CHAPTER 8

Interface Status

You can view status details for any interface through interface status windows, which are associated with each particular line card.

This chapter contains the following information:

- Interfaces and Related Technology-Specific Windows
- Generic Interface Status
- SONET Interface Status
- ATM Interface Status
- DS-3 Interface Status

Interfaces and Related Technology-Specific Windows

Interfaces on line cards can support multiple technologies. Status windows are technology-specific. For example, a DS-3 interface supports two technologies:

- Generic
- DS-3

Therefore, if you want to view the status of a DS-3 interface, you need to view two windows:

- Generic Interface Status window
- DS-3 Interface Status window

This same process is applicable to DS-3, ATM, or Ethernet interfaces. The following table outlines which technology-specific status windows apply to each interface type.

Table 8-1 Interface Types and Status Windows

Interface Type	Technology-Specific Status Window
DS-3	Generic DS-3
ATM	Generic ATM SONET

Table 8-1 Interface Types and Status Windows

Interface Type	Technology-Specific Status Window
Ethernet	Generic
POS	Generic SONET

Generic Interface Status

The Generic Interface Status section covers the following areas:

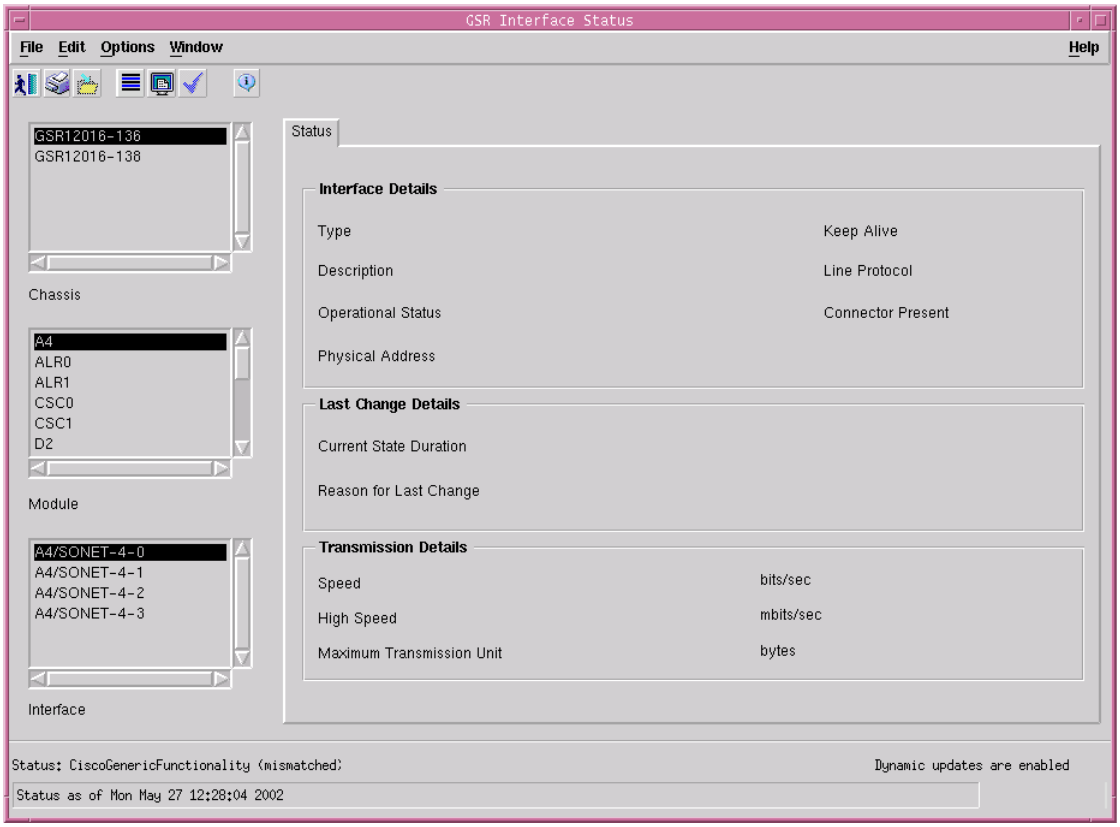
- Viewing the Generic Interface Status Window
- Generic Interface Status Window—Detailed Description

Viewing the Generic Interface Status Window

To view the Generic Interface Status window for any type of interface, proceed as follows:

Step 1 Right-click on the selected line card, then choose **CGM Management>Physical>Interface> Generic>Status**.

Figure 8-1 Generic Interface Status Window



Step 2 Choose the chassis, module, and interface from the list boxes at left. The corresponding details for the selected module appear.

Generic Interface Status Window—Detailed Description

The Generic Interface Status tab has three areas:

- Interface Details
- Last Change Details
- Transmission Details

Interface Details

The Interface Details area displays the following fields:

Type—Type of interface.

Description—Information about the interface. Generally contains the product name and the version of the interface hardware or software.

Operational Status—Current operational status of the interface. Possible values are as follows:

- Up—Ready to pass packets (if admin status is changed to up, then operational status should change to up if the interface is ready to transmit and receive network traffic)
- Down—If admin status is down, then operational status should be down
- Testing—In test mode, no operational packets can be passed
- Unknown—Status can not be determined for some reason
- Dormant—Interface is waiting for external actions
- NotPresent—Some component is missing, typically hardware
- LowerLayerDown—Down due to state of lower layer interface

Physical Address—Interface's address at its protocol sub-layer. For example, an 802.x interface normally contains a MAC address. For interfaces that do not have such an address (such as a serial line), this object should contain an octet string of zero length.

Keep Alive—Displays whether keepalives are enabled or not on this interface.

Line Protocol—Displays whether the line protocol is up or not.

Connector Present—If the interface sublayer has a physical connector, this object has the value true. Otherwise, this value will be false.

Last Change Details

The Last Change Details area displays the following fields:

Interface Last Change—Value of system up time at the time the interface entered its current operational state. If the current state was entered prior to the last re-initialization of the local network management subsystem, then this object contains a zero value.

Reason for Last Change—Reason for the interface's last status change.

Transmission Details

The Transmission Details area displays the following fields:

Speed—(in bps) Estimate of the interface's current bandwidth in bits per second.

High Speed—Estimate of the interface's current bandwidth in units of 1,000,000 bits per second.

Maximum Transmission Unit—Size of the largest packet which can be sent or received on the interface, specified in octets.

SONET Interface Status

The SONET Interface Status section covers the following areas:

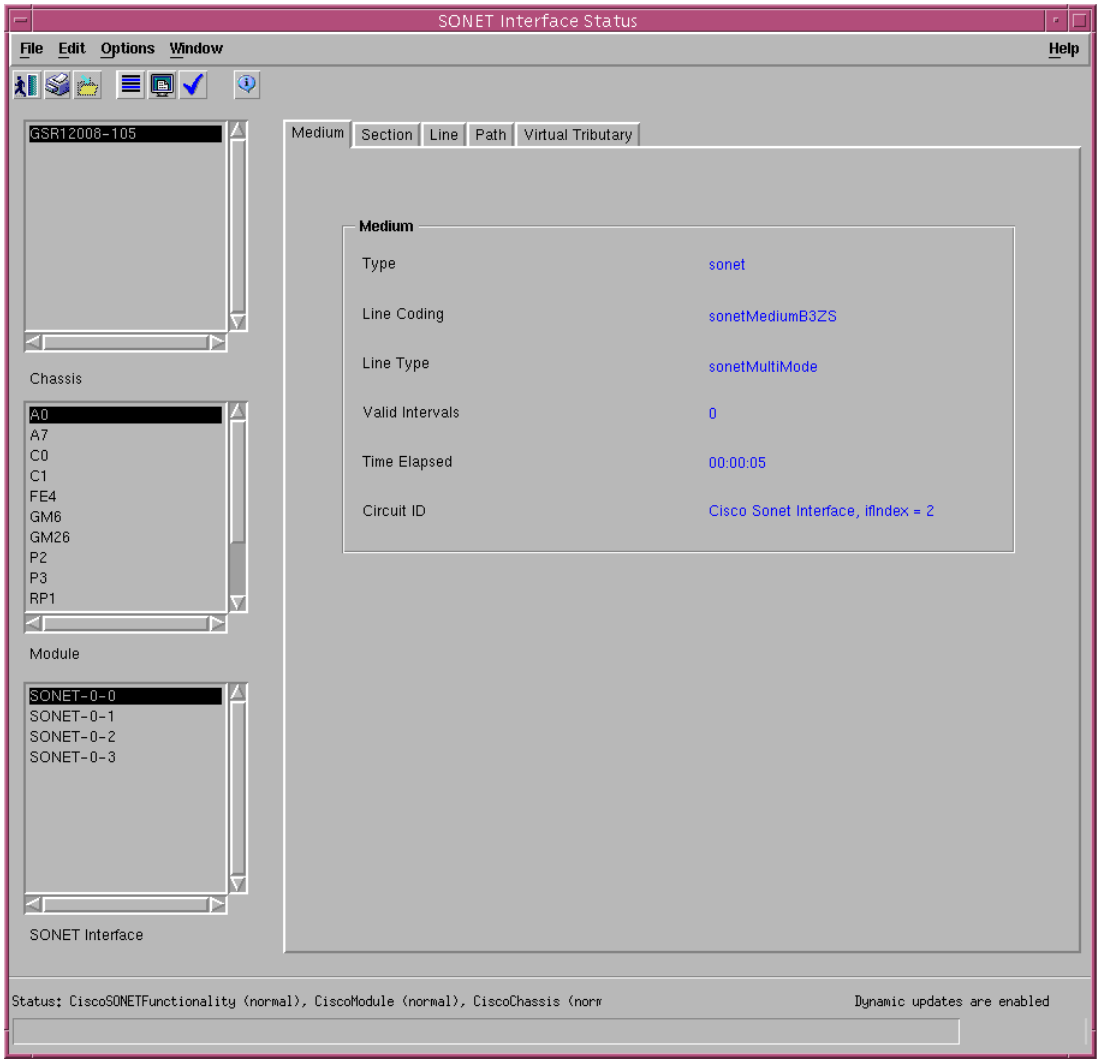
- Viewing the SONET Interface Status Window
- SONET Status Window—Detailed Description

Viewing the SONET Interface Status Window

To view the SONET status window for any type of interface, proceed as follows:

Step 1 Right-click on the selected line card, then choose **CGM Management>Physical>Interface> SONET>Status**.

Figure 8-2 SONET Interface Status—Medium Tab



Step 2 Choose the chassis, module, and SONET interface from the list boxes at left. The corresponding details for the selected interface appear in the tabs at right.

SONET Status Window—Detailed Description

The Sonet Status Window contains five tabs:

- Medium
- Section
- Line

- Path
- Virtual Tributary (not applicable for CGM)

Medium

The Medium tab displays the following fields:

Type—Displays if the signal used across this interface is SONET or SDH.

Line Coding—Type of line coding used in the interface. Can be B3ZS for electrical SONET signals or NRZ for optical SONET signals.

Line Type—Line type for the interface. Can be short range single mode, long range single mode, or multi-mode for fiber interfaces; for electrical interfaces, it can be coax or UTP; and for all other line types it will be other.

Valid Intervals—Number of previous intervals for which valid data is stored.

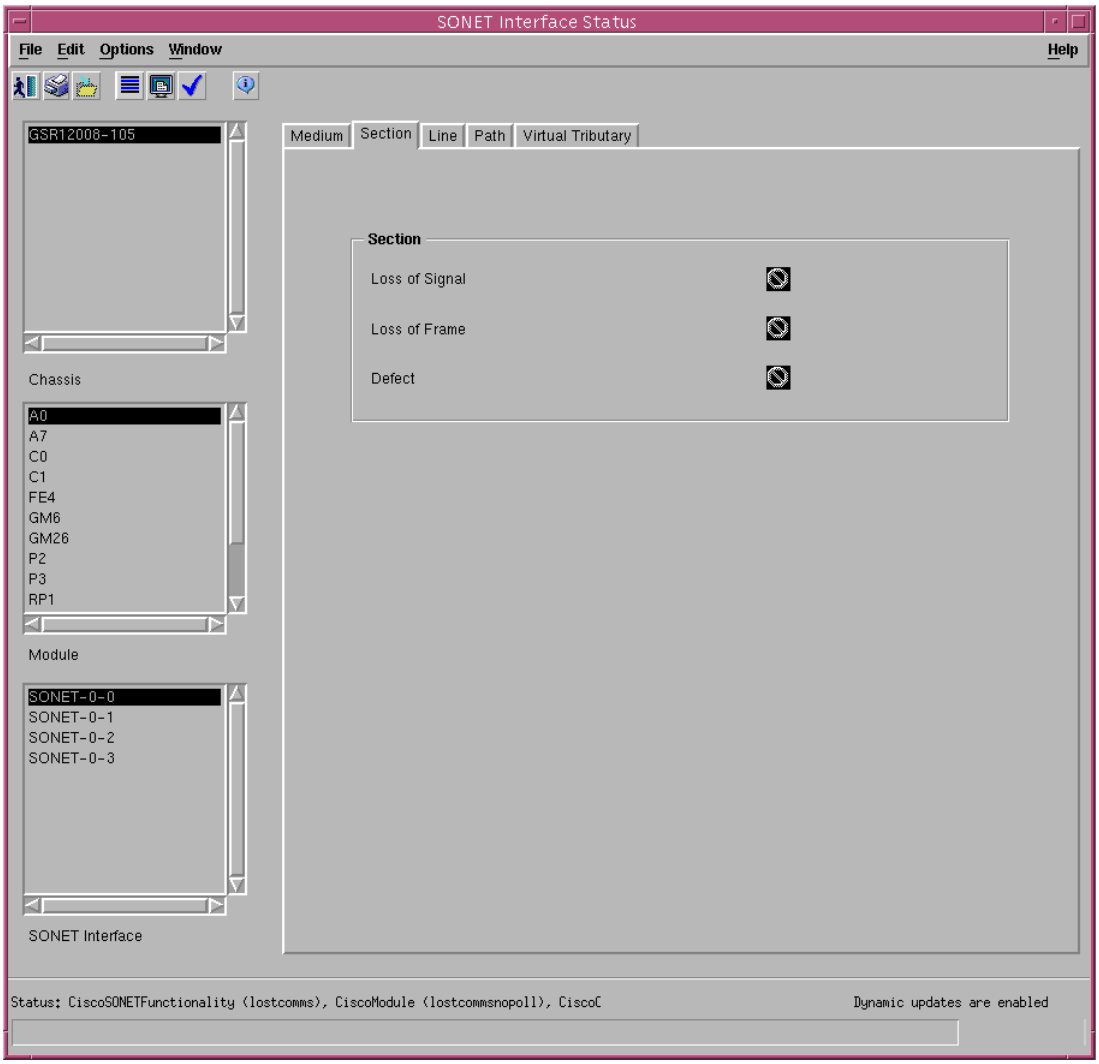
Time Elapsed—Time elapsed (in seconds) after the start of the current error-measurement period. Includes partial seconds.

Circuit ID—Transmission vendor's circuit identifier.

Section

The Section tab appears as follows.

Figure 8-3 SONET Interface Status—Section Tab



The Section tab displays the following fields:

Loss of Signal—Presence or absence of signal loss in the SONET section.

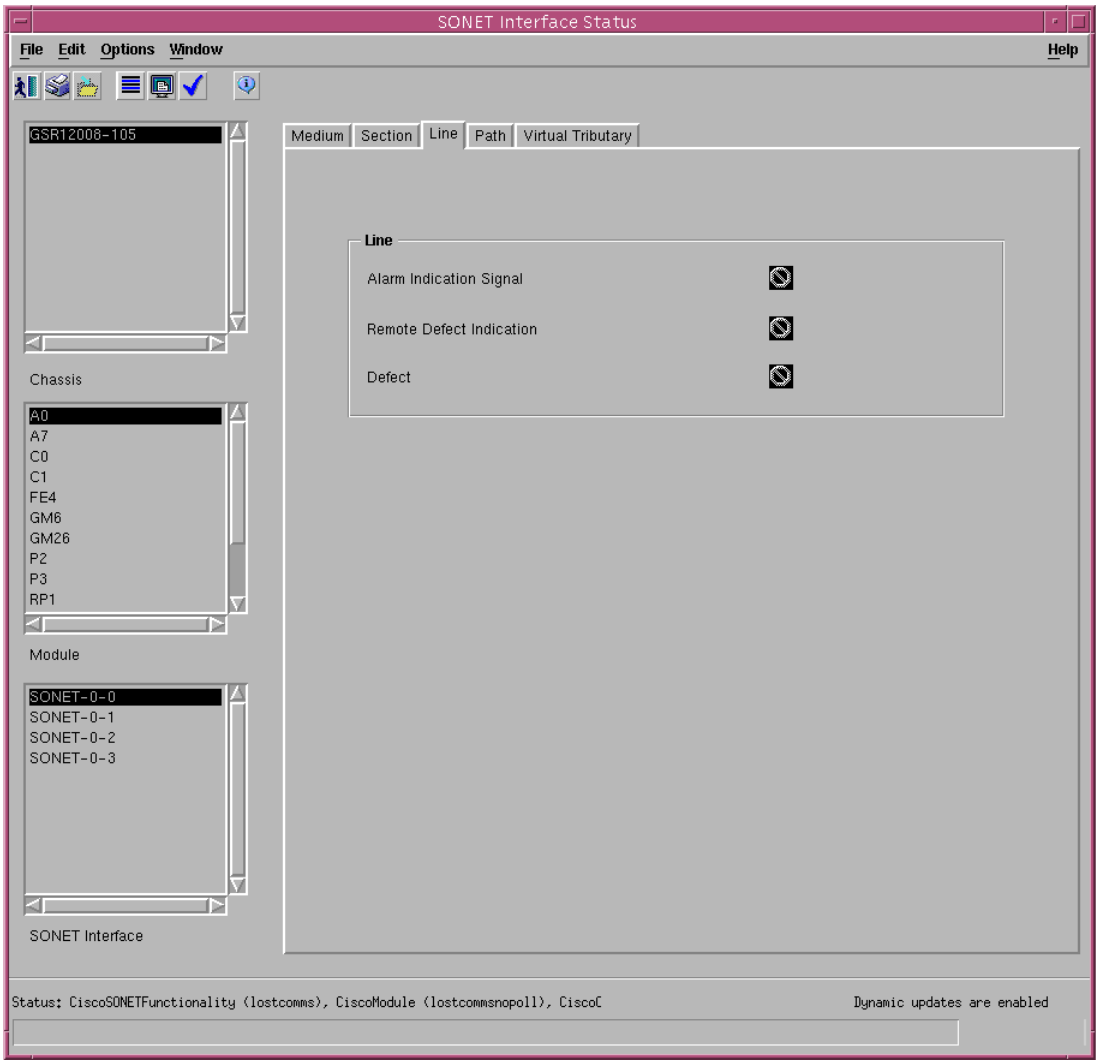
Loss of Frame—Presence or absence of frame loss in the SONET section.

Defect—Presence or absence of section defects.

Line

The Line tab appears as follows.

Figure 8-4 SONET Interface Status—Line Tab



The Line tab displays the following fields:

Alarm Indication Signal—Presence or absence of alarm signals in the SONET line.

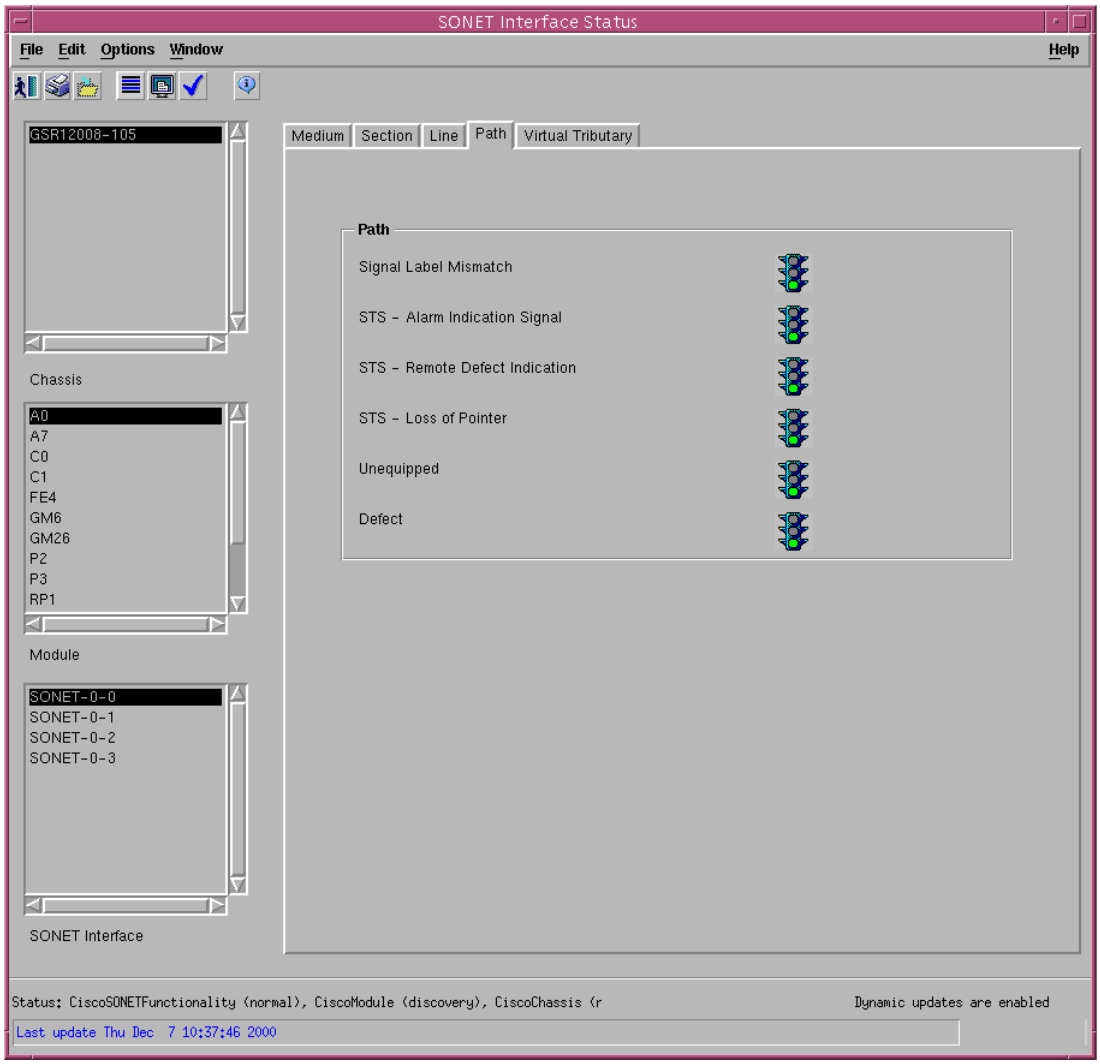
Remote Defect Indication—Presence or absence of remote defects in the SONET line.

Defect—Presence or absence of line defects.

Path

The Path tab appears as follows.

Figure 8-5 SONET Interface Status—Path Tab



The Path tab displays the following fields:

Signal Label Mismatch—Presence or absence of signal label mismatch in the SONET path.

STS - Alarm Indication Signal—Presence or absence of alarm signal in the SONET path.

STS - Remote Defect Indication—Presence or absence of remote defects in the SONET path.

STS - Loss of Pointer—Presence or absence of pointer loss in the SONET path.

Unequipped—Presence or absence of path equipment errors.

Defect—Presence or absence of path defects.

Virtual Tributary

The Virtual Tributary tab is not applicable for CGM.

ATM Interface Status

The ATM Interface Status section covers the following areas:

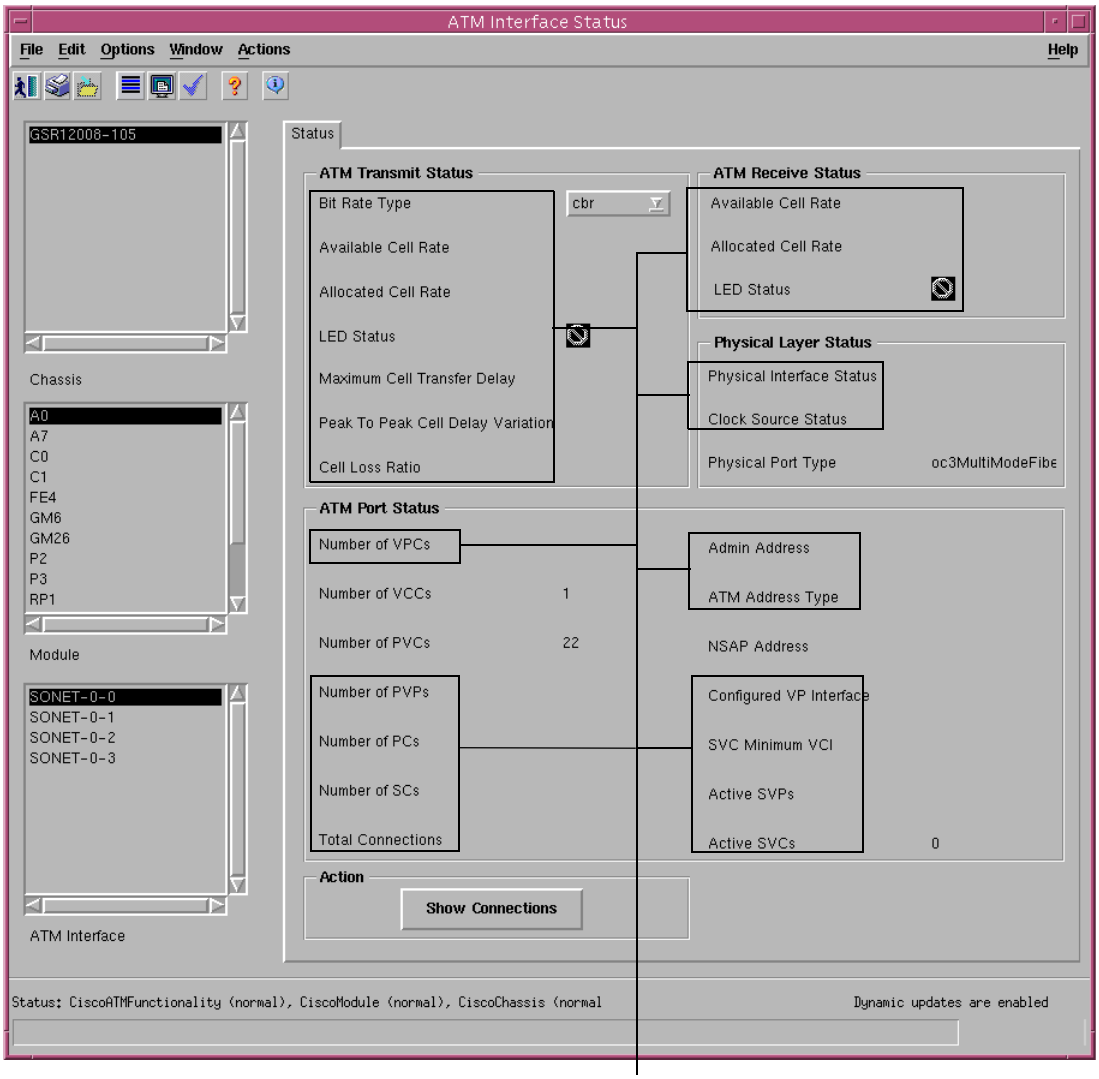
- Viewing the ATM Interface Status Window
- ATM Status Window—Detailed Description

Viewing the ATM Interface Status Window

To view the ATM interface status window for any type of interface, proceed as follows:

Step 1 Right-click on the selected line card, then choose **CGM Management>Physical>Interface>ATM> Status**. The ATM Interface Status window appears.

Figure 8-6 ATM Interface Status Window



Not applicable for CGM

Step 2 Choose the chassis, module, and ATM interface from the list boxes at left. The corresponding details for the selected interface appear in the tab at right.

ATM Status Window—Detailed Description

The Status tab displays five areas: ATM Transmit Status, ATM Receive Status, Physical Layer Status, ATM Port Status, and Action.

ATM Transmit Status

The ATM Transmit Status area is not applicable for CGM.

ATM Receive Status

The ATM Receive Status area is not applicable for CGM.

Physical Layer Status

The Physical Layer Status area contains the following fields:

Physical Interface Status—Not applicable to CGM.

Clock Source Status—Not applicable to CGM.

Physical Port Type—Type of physical layer medium on this interface.

ATM Port Status

The ATM Port Status area contains the following fields:

Number of VPCs—Not applicable to CGM.

Admin Address—Not applicable to CGM.

Number of VCCs—Number of PVCs and SVCs at this interface.

ATM Address Type—Not applicable to CGM.

Number of PVCs—Number of PVCs at this interface.

NSAP Address—(Network Service Access Point) Allows you to specify the NSAP address.

Number of PVPs—Not applicable to CGM.

Configured VP Interface—Not applicable to CGM.

Number of PCs—Not applicable to CGM.

SVC Minimum VCI—Not applicable to CGM.

Number of SCs — Not applicable to CGM.

Active SVPs—Not applicable to CGM.

Total Connections—Not applicable to CGM.

Active SVCs—Not applicable to CGM.

Action

The Action area contains one button, **Show Connections**. **Show Connections** provides IOS information about the state of the current connections on the selected interface. A separate window appears to display the status of all connections on the selected interface.

DS-3 Interface Status

The DS-3 Interface Status section covers the following areas:

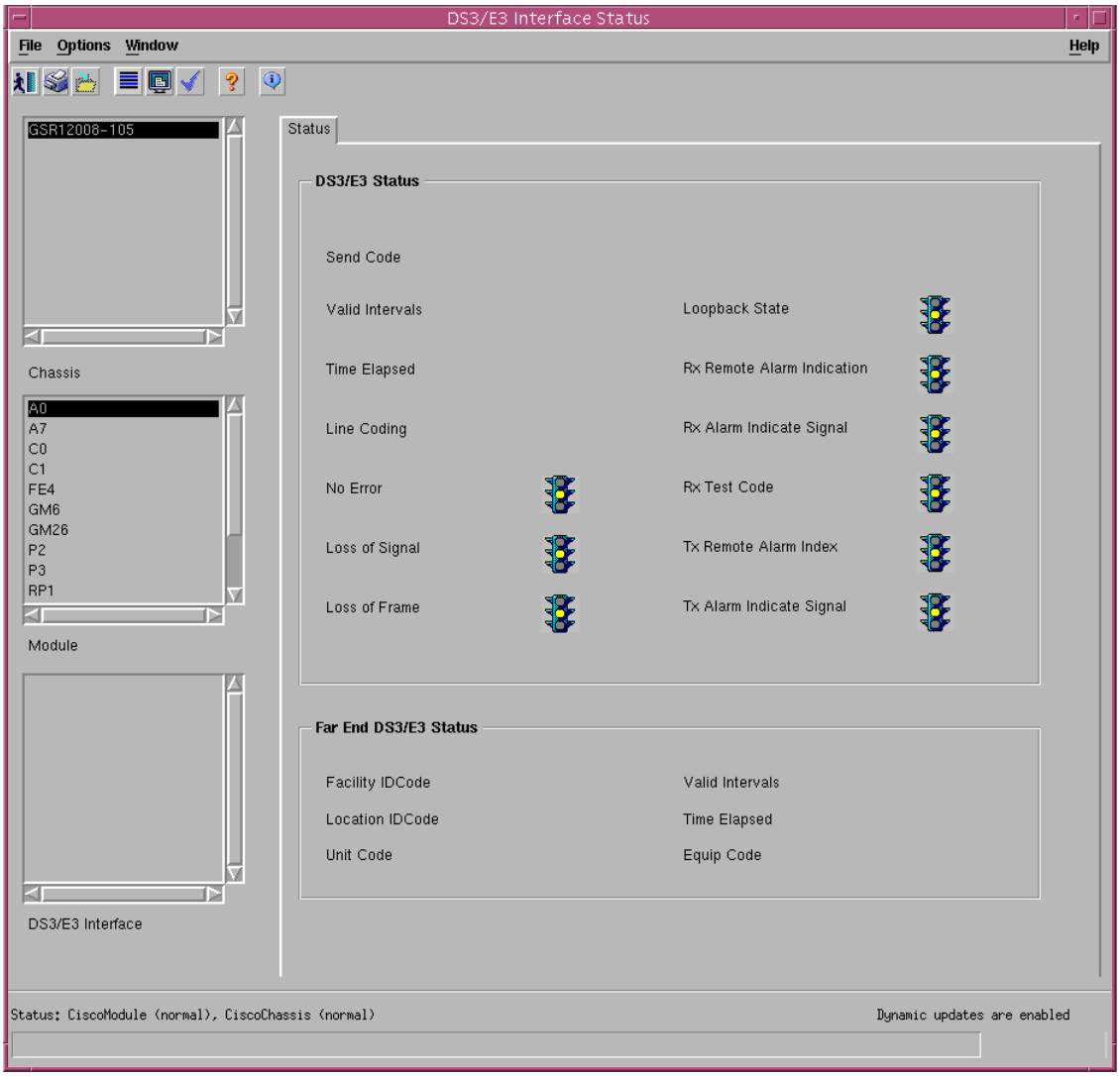
- Viewing the DS-3 Interface Status Window
- DS-3 Interface Status Window—Detailed Description

Viewing the DS-3 Interface Status Window

To view the DS-3 interface status window for any type of interface, proceed as follows:

Step 1 Right-click on the selected line card, then choose **CGM Management>Physical>Interface>DS-3> Status**.

Figure 8-7 DS-3 Interface Status Window



Step 2 Choose the chassis, module, and DS-3 interface from the list boxes at left. The corresponding details for the selected interface appear in the tab at right.

DS-3 Interface Status Window—Detailed Description

The DS-3 Interface Status window has one tab, Status, and two areas: DS-3 Status and Far End DS-3 Status.

DS-3 Status

The DS-3 Status area contains the following fields:

Circuit Identifier—Transmission vendor's circuit identifier.

Error—Presence or absence of defects in the line.

Send Code—Type of code that is being sent across the DS-3 interface by the device.

Loss of Signal—Presence or absence of signal loss in the line.

Line Type—Line type of the interface.

Loss of Frame—Presence or absence of frame loss in the line.

Line Coding—Zero code suppression used in this interface.

Loopback State—Indicates whether the received signals are looped or not.

Valid Intervals—Number of previous near end intervals for which data was collected.

Rx Remote Alarm Indication—Indicates whether remote alarm signal is being received or not.

Time Elapsed—Number of seconds that have elapsed after the beginning of the near end current error measurement period started.

Rx Alarm Indicate Signal—Indicates whether alarm signal is being received or not.

Transmit Clock Source—Source of transmit clock.

Rx Test Code—Indicates whether the line is receiving a test pattern or not.

Loopback Config—Loopback configuration of the DS-3 interface.

Tx Remote Alarm Index—Indicates whether remote alarm signal is being transmitted or not.

Tx Alarm Indicate Signal—Indicates whether alarm signal is being transmitted or not.

Far End DS-3 Status

The Far End DS-3 Status area contains the following fields:

Facility ID Code—Code that identifies a specific far end DS-3 path.

Valid Intervals—Number of previous far end interval for which valid data was collected.

Location ID Code—Far end location identification code that describes the specific location of the equipment.

Time Elapsed—Time elapsed after the current far end measurement period started.

Unit Code—Far end code that identifies the equipment location within a bay.

Equip Code—Far end equipment identification code that describes the specific piece of equipment.