CHAPTER 8

Equipment Management

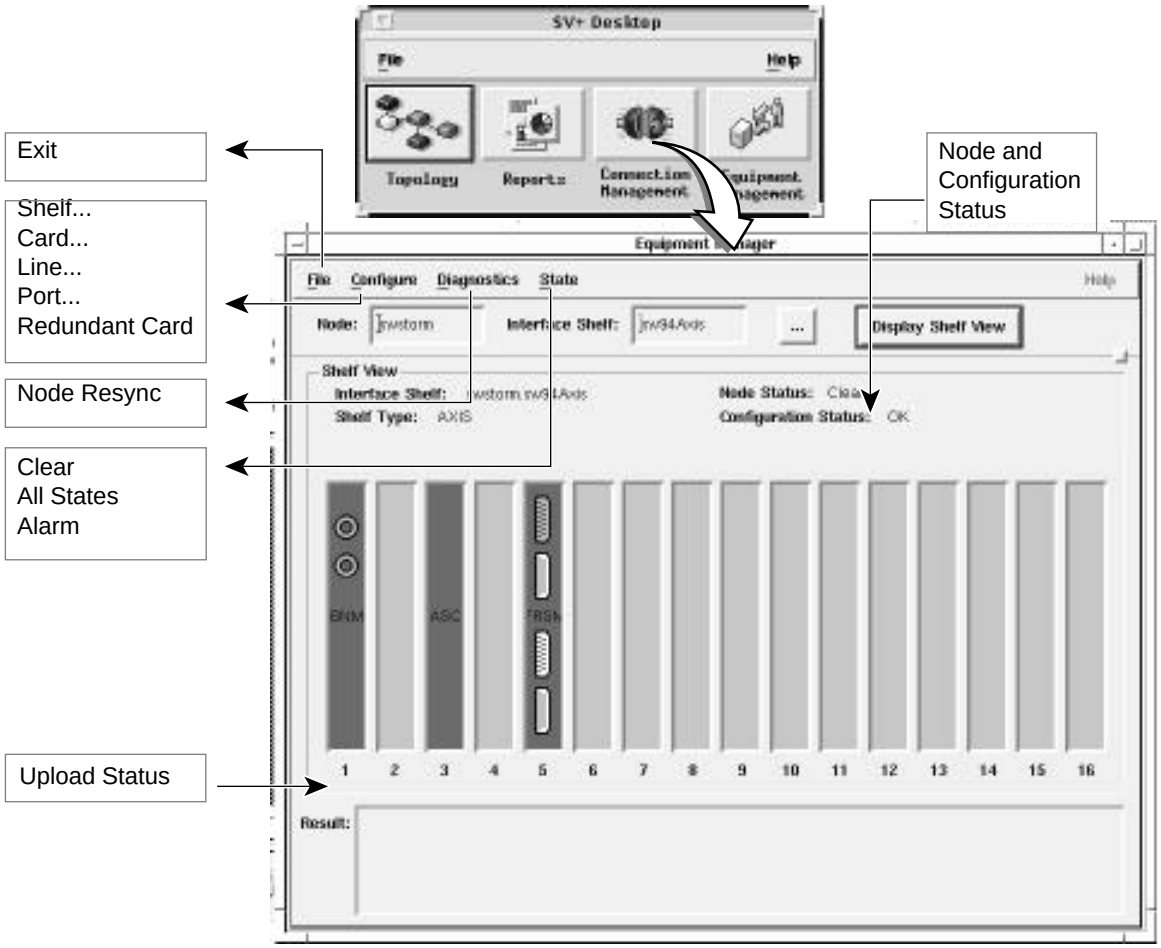
Overview

The StrataView Plus Equipment Manager can be presented from either the SV+ desktop icon, or from an AXIS node icon or a BPX node icon (which has AXIS nodes connected to its shelf) on the HP OpenView submap.To launch Equipment manager from HpOpenView submap, the StrataView Plus core processes must be running. The Equipment Manager contains tools for configuring AXIS-shelf cards, lines, and ports and may be viewed by multiple users at various SV+ workstations. However, a single SV+ desktop cannot run multiple sessions of the Equipment Manager.

This chapter describes the SV+ Equipment Manager window elements and subwindows, and provides guidelines for:

- Line configuration, including dsx1(T1/E1) and dsx3(T3/E3)
- Port configuration, FRSM ports, AUSM ports and BNM (PLCP) ports.
- Alarm display

Figure 8-1 Equipment Manager Window



Equipment Manager Window

The Equipment Manager window displays the current AXIS cards for a specified shelf and current status.

The status of each card is color coded as follows:

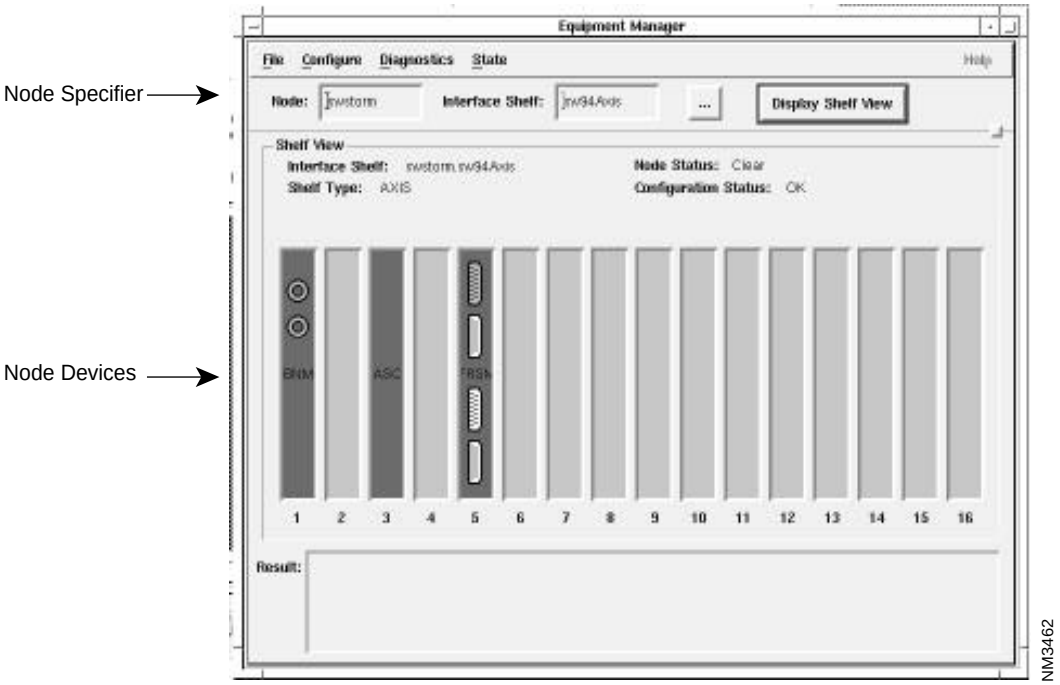
Green	active / OK
Blue	Standby / OK
Red	Failed Mismatch Boot
Brown	Self test
Wheat	Held in reset
Grey	Boot/Empty Slot

The status of each line is color coded as follows:

Green	Clear state
Red	Major alarm
Yellow	Minor alarm
Wheat	Line missing or disabled
White	Loopback

Equipment Manager Window

Figure 8-2 Equipment Manager: AXIS Shelf



Node Name	Select the name of the node by using the popup dialog box from this field.
Interface Shelf	Use this field to specify which interface shelf should be used for card display. The button with the "..." label next to the Interface Shelf name text entry field presents a popup dialog box from which to select a shelf name.
Display Shelf View	Use this button to load the card cage display with the cards for the selected node or shelf.
Shelf View	This region contains a graphical display of the cards in the interface shelf. The cards are represented as buttons. The card type is printed on the card. Under each card is the slot number. You can select one card at a time for menu item actions.
Interface Shelf	Displays the name of the node/shelf.
Shelf Type	A read-only field indicating the shelf type. This is currently AXIS.
Result	This scrollable text field contains the results of operations done in this window. For example if you enter an invalid node name, the error message displays in the result window.

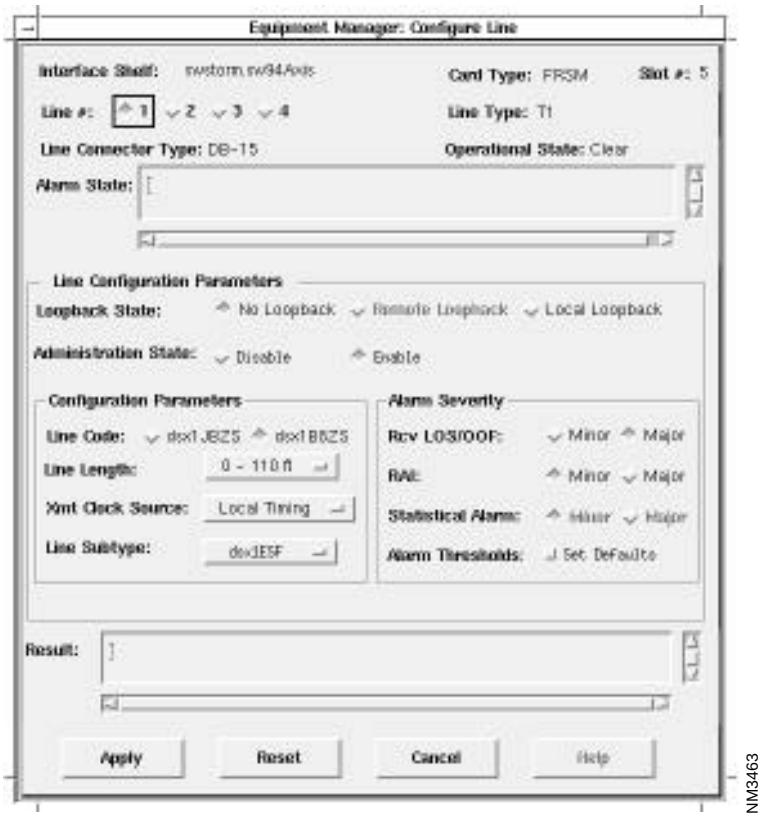
Node Status	The current aggregate alarm state for the node. This is a read-only field that indicates the most critical card, line, port, channel, or peripheral alarm on the node.
Configuration Status	A read-only field that indicates the current state of the configuration upload: OK, INIT, SYNC

Equipment Manager - File - Exit Menu

Use this menu to close the Equipment Manager window.

Equipment Manager - Configure - FRSM Line Menu

Figure 8-3 Equipment Manager: Configure FRSM Lines (AXIS)



Interface Shelf	Current shelf name.
Card Type	Current card type.
Slot #	Current slot number.

Line #	Line selection area. For FRSM cards there are 4 lines on each card. For BNM cards there is only one line on each card, this field is not displayed for BNM cards. Parameters for the selected line are shown in the Configuration Parameters section of this window.
Line Type	A read-only field set to one of the following values: T1 — E1 Extended SuperFrame DS1 — (CCS) CCITT Rec. G.704
Operational State	Current state of the line. The state values are: Clear, Alarm, and Disabled.
Alarm State	This scrollable window contains descriptions of all of the alarms that are currently active on this line. The alarm strings are derived from the alarm bitmap stored on the NE. They do not have the same level of detail as the alarms that are visible in the Event Browser.
Line Configuration Parameters	The line configuration parameters displayed are either T1 or E1 parameters based on card type. This region displays the following parameters:
Administrative State	Select either
Enable or Disable	Loopback State Select one of the following: • No Loopback • Remote Loopback • Local Loopback
Configuration Parameters	
Line Coding	This is a radio box with the following choices. • For T1 line types, select either dsx1JBZS (default) or dsx1B8ZS. • For E1 line types, select either dsx1AMI (default) or dsx1HDB3
Line Length	Select from the following ranges for T1 or E1 lines: T1 — E1 0–110 ft — 75 ohms (BNC connection) 110–220 ft — 120 ohms (DB-15 connection 230–330 ft 440–550 ft 550–660 ft 660 ft
Xmt Clock Source	This is an option menu with the following choices: LoopTiming, LocalTiming, and ThroughTiming. The default is LocalTiming.

Line Subtype

Select from the following ranges for either T1 or E1 lines:

T1	E1
dsxESF	dsx1E1CCS
dsxID4	dsx1E1CCSCRC
	dsx1E1CAS
	dsx1E1CASCR
	Clear Channel

Alarm Severity

This region is used to set the severity level for the following alarms: receive LOS and OOF, RAI, and statistical alarms. The severity levels of individual statistical alarms can not be set, they are set as a group.

Rcv LOS/OOF

A radio box with two choices: Major and Minor. Defaults to Major.

RAI

A radio box with two choices: Major and Minor. Defaults to Minor.

Alarm Threshold

When Set Default Values is selected the line is configured with default alarm threshold values.

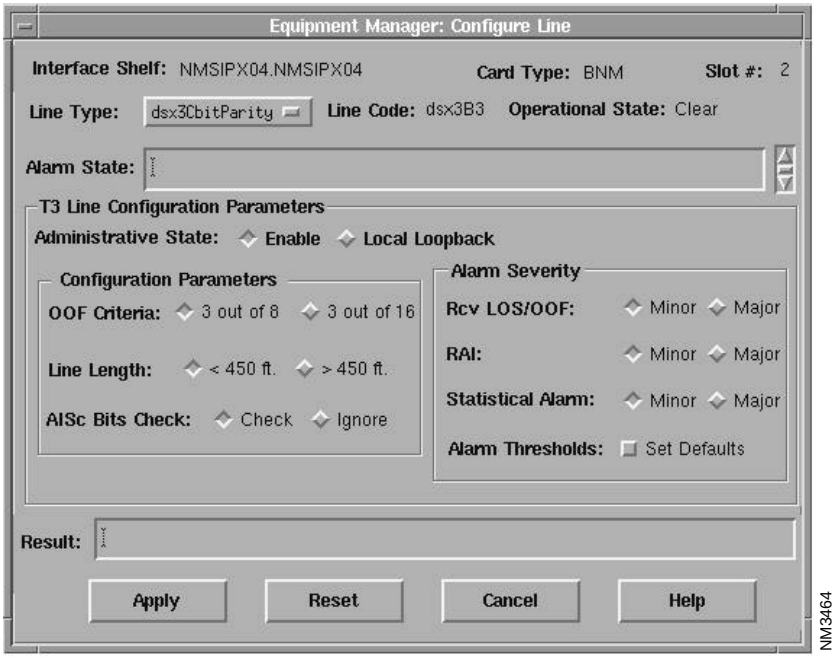
For Rcv LOS/OOF thresholds the following values are used

Table 8-1

Alarm	15 Minutes	24 Hours
Line Code Violation (LCV)	14	134
LCV Errored Seconds (LES)	12	121
LCV Severely Errored Seconds (LSES)	10	100
CRCES	12	121
SEFS	2	17
AISS	2	17
UAS	10	10

Equipment Manager - Configure BNM Line Menu

Figure 8-4 Equipment Manager: Configure BNM Lines (AXIS)



Interface Shelf	Current shelf name.
Card Type	Current card type.
Slot #	Current slot number.
Line #	Line selection area. • For FRSM cards there are 4 lines on each card. • For BNM cards there is only one line on each card, this field is not displayed for BNM cards. Parameters for the selected line are shown in the Configuration Parameters section of this window.
Line Code	Read-only field set to one of the following values: **T3**: dsx3B3ZC **E3**: e3HDB3
Line Type	Select one of the following values: **T3**: dsx3CbitParity **E3**: e3Framed, e3PLCP
Operational State	This field describes the actual state of the line. The state values are: OK, Failed, Local Loopback, Remote Loopback, Remote Test.

Alarm State	This scrollable window contains descriptions of all of the alarms that are currently active on this line. The alarm strings are derived from the alarm bitmap stored on the NE. They do not have the same level of detail as the alarms that are visible in the Event Browser.
Line Configuration Parameters	The line configuration parameters displayed are either T1 or E1 parameters based on card type. This region displays the following parameters:
Loopback State	This is a radio box with the following choices: • No loopback • Enable • Disable • Local Loopback
Configuration Parameters	Use this configuration area to set T3 or E3 parameters for specific card type.
Line Code	Read-only field set to one of the following values: **T3** — dsx3B3ZC **E3** — e3HDB3
OOF Criteria	Select either: • 3 out of 8 or • 3 out of 16
Line Length	This is a option menu with the following choices....
AISc Bits Check	Ignore.
Alarm Severity	This region is used to set the severity level of alarms. The configurable alarms are the same as those described for the FRSM Line Configuration screen. The default values for the alarm thresholds are different
RAI	A radio box with two choices: Major and Minor. Defaults to Minor.
Statistical Alarm	A radio box with two choices: Major and Minor. Defaults to Minor.

Alarm Threshold

Select Set Defaults to configure the line with default alarm threshold values.

Rcv LOS/OOF Threshold values are the same as those for the FRSM/AUSM cards.

Statistical alarms have three additional threshold values:

- P-bit Parity Code Violation
- PVC Errored Seconds
- PVC Severely Errored Secs.

Table 8-2 lists the default values used for the statistical alarm thresholds.

Table 8-2

Alarm	15 Minutes	24 Hours
Line Code Violation	3870	38650
LCV Errored Seconds	86	864
LCV Severely Errored Seconds	4	40
P-bit Parity Code Violation (PCV)	382	3820
PCV Errored Seconds	86	864
PCV Severely Errored Seconds	4	40
Severely Errored Framing Second	120	1200
Alarm Indication Signal Second	120	1200
Unavailable Seconds	120	1200

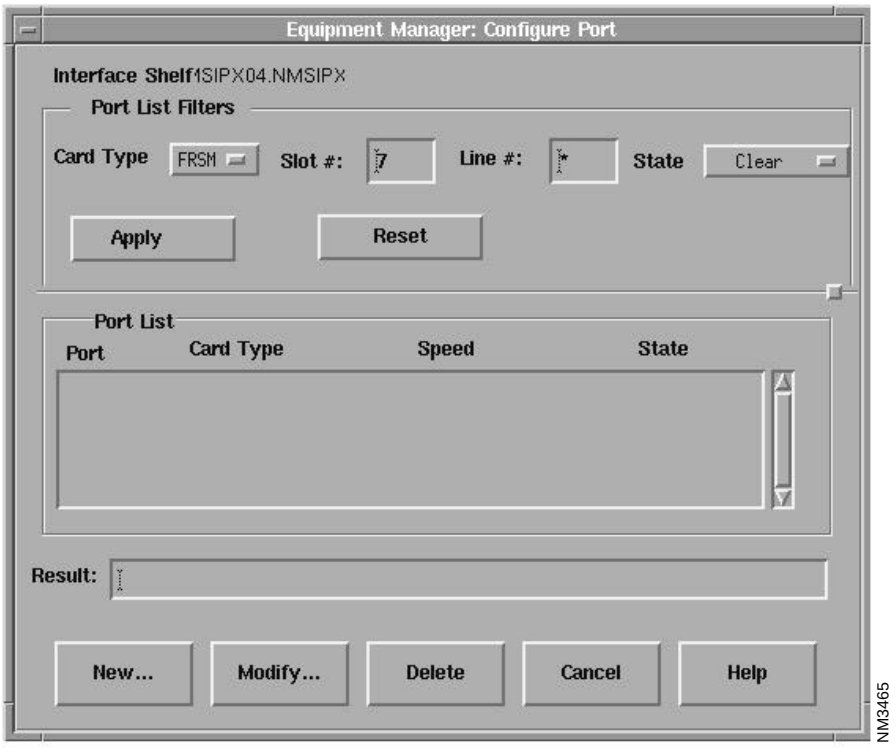
Equipment Manager - Configure - Port Menu

The Port List dialog window is invoked by first selecting a card in the Shelf View region and then selecting Configure->Port from the menu bar of the Equipment Manager window. There are three window types for port configuration, depending on the card type.

FRSM cards	Ports have to be manually added by selecting New on the Port List screen.
BNM cards	A single port is automatically added for each line. The “port” on the BNM card refers to the PLCP port (for DS3).

To see a list of ports, click the Apply button of the Configure Port window. Click on a displayed port name, then use the Add, Modify, or Delete button to configure or remove the selected port.

Figure 8-5 Equipment Manager: Configure FRSM Port (AXIS)

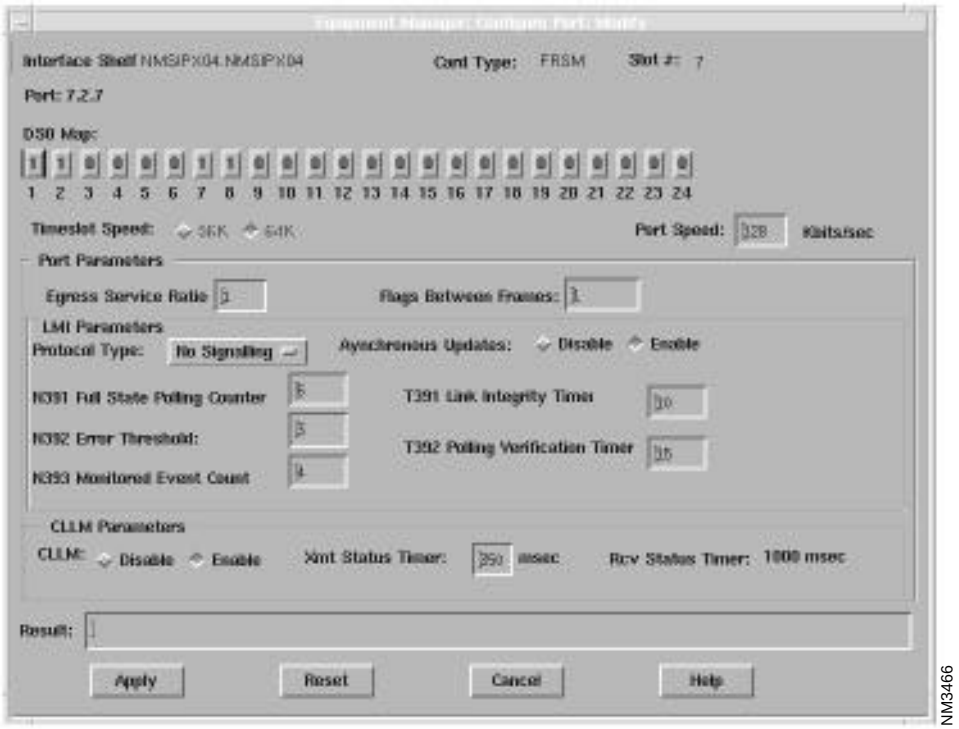


Port List	Scrollable read-only window that displays ports which match the filter criteria. Each entry in the list has the following format: 1st field: Port number (used by StrataView Plus) <slot>.<line>.<physical port > 2nd field: Card type 3rd field: Port type— Displayed port types are Frame Relay, Frame Forwarding, FUNI, ATM, and CE. 4th field: Port State—A port is in Clear, Down, or Alarm State. Select a single entry at a time from this list to modify or delete.

Result field	A scrollable read-only window to display the error message or result of the operation. The detailed content of this field will be determined during design
New Button	Type a slot number to activate the New Button, then use the New Button to add new port configurations for FRSM cards. This button presents the new port screen. Once the user requests an add, all buttons on this window will be disabled and this window will stay open until the action is completed
Modify Button	Use this button to modify port parameters. The modify port screen that opens when you click the Modify button is similar to the new port screen
Delete Button	Use this button to delete ports from the network.The result of the operation will be displayed in the result scrollable area. Only FRSM ports may be deleted

Equipment Manager - Configure New Port - FRSM Port Window

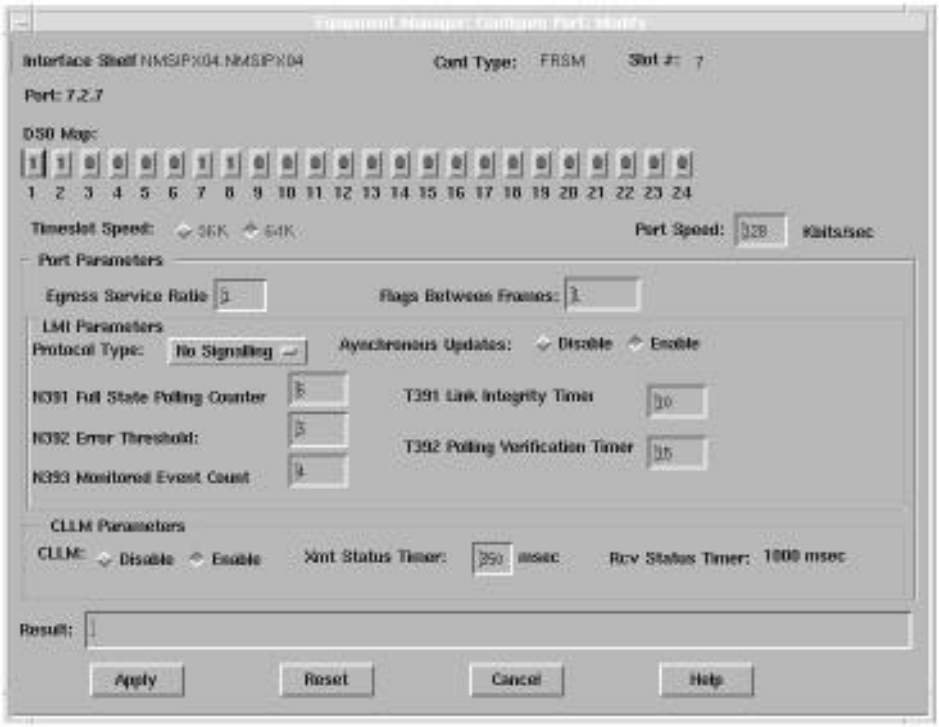
Figure 8-6 Equipment Manager: Configure New FRSM Port (AXIS)



Interface Shelf	Current shelf name.
Card Type	Current card type. This field also indicates if the card is channelized.
Line Type	Displays line types for T1 or E1.
Subtype	Displays subtypes for T1 or E1. **T1**: dsx1ESF, dsx1D4 **E31**: dsx1E1CCS, dsx1E1CCSCRC, dsx1E1CAS, dsx1E1CASCRC, Clear Channel
Slot #	A text field that displays the current slot number. The user may modify this field to facilitate the configuring of other cards.
Line #	A radio box to select which line. For FRSM cards there will be 4 lines.
DS0 Map	This is read-only area that shows all the DS0 timeslots for the line. A T1 line will have 24 timeslots, a E1 line will have 32 timeslots. A “1” indicates that the timeslot is in-use

Timeslot Speed	This is a radio box with two choices: 56K or 64K.
Starting Channel Number	This field will be the starting timeslot. The starting channel number is the port number (id) for the port
Port Speed	The port speed for this port. This field is used, along with the Timeslot speed, to determine the number of DS0's that should be allocated for this port. Note: a sub-rate speed will occupy an entire DS0 timeslot.
Port Parameters	
Egress Service Ratio	This field is the number of times egress queue 2 is serviced for every service of egress queue 3. The values range from 1 to 15. The default is 1.
Flags between Frames	A text field that has values from 1 to 10. Default is 1
LMI Fields	
Protocol Type	A pull down menu with these choices: NoSignalling, StrataLMI, AnnexAUNI, AnnexDUNI, AnnexANNI, AnnexDNNI, and Other. The default is No Signalling.
Asynchronous Updates	This is a radio box with two choices: Enable and Disable. The default is Enable.
N391 Full Status Polling Counter	This is a text field with a value range of 1.255. The default is 6
N392 Error Threshold	This is a text field with a value range of 1.10. The default is 3.
393 Monitored Event Count	This is a text field with a value range of 1.10. The default is 4.
T391 Link Integrity Timer	Type a value range of 5.30. The default is 10.
T392 Polling Verification Timer	Type a value range of 5.30. The default is 15.
Result	Scrollable read-only window displays the result of the operation (including any error messages).
Apply	Use this button to add the new port configurations in the network. The result will be displayed in the Result window. After you press the Apply button, all buttons on this window are disabled and the window stays open till the action is completed.

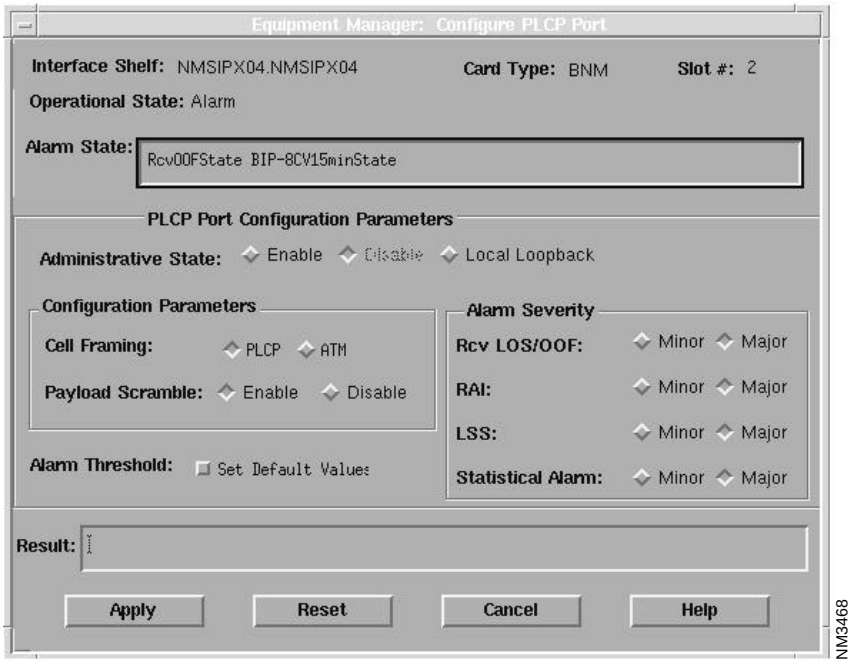
Equipment Manager - Configure Port - Modify Window



Equipment Manager - Configure PLCP Port Window

Use this window to configure the PLCP protocol layer of BNM cards. The port number will always be <slot>.1.1. This window has the same layout as the configure line screens, with the following exceptions.

Figure 8-7 Equipment Manager: Configure BNM PLCP Port (AXIS)



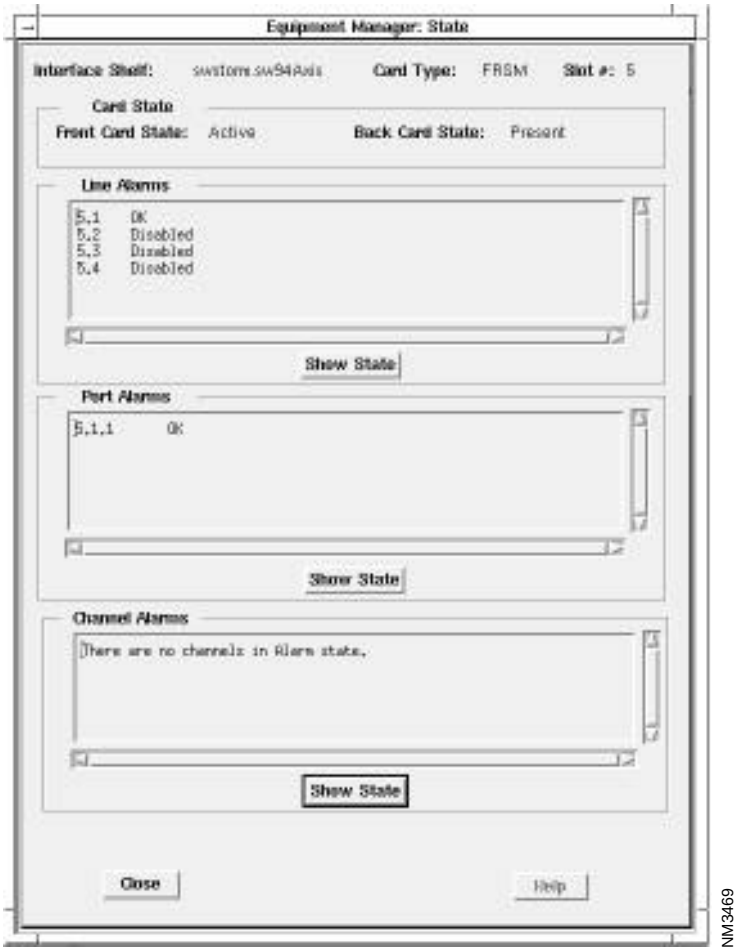
Cell Framing	This is a read-only field. For DS3 it is set to PLCP. For E3 it is set to ATM.
Payload Scramble	This is a radio box with two choices: Enable and Disable. The default is Disable.
Alarm Severity	
Alarm Threshold Values	If Set Default Values is selected, the port will be configured with the default values. The following values are used for Code Connected, Code Rx Link Down and Rx Link Up: • Code Connected = 0 • Code Rx Link Down = 3 • Code Rx Link Up = 6 Table 8-3lists the defaults for the statistical alarm thresholds.

Table 8-3 Statistical Alarm Thresholds

Alarm	15 Minutes	24 Hours
BIP-8 Code Violation	359,000	3584000
BIP-8 Errored Seconds	86	864
BIP-8 Severely Errored Seconds	4	40
Severely Errored Framing Second	120	1200
Unavailable Seconds	120	1200

Equipment Manager - State Menu

Figure 8-8 Equipment Manager State Window



Interface Shelf	This text field displays the current shelf name.
Card Type	This text field displays the current card type.
Slot #	This text field displays the current slot number. Type in the number of the slot containing the card you want to configure. The other fields will change to reflect the contents of the slot number.
Card State	Displays front and back states of cards
Front Card State	This text field displays the state of the front card. The values for this field are: No Card, Standby, Active, Failed, Self Test, Held in Reset, Mismatch, and Unknown.
Back Card State	This text field displays the state of the back card (either Present and Not Present)

Line Alarms	This region displays the front and back card states.
Operational State	This text field contains the current operational state
Alarm State	This text field details the current alarm state.