic*

Description

The INitialize MODule command either reboots the module without changing any system parameters, or reboots while changing some or all of the system's parameters, depending on which reset level is indicated. If you use the DOWNload or DOWNload SAve options, the module downloads the application software from the server. Table 3-9 lists the characteristics for this command.

Table 3-8 INitialize MODule Command Reset Level Description

Characteristic	Selection	Option	Default	Description
LEVel	<i>level</i> (1, 2, 3, or 4)		1	Specify one of the reset levels described below: 1 = Reboots the module without changing any parameters. 2 = Reset Level 1. 3 = Reboots the module and restores all default parameters, except IP address, Netmask, TFTPserver address, TFTP filename, and configuration filename. 4 = Reboots the module and restores all factory default parameters.
		DOWNload		Downloads the application software from the server, but will not burn it into flash EPROM. Useful for trying a new version of software.
		DOWNload SAve		Specifies that the downloaded software is saved to the Flash EPROM.

Example 1

This command reboots the module without changing any parameters:

```
in mod lev 1
```

(or the equivalent command: `in mod`)

Example 2

This command reboots the module, restores all factory default settings, and burns the application software into DRAM:

```
in mod lev 2 down
```

Example 3

This command reboots the module, resets all port configuration parameters to the default values, downloads new application software to the DRAM, and saves the software to the Flash EPROM.

```
in mod lev 3 down sa
```

LOgout

Syntax

LOgout

Description

The LOgout command exits the module's user interface.

Example

Use the following command to log out:

```
lo
```

After entering this command, the console screen clears and the user is prompted for the login password.

LOOPBack

Syntax

```
LOOPBack port F4 vpi count
LOOPBack port F5 vpi vci count
```

Description

The LOOPBack command performs a cell loopback test through a specified path, either an end-to-end VP or an end-to-end VC. The module selects an unused VPI/VCI pair to be used, sends an OAM loopback cell from the P3 interface, then waits up to a second for the cell to be returned. Results of the test are displayed on the console screen. Table 3-9 lists the characteristics available for this command.

Table 3-9 LOOPback Command Characteristics

Characteristic	Selection	Description
<i>port</i>	1 or 2	Specify UNI port 1 or port 2.
F4	<i>vpi</i>	Defines an end-to-end VP (F4) on which the OAM cells are sent.
	<i>count</i>	The number of cells to be sent. Specify a number from 1 to 1000.
F5	<i>vpi vci</i>	Defines an end-to-end VC (F5) on which the OAM cells are sent.
	<i>count</i>	The number of cells to be sent. Specify a number from 1 to 1000.

Example 1

The following example creates a loopback test on UNI port 1 for the vpi,vci defined as 1 90 and with a loop count of 3. The example shows the message displayed when the loopback test completes successfully:

```
loop 1 f5 1 90 3
Success. Two loopback responses received.
```

Example 2

The following example creates a loopback test on the UNI port 2 for the vpi defined as 3621, with a loop count of 10. The example shows the message displayed when the loopback test completes successfully:

```
loop 2 f4 3621 10
Success. Two loopback responses received.
```

Ping

Syntax

Ping ipaddress characteristics

Description

The Ping command sends an ICMP Echo Request to the device indicated by the IP address in the command line. Press Control-C to cancel this command. You can use the command and IP address alone or with the options listed in Table 3-10.

Table 3-10 Ping Command Characteristics

Selection	Options		Default	Description
<i>ipaddress</i>				The module tries to reach the device at this address.
	<i>Size bytes</i> (64 to 1472)		64	This option allows you to enter the data size of the ping packet. The range is from 64 to 1472.
		<i>COUnT pings</i> (1 to 10000 or *)	1	Specifies a repeat count ranging from 1 to 10000. A value of '*' indicates an infinite number of pings.
		<i>TIMEOut seconds</i> (5 to 100)	10	Sets the timeout period ranging from 5 to 100 seconds.

Example 1

This command pings a device located at the IP address 129.47.52.10:

```
pi 129.47.52.10
```

The following message is displayed in response:

```
Device 129.47.52.10 is alive.
```

Example 2

This command attempts to ping the device located at IP address 129.47.52.10 with a packet that is 128 bytes long:

```
pi 129.47.52.10 si 128
```

The following message is displayed in response:

```
Device 129.47.52.10 is not responding.
```

Example 3

This command pings the device located at IP address 129.47.52.10 10,000 times:

```
pi 129.47.52.10 cou 10000
```

The following message is displayed in response:

Ping Statistics Summary

Packets Transmitted:	10000
Packets Received:	10000
Timeouts:	0
Host Errors:	0

Example 4

This command pings the device at IP address 129.47.52.10 and sets the timeout value to 100 seconds:

```
pi 129.47.52.10 timeo 100
```

The following message is displayed in response:

```
Device 129.47.52.10 is alive.
```

Example 5

This command shows the command syntax and the message that is displayed when you press Control-C while pinging another device multiple times:

```
pi 129.47.1.123 si 1472 cou 10000
```

The following message is displayed in response:

Ping Statistics Summary

Packets Transmitted:	675
Packets Received:	674
Timeouts:	0
Host Errors:	0

Example 6

This command shows the command syntax and the message that is displayed when you are pinging a device that does not respond, then press Control-C before the timeout period has elapsed:

```
pi 129.47.1.123 ti 100
```

The following message is displayed in response:

```
Device 129.47.1.123 is not responding.
```

SHoW ATM STATIStics

Syntax

SHoW ATM STATIStics

Description

The SHoW ATM STATIStics command displays the backplane statistics for the whole module.

Example

This command produces a display similar to the following:

```
sh atm statis
```

```
Hub Id: 5401 Slot ID: 8 WCI 908 ATM-NI CARD APPLICATION 08-04-95 13:22:43
```

```
-----  
ATM (P3) Traffic Statistics
```

```
Non-idle Cells                137330 Cells Tx to P3 0  
Cells Rx from P3              133237 BIP-8 Err. Secs from P3 0  
HEC Error in Secs from P3      0 Slot of Last BIP-8 board 0
```

```
SAR Transmit Statistics  
-----
```

```
Transmit Statistics
```

```
Cells transmitted   : 10130  
Packets requested  : 8084  
Packets transmitted : 8084  
Packet flushed errors : 0  
Packet parity errors : 0  
Transmitter internal err: 0
```

```
SAR Receive Statistics  
-----
```

```
Receive Statistics
```

```
Good cells received : 127475  
Cell CRC errors     : 0  
Cell flushed errors : 0  
Good packets received : 38563  
Packet CRC errors   : 0  
Packet EOF errors   : 0  
Packet parity errors : 0  
Packet timeout errors : 0  
Packet overflow errors : 0  
Packet no resource err : 0  
Invalid VPI errors  : 0  
Invalid VCI errors  : 0  
Invalid packet type err : 0  
Receiver internal errors: 0
```

The fields in this display are described in Table 3-11.

Table 3-11 SHoW ATM STATISTICS Display Fields

Field Type	Field	Description
General	Non-idle Cells	The number of non-idle (non-zero) cells received.
	Cells Rx from P3	The number of cells received from P3.
	HEC Error in Secs from P3	The Header Error Control (in seconds) from P3.
	Cells Tx to P3	The number of cells transmitted to P3.
	BIP-8 Err. Secs from P3	The Bit Interleaved Parity errors detected on incoming signals.
	Slot of Last BIP-8 board	The slot number of the last board to source a BIP-8 error cell received from P3.
SAR Transmit Statistics	Cells transmitted	The number of cells transmitted from SAR.
	Packets requested	The number of packets requested to be transmitted.
	Packets transmitted	The number of packets transmitted from SAR.
	Packet flushed errors	The number of packets terminated due to short cell.
	Packet parity errors	The number of packets received with parity errors and parity errors detected while transmitting a packet.
	Transmitter internal err	The number of SARA internal errors that occurred while transmitting cells.
SAR Receive Statistics	Good cells received	The number of acceptable cells received.
	Cell CRC errors	The number of cell CRC errors.
	Cell flushed errors	The number of received cells in error and also having an EOF error.
	Good packets received	The number of acceptable packets received.
	Packet CRC errors	The number of packets with CRC errors.
	Packet EOF errors	The number of packets received with no end of packet boundary.
	Packet Parity errors	The number of packets received with parity errors and parity errors detected while transmitting a packet.
	Packet timeout errors	The number of packets discarded when the reassembly timer timed out.
	Packet overflow errors	The number of packets terminated due to buffer overflow before the last cell was received.
	Packet no resource err	The number of packets discarded because of no resources.
Invalid VPI errors	The number of errors due to invalid VPIs.	

Table 3-11 SHow ATM STATISTICS Display Fields (Continued)

Field Type	Field	Description
SAR Receive Statistics <i>(continued)</i>	Invalid VCI errors	The number of errors due to invalid VCIs.
	Invalid packet type err	The number of errors due to invalid packet type.
	Receiver internal errors	The number of internal receiver errors.

SHow MODule

Syntax

SHow MODule *characteristic*

Description

The SHow MODule command displays the counters and summary characteristics of the module from the run-time configuration.

Table 3-12 lists the characteristics of this command.

Table 3-12 SHow MODule Characteristics

Characteristic	Description
ARp	Displays the current contents of the ARP cache.
IP	Displays a summary of module IP address, IP mask, and IP router information, as well as those parameters affecting the operation of SNMP.
LOAd	Displays TFTP boot file and TFTP server addresses.
RESet LOg	Displays a list of the last resets for the module.

Example 1

This command displays all available module information: sh mod

```

Hub Id: 5401 Slot ID: 8 WCI 908 ATM-NI CARD APPLICATION 08-03-95 12:19:42
-----
Up Time: 1 Days 19 Hours 35 Minutes
IP Address: 172.16.31.13
Bootp: Enabled Serial Number: 0
S/W Version: 1.00g2 Timeout: 0
Boot Prom Version: 1.00b
Prompt: 908->

Net Synch Clock Source: Configured Value Current Value
Net Synch not suppliedNet Sync not supplied
Net Synch Clock to P3 Disabled
Net Synch Clock on P3 Inactive
Transmit VCI: 65

P3 Clock Master Arbitration Enabled

Name: 908 #2
Contact: BRIAN 2345779
Location: LAB HUB 1

```

The fields in the above display are described in Table 3-13.

Table 3-13 SHow MODule Command Display Field Descriptions

Field	Description
Up Time	The amount of time that the module has been up.
IP Address	The module's IP address.
BootP	The BootP state (enabled or disabled).
S/W Version	The version of application software.
Boot Prom Version	The version of EPROM.
Prompt	The prompt that appears for the module.
Serial Number	The serial number of the module.
Timeout	The console timeout setting.
Net Synch Clock Source	Provides the configured value and the current value for the clock source used to transmit on UNI.
Net Synch Clock to P3	The status (enabled or disabled) of whether the module is supplying Net Synch Clock to P3.
Net Synch Clock on P3	The status (Active or Inactive) of whether the Net Synch Clock is present on P3.
Transmit VCI	The "claimed" vci, as determined by the Multicast Claim and Rebut protocol.
P3 Clock Master Arbitration	The status (enabled or disabled) of the P3 Clock Master Arbitration.
Name	The module name that you defined by using the DEFine MODule NAmE command.
Contact	The contact person name that you defined by using the DEFine MODule CONtAct command.
Location	The module location that you defined by using the DEFine MODule LOCation command.

Example 2

This command displays ARP cache information: `sh mod arp`

```
Hub Id: 5401 Slot ID: 8 WCI 908 ATM-NI CARD APPLICATION 08-03-95 12:23:13
```

ARP Cache

Time-out value: 600 sec

IP Address	MAC Address	Type	Port No.	VPI	VCI
-----	-----	----	-----	---	---

The fields in the above display are described in Table 3-14.

Table 3-14 SHow MODule ARp Command Display Descriptions

Field	Description
Time-out value	The length of time before ARP cache entries are deleted.
IP Address	The IP address of the destination.
MAC Address	The MAC address of the destination.
Type	Dynamic (the only available type in this software version).
Port No.	The port on which the reply was received.
VPI	The VPI value.
VCI	The VCI value.

Example 3

This command displays a summary of IP information: `sh mod ip`

```
Hub Id: 5401 Slot ID: 8 WCI 908 ATM-NI CARD APPLICATION 08-03-95 12:20:54
```

TCP/IP Information

IP Address:	172.16.9.28	Primary Router:	172.16.1.254
Netmask:	255.255.0.0	Secondary Router:	0.0.0.0

Domain:

Domain Name Server: 0.0.0.0 SNMP Authentication: None

SNMP Managers:

No.	IP Address
1	129.17.12.280
2	0.0.0.0
3	0.0.0.0
4	0.0.0.0

The fields in the SHow MODule IP display are described in Table 3-15.

Table 3-15 SHow MODule IP Command Display Descriptions

Field	Description
IP Address	The module's IP address.
Netmask	The module's Netmask.
Primary Router	The primary router's IP address.
Secondary Router	The secondary router's IP address.
Domain	The Domain is hls.com
Domain Name Server	The IP address of the host providing host-names to IP binding.
SNMP Authentication	The status of SNMP access requirements -- either community or none. The community setting denies access unless the module's password is entered.
SNMP Managers	The IP addresses of SNMP managers.

Example 4

This command displays the TFTP boot file and TFTP server addresses:

```
sh mod loa
```

```
Hub Id: 5401 Slot ID: 8 WCI 908 ATM-NI CARD APPLICATION 08-03-95 12:22:01
```

Load Parameters

```
Image File: h908v1.00
Request File: h908
Configuration File: /tftpboot/h908
```

```
TFTP Server Address: 172.16.1.50
```

The fields in the above display are described in Table 3-16.

Table 3-16 SHow MODule LOAd Command Display Descriptions

Field	Description
Image File	The image file to be downloaded to the flash EPROM.
Request File	The request file for BootP.
Configuration File	The file used for TFTP.
TFTP Server Address	The IP address of the TFTP server.

Example 5

This command displays the reset log, which shows the last module resets: `sh mod res lo`

```
Hub Id: 5401 Slot ID: 8 WCI 908 ATM-NI CARD APPLICATION 08-03-95 12:23:51
-----
Reset Log
No.      Date          Time          Reason          Elapsed Time
---      -
1        08-03-95     12:11:56     Software Reset Level 1 0 hrs, 29 min
```

The fields in the above display are described in Table 3-17.

Table 3-17 SHow MODule RESet LOg Command Display Descriptions

Field	Description
No.	The serial number.
Date	The date the module was reset.
Time	The time the module was reset.
Reason	The reason for the reset.
Elapsed Time	The amount of time that has passed since the last reset.

Related Commands

CLear MODule
DEFine MODule

SHoW POrt

Syntax

SHoW POrt *port*

SHoW POrt *port characteristic*

Description

The SHoW POrt command displays port status information. Enter 1 or 2 for the UNI port number; enter ALL to display information for both ports. Table 3-18 lists the characteristics of this command.

Table 3-18 Show POrt Command Characteristic

Characteristic	Selection	Description
STATIStics		Displays traffic information for one or both UNI ports.
VC	<i>vpi vci</i> (optional)	Displays the status of the specified VC. If you do not provide a <i>vpi vci</i> , displays the status of all VCs that are on the specified UNI ports.
VP	<i>vpi</i> (optional)	Displays the status of the specified VP. If you do not provide a <i>vpi</i> , displays the status of all VPs that are on the specified UNI ports.
VCConnection	<i>vpi vci</i> (optional)	Displays the status of the specified VCC. If you do not provide a <i>vpi vci</i> , displays the status of all VCCs that are on the specified UNI ports.
VPConnection	<i>vpi</i> (optional)	Displays the status of the specified VPC. If you do not provide a <i>vpi</i> , displays the status of all VPCs that are on the specified UNI ports.

Example 1

This example shows the screen displayed when SHoW POrt command requests status for both UNI ports:

```
sh po all
```

```
Hub Id: 5401 Slot ID: 8 WCI 908 ATM-NI CARD APPLICATION 08-04-95 13:23:40
-----
Port 1 Configuration and Status
ATM Layer Configuration          Physical Layer Configuration
-----
Maximum VPCs                     255      Transmission Type           STS-3C
Maximum VCCs                     1024     Media Type                  Multi-mode

Port Type                         PRIVATE  ILMI VCI                   16
To-P3 Qmon Threshold              281     From-P3 Qmon Threshold     9001

To-P3 Discard Start               280     To-P3 Discard End         1
From-P3 Discard Start             9000    From-P3 Discard End       1
Default VP/VC Priority             0
Transmit Clock Port Receive-side
Cell Delineation                  TRUE
Number of Active PVCs              3       Number of Active PVPs     3

Port 2 Configuration and Status
ATM Layer Configuration          Physical Layer Configuration
-----
Maximum VPCs                     255      Transmission Type           STS-3C
Maximum VCCs                     1024     Media Type                  Multi-mode

Port Type                         PRIVATE  ILMI VCI                   16
To-P3 Qmon Threshold              281     From-P3 Qmon Threshold     9001

To-P3 Discard Start               280     To-P3 Discard End         1
From-P3 Discard Start             9000    From-P3 Discard End       1
Default VP/VC Priority             0
Transmit Clock Port Receive-side
Cell Delineation                  TRUE
Number of Active PVCs              2       Number of Active PVPs     1
```

Table 3-11 describes the fields that appear in this display for each UNI port.

Table 3-19 SHow PORT ALL Display Fields

Field Type	Field	Description
ATM Layer Configuration	Maximum VPCs	Maximum number of VPCs allowed.
	Maximum VCCs	Maximum number of VCCs allowed.
	Port Type	Public or private.
	To-P3 Qmon Threshold	The depth at which thresholds are defined (when cells put in the buffer exceed the specified depth).
	To-P3 Discard Start	The depth at which cells will start being discarded from the buffer.
	From-P3 Discard Start	The depth at which received cells will start being discarded from the buffer.
	Default VP/VC Priority	The cell priority for cells generated by the SAR on P3.
	Transmit Clock	The clock used by UNI ports for transmitting data.
	Cell Delineation	The value at which cell boundaries are recognized.
	Number of Active PVCs	The number of active PVCs.
Physical Layer Configuration	Transmission Type	The physical transmission type.
	Media Type	The physical media type.
	ILMI VCI	The VCI used by ILMI.
	From-P3 Discard End	The point at which received cells will stop being discarded from the buffer.
	Number of Active PVPs	The number of active VPs.

Example 2

This example shows the screen displayed when the SHow PORT command is entered to display status information for port 1:

```

sh po 1
Hub Id: 5401 Slot ID: 8 WCI 908 ATM-NI CARD APPLICATION 08-03-95 14:57:49
-----
Port 1 Configuration and Status
ATM Layer Configuration          Physical Layer Configuration
-----
Maximum VPCs                     255      Transmission Type          STS-3C
Maximum VCCs                     1024     Media Type                 Multi-mode

Port Type                         PRIVATE   ILMI VCI                  16
To-P3 Qmon Threshold             281     From-P3 Qmon Threshold    9001

```

```

To-P3 Discard Start          280      To-P3 Discard End          1
From-P3 Discard Start       9000     From-P3 Discard End       1
Default VP/VC Priority        0
Transmit Clock      Port Receive-side
Cell Delineation            TRUE

Number of Active PVCs        1      Number of Active PVPs     0
  
```

For a description of each field, refer to Table 3-11.

Example 3

This example shows a sample of the screen displayed when the SHoW POrt STATIStics command is entered:

```
sh po 1 statis
```

```
Hub Id: 5401 Slot ID: 8 WCI 908 ATM-NI CARD APPLICATION 08-04-95 13:24:32
```

```
-----
UNI Port 1 Statistics
-----
```

Port Tx counters of port 1 :

```

Accepted CLP 0, priority 2,3,4 cell count: 126938
Accepted CLP 0, priority 1 cell count:      4055
Accepted CLP 1 cell count:                  0
Unconfigured VPI/VCI count:                0
Dropped CLP 0, priority 2,3,4 cell count:  0
Dropped CLP 0, priority 1 cell count:      0
Dropped CLP 1, cell count                   0
Queue Depth Monitor Threshold Crossings    0
High Water Mark                            2
  
```

Port Rx counters of port 1 :

```

Accepted CLP 0, priority 2,3,4 cell count: 0
Accepted CLP 0, priority 1 cell count:      0
Accepted CLP 1 cell count:                  0
Unconfigured VPI/VCI count:                0
Dropped CLP 0, priority 2,3,4 cell count:  0
Dropped CLP 0, priority 1 cell count:      0
Dropped CLP 1, cell count                   0
Queue Depth Monitor Threshold Crossings    0
High Water Mark                            0
  
```

Table 3-20 describes the fields for each part of the above display.

Table 3-20 SHow PORT 1 STATISTICS Command Display Descriptions

Field	Description
Accepted CLP 0, priority 2,3,4 cell count	The number of the least discardable cells (with a Cell Loss Priority of 0, and a priority of 2, 3, or 4).
Accepted CLP 0, priority 1 cell count	The number of moderately discardable cells (with a Cell Loss Priority of 0, and a priority of 1).
Accepted CLP 1 cell count	The number of the most discardable cells.
Unconfigured VPI/VCI count	The number of unconfigured VPI VCI cells (not in CAM).
Dropped CLP 0, priority 2,3,4 cell count	The number of cells dropped with these priorities.
Dropped CLP 0, priority 1 cell count	The number of cells dropped with these priorities.
Dropped CLP 1, cell count	The number of cells dropped with these priorities.
Queue Depth Monitor Threshold Crossings	The number of cells dropped by the receive buffer when the queue depth threshold is exceeded.
High Water Mark	The number of cells that have resided in the receive buffer since the last measure of the high water mark.

Example 4

This example displays information about VCCs for port 1:

```
sh po 1 vcc
Hub Id: 5401 Slot ID: 8 WCI 908 ATM-NI CARD APPLICATION 08-04-95 13:25:13
```

```
-----
```

Port	VPI	VCI	P3-VPI	P3-VCI	Type	Direction	Status
----	---	---	-----	-----	----	-----	-----
1	2	300	3584	64	PP	- N/A -	Active
1	10	16	3584	256	PP	- N/A -	Active
1	2	500	3584	50	PP	- N/A -	Active

Example 5

This example displays information for VC 25 3587 on UNI port 1:

```
sh po 1 vc 25 3587
```

Related Commands

CLear POrt
DEFine POrt

SHoW STP

Syntax

SHoW STP
 SHoW STP *characteristics*

Description

The SHoW STP command displays the Spanning Tree parameters and traffic statistics for the module. Table 3-21 lists the characteristics of the SHoW STP command.

Table 3-21 SHoW STP Command Characteristics

Characteristic	Selection	Option	Description
STATIStics			Displays the spanning tree traffic statistics.
VLAN	<i>vpi</i>	CONFIguration	Specifies the VLAN for which Spanning Tree parameters are to be displayed. If this parameter is not specified, Spanning Tree parameters for all VLANs on the module are displayed. CONFIguration option. The SHoW STP VLAN <i>vpi</i> CONFIguration command is equivalent to the SHoW STP VLAN command (see Example 1, below).

Example 1

A screen similar to the following appears when you enter the SHoW STP VLAN command for a specific VLAN (or you can enter the SHoW STP command without specifying a VLAN to display a similar screen for all VLANs):

```

908-->sh stp vlan 3585
Hub Id: 64b6 Slot ID: 4 WCI 908 ATM-NI CARD APPLICATION 07-02-95 11:08:25
-----
                        Spanning Tree Parameters
Virtual LAN VPI:          3585          Virtual LAN Name:
STP Mode:                 Enabled       Designated Root:
0080bb64b640
Bridge Priority:          32768         Designated Root Priority:
32768
Topology Changes:        0             Direction to Root:
0
Time Since Last Chg:     59            Root Path Cost:
0
Bridge Timer (secs)      Actual Timer (secs)
  Hello Time:            2             Root Hello Time:          2
  Info Lifetime:         20            Root Info Lifetime:       20
  Forward Delay:         15            Root Forward Delay:       15

State                    UNI Port 1  UNI Port 2  P3 Port
                        Forwarding   Disabled    Forwarding
    
```

Port Priority	128	128	10
Path Cost	100	100	1
Physical Address	0080bb64b640	0080bb64b640	0080bb64b640
Designated Bridge	0080bb64b640	0080bb64b640	0080bb64b640
Designated Priority	32768	32768	32768
Fwd Transitions	9	26	2

Example 2

A screen similar to the following appears for every VLAN when you enter the SHow STP VLAN STATIStics command, or you can specify a VLAN, as shown:

```
908-->sh stp vlan 3585 statis
Hub Id: 64b6 Slot ID: 4 WCI 908 ATM-NI CARD APPLICATION 07-02-95 11:09:10
```

Spanning Tree Traffic Statistics

Virtual LAN VPI:	3585	Virtual LAN Name:		
	Port 1	Port 2	P3 Port	
	-----	-----	-----	
Sent Config Msgs	19668	6005	19707	
Rcvd Config Msgs	2741	89	2752	
Sent Top Chg Msgs	4	11	6	
Rcvd Top Chg Msgs	75	106	2	

Related Command

DEFine STP

TELnet

Syntax

TELnet *host port*

TELnet *ipaddress port*

Description

The TELnet command is used to establish a Telnet session to the specified host. The host can be specified using its IP address, or you can enter a host name that will be resolved by the domain name server. This command can only be issued from a local console.

During an active Telnet session, you can return to the command console mode by pressing the Break key. You can then enter another console command for the module.

To establish a Telnet session with a host that has an IP address of 120.47.8.100, enter the following command:

```
tel 129.47.8.100
```

