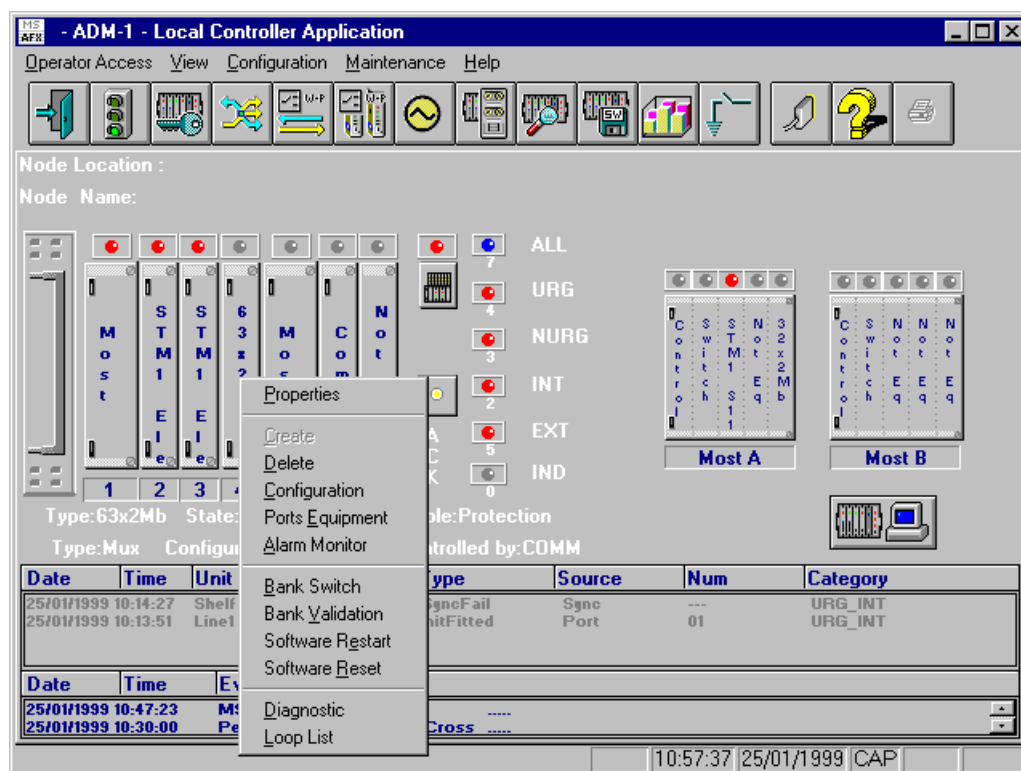


Unit Functions

The **Unit Menu** is accessible by clicking with the right mouse button on the units in the main window.



These menus include the creation/deletion of units, their configurations, the monitoring configuration of the alarms on each unit.

See Also:

Alarm Monitoring, Bank Switch, Bank Validation, Unit Configuration, Unit Creation, Unit Deletion, Loopback List, Optical Info, Software Reset, Software Restart, Unit Active Alarms, Unit Info, Unit Inventory Data, Unit Software Info

Unit Active Alarms

The LED on the top of each unit, in the main window, gives access to a list of the active alarms. This function is available for each type of unit.

To access the unit active alarms, proceed as follows:

1. Double click with left mouse button on the top LED of the selected unit.

The **Unit Active Alarms** becomes available.

By default all the alarms are displayed.



This window displays the following fields:

Unit Id

displaying the unit identifier.

Unit Type

displaying the unit type.

Alarm Type

displaying the alarm type.

Source

displaying the alarms source according to the ITU-T Rec. G.703.

Num

displaying the number.

Category

displaying the alarm category.

Monitoring

displaying whether the alarm monitoring is enable or disable.

2. Select the category of alarms to be displayed (URG_INT, URG_EXT, NURG_INT, NURG_EXT, IND, ALL) by clicking on the relevant button.

In the upper part of the window the active alarms are displayed with their characteristics. The *State* specifies whether the alarm has been acknowledged or not, while the *Monitoring* shows whether the detection of that alarm is enabled or not.

3. Click on the **Cancel** button to close this window.

See Also:

Alarm Monitoring, NE Log

Unit Info

(Unit Menu->Properties->Unit Info)

Each unit has a set of associated info: (i.e. unit id, unit type, operation state, etc.).

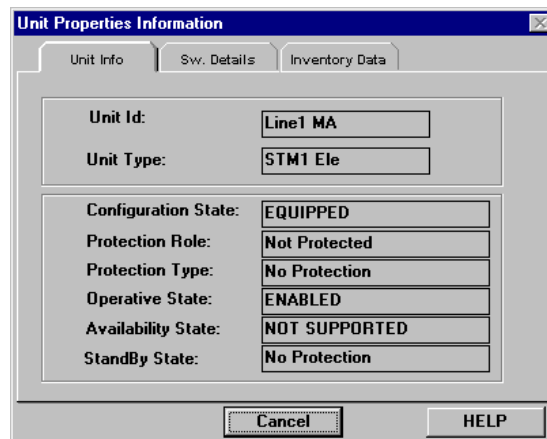
- ◆ Unit Id: indicates the physical position of the unit in the shelf
- ◆ Unit Type: indicates the type of the unit
- ◆ Configuration State: indicates whether the unit is equipped or not
- ◆ Prot. Role: can be Not Protected, Working, Protection or Undefined
- ◆ Prot. Type: can be MSP unidirectional or bidirectional, 1:1 (1:2) Equipment Protection or No Protection
- ◆ Operative State: indicates whether the unit is failed or not
- ◆ Availability State: not supported.
- ◆ StandBy State: can be No Protection, Providing Service or StandBy

This function is available for each type of unit.

To access unit info:

1. Select the **Properties** item in the unit menu.
2. Select the **Unit Info** folder.

The **Unit Information** window becomes accessible.



3. Click on the **Cancel** button to close this window.

See Also:

Unit Inventory Data, Unit Software Info

Unit Software Info

(Unit Menu->Properties->Sw Details)

On each unit is available a list including the following software features:

- ◆ Software stored on Boot EPROM
- ◆ Software stored on FLASH Banks
- ◆ Active FLASH Bank

To access unit software info:

1. Select the **Properties** item in the unit menu.
2. Select the **Sw Details** folder.

The **Sw Details** window becomes accessible.

The screenshot shows a dialog box titled "Unit Properties Information" with three tabs: "Unit Info", "Sw. Details", and "Inventory Data". The "Sw. Details" tab is selected. It contains several fields for software information:

Unit Id:	Trib 1
Unit Type:	3x34Mb
Boot Eprom Sw.:	S38-0336/01.01.05
Bank 1 Software:	S38-0337/01.01.25
Bank 2 Software:	S38-0337/01.01.29
Active Bank:	2

At the bottom of the dialog box are two buttons: "Cancel" and "HELP".

3. Click on the **Cancel** button to close this window.

----- The Sw. Details information for the MOST unit are displayed selecting the control sub-unit only. For the lines and tributary modules these fields are blanks.

See Also:

Unit Info, Unit Inventory Data

Unit Inventory Data

(Unit Menu->Properties->Inventory Data)

On each unit is available a list including the following hardware features:

- ◆ Unit Serial Number
- ◆ Unit Part Number
- ◆ Unit Revision

To access unit inventory data:

1. Select the **Properties** item in the unit menu.
2. Select the **Inventory Data** folder.

The **Inventory Data** window becomes accessible.

The screenshot shows a dialog box titled "Unit Properties Information" with three tabs: "Unit Info", "Sw. Details", and "Inventory Data". The "Inventory Data" tab is selected. It contains two sections of input fields. The first section has "Unit Id:" with the value "Trib 2" and "Unit Type:" with the value "3x34Mb". The second section has "Serial Number:" with the value "ML97JUU441", "Part Number:" with the value "131-8685/01", and "Revision:" with the value "01". At the bottom of the dialog are "Cancel" and "HELP" buttons.

Field	Value
Unit Id:	Trib 2
Unit Type:	3x34Mb
Serial Number:	ML97JUU441
Part Number:	131-8685/01
Revision:	01

3. Click on the **Cancel** button to close this window.

See Also:

Unit Info, Unit Software Info

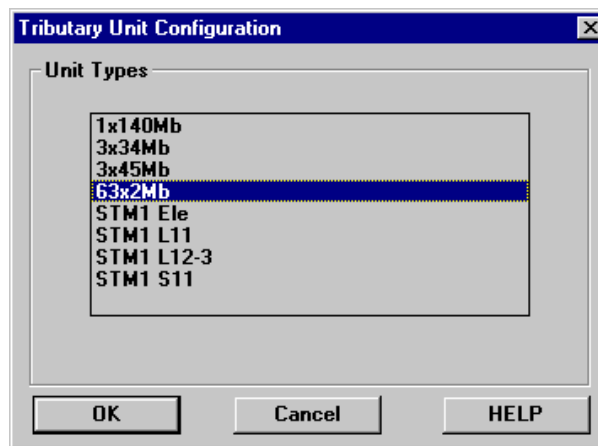
Unit Creation

(Unit Menu -> Create)

This function is used to create new units. It is available for each type of unit.

By selecting the **Create** item in a unit menu, the **Unit Configuration** window relevant to that unit will be displayed.

----- Different "Tributary Unit Configuration" windows can be displayed depending on the selected slot and existing configuration.



To create a new unit:

1. Select the type of unit to be created, by checking the relevant radio button. In case of Auxiliary unit (slot n. 7), the card will be automatically created.
2. Confirm the operation by clicking on the **OK** button.

See Also:

Unit Configuration, Unit Deletion, Protection Role, Ports Equipment

Unit Deletion

(Unit Menu -> Delete)

This function is used to delete units. It is available for each type of configured unit except for the control and switch MOST modules.

----- To be deleted, a unit must be unconfigured and with an undefined protection role.

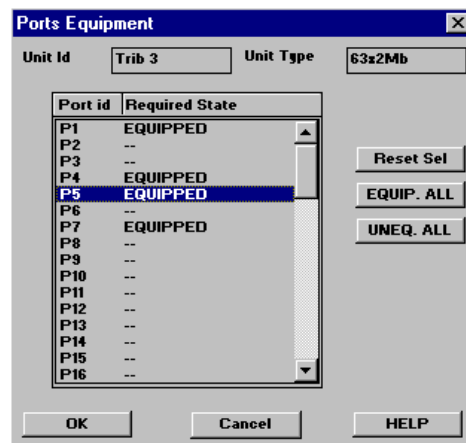
See Also:

Unit Configuration, Unit Creation, Protection Role

Ports Equipment

(Unit Menu -> Ports Equipment)

This function is used to equip the unit ports, once the unit has been created.



To equip a port:

1. Double click on the selected port (only a Not Protected unit can be equipped).
By using the **EQUIP. ALL** button, all the ports can be equipped together.
2. Click on the **OK** button to confirm the settings; click on the **Cancel** button to close the window without confirming.

To unequip a port:

1. Double click on the equipped port.
By using the **UNEQ. ALL** button, all the equipped ports can be unequipped together.
2. Click on the **OK** button to confirm the settings; click on the **Cancel** button to close the window without confirming.

See Also:

Unit Configuration, Unit Creation

Unit Configuration

(Unit Menu -> Configuration)

Each channel/port has to be configured before using it. The function that allows the configuration of channels/port on a unit, is available in the unit menu and is handled in different ways for every type of unit.

This function is available only for line, tributaries, and the auxiliary unit.

The different functions that can be performed by means of the configuration menu will be described on the following pages.

See Also:

2Mbit/s Unit Configuration, Unit Creation, Unit Deletion, Protection Role, STM-1 Configuration, Ports Equipment

STM-1 Configuration

The only channel of an STM-1 unit must be equipped, then several parameters, such as the section and path trace identifiers (byte J0 of SOH, bytes J1 and J2 of POH) or fault actions to be performed as consequence of some detected events, has to be configured.

By selecting the **Configuration** item in an STM-1 unit menu, the **STM-1 Unit Configuration** window is displayed.

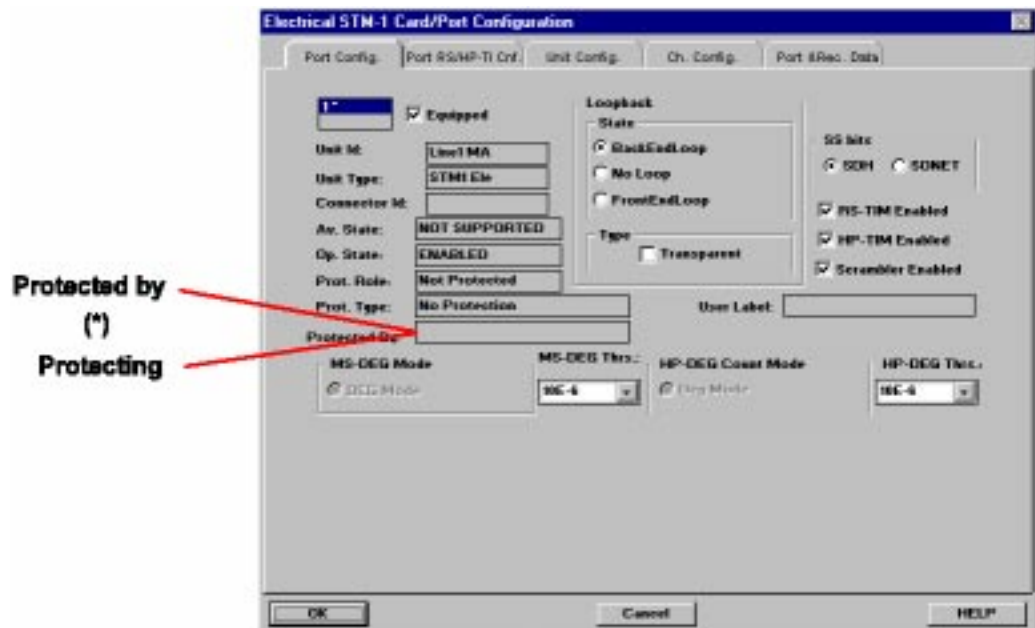
See Also:

STM-1 Channel Parameters Configuration, STM-1 Optical Parameters Configuration, STM-1 Path Information Configuration, STM-1 Port Configuration, STM-1 Unit Configuration

STM-1 Port Configuration

(Unit Menu -> Configuration -> Port Config.)

By clicking on the **Port Config.** button, the **Port Configuration** folder is displayed.



This window displays the following fields:

Unit Id

displaying the unit identifier.

Unit Type

displaying the unit type.

Connector Id

displaying the connector identifier number.

Av. State

displaying the availability state of the unit.

Op. State

displaying the operative state of the unit.

Prot. Role

displaying the protection role of the unit.

Prot. Type

displaying the protection type of the unit.

Protected By

displaying the protecting unit.

Protecting

displaying the worker unit.

To configure the port of an STM-1 unit (or module):

1. Select the port to be configured by clicking on it in the relevant scroll list (in this case there is only one selectable port).
2. Set the port as **Equipped** by checking the relevant check box (only a Not Protected unit can be equipped).

NOTICE

When the STM-1 interface is involved in a MSP scheme, its port is automatically equipped during the protection creation; then it is not necessary to equip it in the STM-1 Port Configuration folder.

3. Select the type of standard used (SDH or SONET) for the **SS bits** of the pointers, by checking the relevant radio button.
4. Enable the check of byte J0 of RSOH, in order to emit an eventual RS TIM alarm, by checking the **RS TIM Enabled** check box.
5. Enable the check of byte J1 of VC-4 POH, in order to emit an eventual HP TIM alarm, by checking the **HP TIM Enabled** check box.
6. Enable the scrambling on SOH bytes, by checking the relevant check box.
7. Type in the User Label field a string (max. 10 characters) as reminder for the specific port.

NOTE (*) The indication Protected By or Protecting is displayed according to the protection role of the selected unit.

8. Define the threshold for the **MS-DEG**, by using the relevant scroll list (values of BER from 10^{-5} to 10^{-9})
9. Define the threshold for the **HP-DEG**, by using the relevant scroll list (values of BER from 10^{-5} to 10^{-9})
10. Confirm the settings by clicking on the **OK** button.

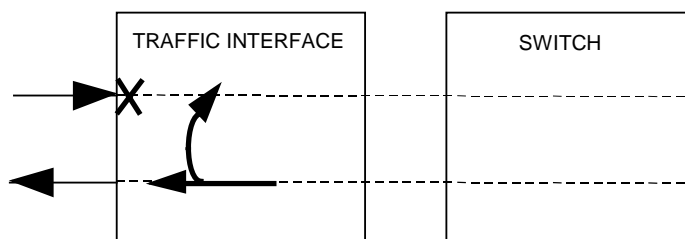
To create a loopback on a STM-1 unit:

1. Select the **State** of the loopback (Back End, Front End or No Loop), by checking the relevant radio button.
2. Define the type of the loopback (Transparent or Not Transparent) by checking or not the **Transparent** check box (in the Not Transparent loopback AIS is injected downstream from the loopback point).
3. Confirm the settings by clicking on the **OK** button.

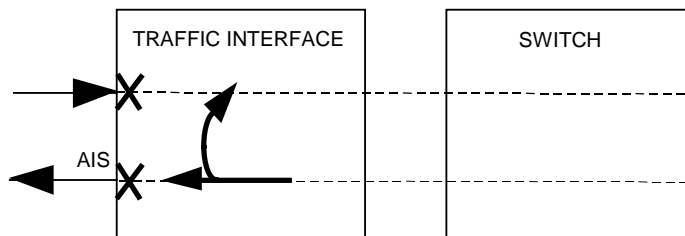
On the next page examples of loopbacks are given.

----- This folder is also used to unequip the configured STM-1 ports.

See Also:

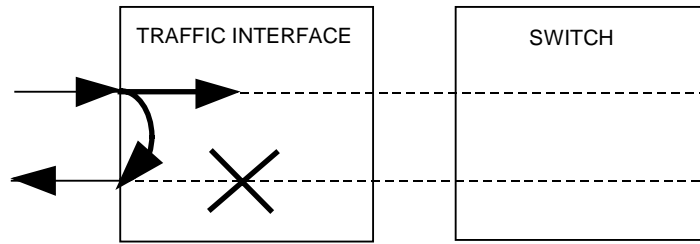
STM-1 Configuration

Transparent loopback

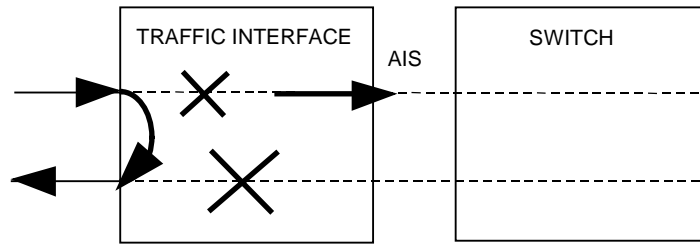


Not-transparent loopback

Back-end loopback



Transparent loopback



Not-transparent loopback

Front-end loopback

STM-1 Path Information Configuration

(Unit Menu->Configuration ->Port RS/HP_TI Cnf)

By clicking on the **Port RS/HP-TI Cnf** button, the **Path Trace Configuration** folder is displayed.

This window displays the following fields:

Protection Type

displaying the protection type.

Connector Id

displaying the connector identifier number.

Protection Role

displaying the protection role of the unit.

PL Received (hex)

displaying the received payload label.

Received Mode

displaying the mode (fixed byte or ASCII string) selected for the receive side.

In the upper part of the folder the **PL (Payload Label)** fields display the received and expected values of payload label.

To configure the Regenerator Section Trace Identifier:

1. Define whether the Trace Identifier management is enabled or not, on the transmitted signal.

If the Trace Identifier management is enabled:

2. Select the type of Regenerator Section Trace Identifier (byte J0 of RSOH) to be sent:

Fixed Byte

ASCII String (fifteen bytes word)

by checking the relevant check box

3. Insert the values of Trace Identifier, into the relevant text fields (for the ASCII String insert the text value in the upper fields, while the hexadecimal value is automatically displayed in the lower fields).

----- When the Trace Identifier management is not enabled, a fixed value (one byte) is sent.

4. Select the type of Regenerator Section Trace Identifier to be used as expected:

Fixed Byte

ASCII String (fifteen bytes word)

by checking the relevant check box

5. Insert the value of Trace Identifier, into the relevant text field (insert the text value in the upper fields, while the hexadecimal value is automatically displayed in the lower fields).

To configure the High Order Path Trace Identifier:

Define whether the Trace Identifier management is enabled or not, on the transmitted signal.

If the Trace Identifier management is enabled:

2. Select the type of High Order Path Trace Identifier (byte J1 of VC-4 POH) to be sent:

Fixed Byte

ASCII String (fifteen bytes word)

by checking the relevant check box

3. Insert the values of Trace Identifier, into the relevant text fields (for the ASCII String insert the text value in the upper fields, while the hexadecimal value is automatically displayed in the lower fields).

----- When the Trace Identifier management is not enabled, a fixed value (one byte) is sent.

4. Select the type of High Order Path Trace Identifier to be used as expected:

Fixed Byte

ASCII String (fifteen bytes word)

by checking the relevant check box

5. Insert the value of Trace Identifier, into the relevant text field (insert the text value in the upper fields, while the hexadecimal value is automatically displayed in the lower fields).
6. Confirm the settings by clicking on the **OK** button.

See Also:

STM-1 Configuration

STM-1 Unit Configuration

(Unit Menu->Configuration Unit Config)

By clicking on the **Unit Config.** button, the **Fault Action Configuration** folder is displayed.

Electrical STM-1 Card/Port Configuration

Port Config. Port RS/HP-TI Cnf. **Unit Config.** Ch. Config. Port & Rec. Data

Fault Actions

- ☒ RS-TIM -> AIS
- ☒ MS-AIS -> RDI
- ☒ MS-EXC -> AIS
- ☒ MS-EXC -> RDI
- ☒ HP-RDI enable
- ☒ HP-EXC -> AIS
- ☒ HP-PLM -> RDI
- ☒ HP-EXC -> RDI
- ☒ HP-TIM -> AIS
- ☒ HP-TIM -> RDI
- ☒ HP-UNEQ -> AIS
- ☒ HP-UNEQ -> RDI

Unit Id: Protection Type:

Unit Type: Protection Role:

OK Cancel HELP

This window displays the following fields:

Unit Id

Displaying the unit identifier.

Unit Type

displaying the unit type.

Protection Type

displaying the protection type of the unit.

Protection Role

displaying the protection role of the unit.

To configure the fault actions to be performed by the STM-1 unit:

- 1.** Define the fault actions to be performed, by selecting which pairs of received and emitted alarms must be used, by checking the relevant check boxes (the right indication is relevant to the emitted alarm, while the left one is the received alarm) (i.e. the check of **MS-AIS->RDI** check box, means that if an MS-AIS is detected, an RDI indication is sent towards the remote equipment).
 - 2.** Confirm the settings by clicking on the **OK** button.
- When an STM-1 unit is acting as protection in a MSP group, some of the fault actions are not available (the settings used are the ones defined on the working unit).

See Also:

STM-1 Configuration

STM-1 Channel Parameters Configuration

(Unit Menu->Configuration->Ch. Config.)

By clicking on the **Ch. Config.** button, the **Channel Parameters Configuration** folder is displayed.

The screenshot shows the 'Optical STM-1 Card/Port Configuration' dialog box with the 'Ch. Config.' tab selected. The 'Channels' list shows 'AU4' selected. The 'User Label' field is empty. The 'LP-DEG Thrs.' is set to '10E-6'. The 'LP-DEG Mode' is set to 'Deg Mode'. The 'Rx Side' section has 'TIM Enabled' unchecked and 'Monitoring Enable' checked. 'PL Expected' is empty, and 'PL Received (hex)' is 'VC AIS'. The 'HSU/LSU Configuration' has 'Supervisor Uneq' selected. The 'Tx side - TI' section has 'Tx MMode' set to 'FixedByte' and 'Enabled' checked. 'Rx Mode' is set to 'FixedByte'. 'Received Mode' is set to 'Fixed Byte'. The 'TI (configured)' field shows '01010101010101010101010101010101' in hex. 'HP-TI (configured fixed byte)' is '01'. 'TI (expected)' shows the same hex value. 'HP-TI (received)' is empty.

To configure the channel parameters of an STM-1 unit (or module):

1. Select the channel to be configured in the relevant scroll list.
2. Enable the check of byte V5, in order to emit an eventual LP TIM alarm, by checking the **TIM Enabled** check box.
3. Define the threshold for the **LP-DEG**, by using the relevant scroll list (values of BER from 10^{-5} to 10^{-9})
4. Define a user label to be assigned to current channel (max. 16 characters).

----- Only the cross connected channels are accessible.

The **Rx Side** and **Tx side - TI** sections are accessible only when the channel to be configured is a VC-4 completely free.

4. Enable the Supervisory Unequipped Mode by selecting the relevant radio button in the **HSU/LSU Configuration** section. In this mode, if an outgoing VC-4 is completely free (no VC is connected) a high order VC with undefined payload and fully valid POH is sent.
5. Select in the **TX Mode** section, the type of High Order Path Trace Identifier (byte J1 of VC-4 POH) to be sent:

Fixed Byte

ASCII String (fifteen bytes word)

by checking the relevant radio button and the **ENABLED** check button. In ASCII String mode insert the TI to be sent.

----- When the Trace Identifier management is not enabled, a fixed value (one byte) is sent.

7. Select in the **RX Mode** section, the type of High Order Path Trace Identifier (byte J1 of VC-4 POH) to be expected:

Fixed Byte

ASCII String (fifteen bytes word)

by checking the relevant radio button. In ASCII String mode insert the TI Expected.

See Also:

STM-1 Configuration

STM-1 Optical Parameters Configuration

(Unit Menu->Configuration->Optical Param.)

By clicking on the **Optical Param.** button, the **Optical Parameters Configuration** folder is displayed.

Optical STM-1 Card/Port Configuration

Port Config. Port RS/HP-TI Cnf. Unit Config. Ch. Config. Optical Param. Port & Rec. Data

GET DATA

Optical Parameter

☒ ALS Mode Enabled

ALS Restart Time: 2

1
2
3
4
5

Laser Command Status: Automatic

Bias Current (microA): 16

Transmitted Power (dB): -3.00

Received Power (dB): -14.00

Laser Status: On

OK Cancel HELP

----- This folder is only available for STM-1 optical interfaces.

To configure the optical parameters of an STM-1 unit (or module):

1. Select whether use the Automatic Laser Shutdown or not, by checking the **ALS Mode enabled** check box.
2. Set the Automatic Laser Restart time, by inserting the desired value into the **ALS Restart Time** text field (this time is expressed in minutes, from 1 to 5 with step 1, default 2).
3. Confirm the settings by clicking on the **OK** button.
4. Click on the "**Get Data**" push button to display the current optical parameters.

In this folder are also displayed some optical parameters, such the BIAS current, the received and transmitted power and the laser status.

See Also:

STM-1 Configuration, Optical Info

STM-1 SOH Reading

(Unit Menu->Configuration->Port & Rec. Data)

For displaying the received data on the SOH bytes, click on the **Port & Rec. Data** button.

System displays SOH bytes status received over the selected STM-1 interface, in hexadecimal format.

----- This function is available for the MOST Units STM-1 lines only.

Optical STM-1 Card/Port Configuration

Port Config. Port RS/HP-TI Cnf. Unit Config. Ch. Config. Optical Param. **Port & Rec. Data**

Port: **1** Refresh

F2 received: **0xF** Z3 received: **0xF** Z4 received: **0x0**

Overhead values

	1	2	3	4	5	6	7	8	9
1								FF	FF
2		FF	FF	4A	42	72	FF	19	FF
3	0B	FF	6C	FF	FF	FF	FF	33	54
4									
5				FF	13	FF	FF	FF	50
6	5E	3B	64	FF	27	2D	11	FF	FF
7	FF	76	FF	48	4E	5A	23	35	40
8	78	FF	FF	FF	FF	FF	46	6A	FF
9	FF	FF	25	21	39	68	FF	FF	01

OK Cancel

Refresh will be performed clicking on **Refresh** button

See Also:

SOH Bytes Configuration

2Mbit/s Configuration

The channels of a 2Mbit/s unit must be equipped, then several parameters, such as the path trace identifier (byte J2 of POH) or fault actions to be performed as consequence of some detected events, has to be configured.

By selecting the **Configuration** item in an 2Mbit/s unit menu, the **2Mb Card/Port Configuration** window is displayed.

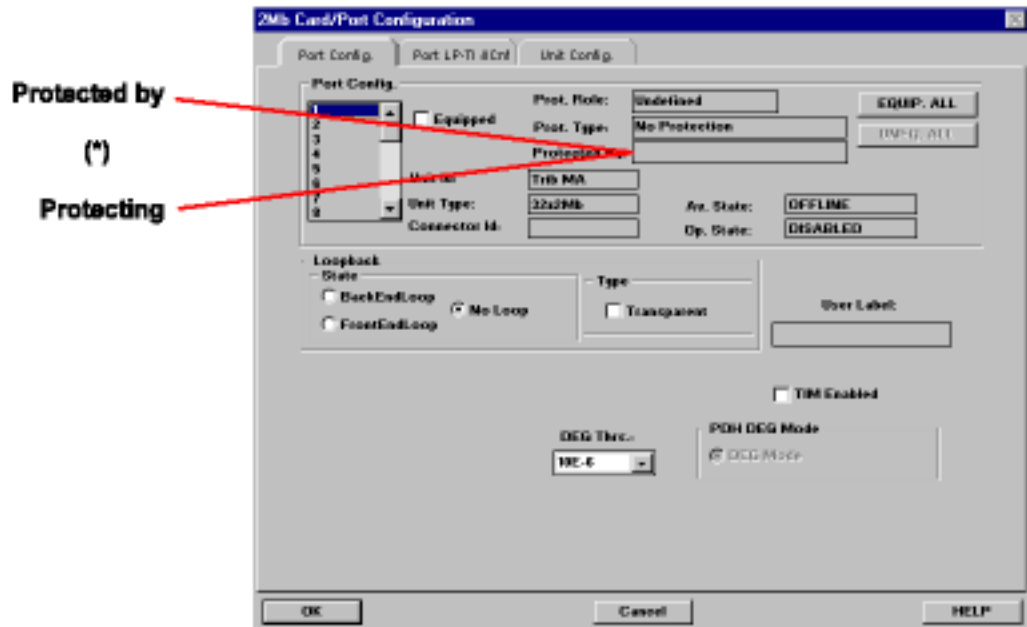
See Also:

**2Mbit/s Unit Configuration, 2Mbit/s Path Information Configuration,
2Mbit/s Port Configuration**

2Mbit/s Port Configuration

(Unit Menu->Configuration->Port Config.)

By clicking on the **Port Config.** button, the **Port Configuration** folder is displayed.



This window displays the following fields:

Protection Type

displaying the protection type of the unit.

Protection Role

displaying the protection role of the unit.

Protected By

displaying the protecting unit.

Protecting

displaying the worker unit.

Unit Id

Displaying the unit identifier.

Unit Type

displaying the unit type.

Connector Id

displaying the connector identifier number.

Av. State

displaying the availability state of the unit.

Op. State

displaying the operative state of the unit.

To configure the 2Mbit/s port (or module):

1. Select the port number to be configured by double clicking on it in the relevant scroll list.
2. Set the port as **Equipped** by checking the relevant check box (only a Not Protected unit can be equipped).

By using the **EQUIP. ALL** button, all the ports can be equipped together.
3. Set (if necessary) the Trace Identifier Mismatch Enable, by checking the **TIM Enabled** check box.
4. Define the threshold for the **DEG** of the PDH signal, by using the relevant scroll list (values of BER from 10^{-5} to 10^{-9})

To create a loopback on the 2Mbit/s port:

5. Select the **State** of the loopback (Back End, Front End or No Loop), by checking the relevant radio button.

NOTE (*) The indication **Protected By** or **Protecting** is displayed according to the protection role of the selected unit.

6. Define the type of the loopback (Transparent or Not Transparent) by checking or not the **Transparent** check box (in the Not Transparent loopback AIS is injected downstream from the loopback point).
7. Type in the user label field a string (max. 16 characters) as reminder for the specific port.
8. Confirm the settings by clicking on the **OK** button.

For examples of loopbacks see **STM-1 Port Configuration**.

----- This folder is also used to unequip the configured 2Mbit/s ports.

See Also:

2Mbit/s Configuration, Loopback List

2Mbit/s Path Information Configuration

(Unit Menu->Configuration->Port LP-TI & Cnf)

By clicking on the **Port RS/HP-TI Cnf** button, the **Path Trace Configuration** folder is displayed.

This window displays the following fields:

PL Received (hex)

displaying the received payload label.

PDH Traff. Rate

showing the PDH traffic rate 1.5 or 2Mbit/s.

Received Mode

displaying the mode (fixed byte or ASCII string) selected for the receive side.

In the upper part of the folder the **Signal Label** fields display the received and expected values of payload label.

To configure the Low Order Path Trace Identifier:

1. Define whether the Trace Identifier management is enabled or not, on the transmitted signal.

If the Trace Identifier management is enabled:

1. Select the type of Low Order Path Trace Identifier (byte J2 of VC-12) to be sent:

Fixed Byte**ASCII String (fifteen bytes word)**

by checking the relevant check box

3. Insert the values of Trace Identifier, into the relevant text fields (for the ASCII String insert the text value in the upper fields, while the hexadecimal value is automatically displayed in the lower fields).

----- When the Trace Identifier management is not enabled, a fixed value (one byte) is sent.

4. Select the type of Low Order Path Trace Identifier to be used as expected:

Fixed Byte**ASCII String (fifteen bytes word)**

by checking the relevant check box

5. Insert the value of Trace Identifier, into the relevant text field (insert the text value in the upper fields, while the hexadecimal value is automatically displayed in the lower fields).

6. Confirm the settings by clicking on the **OK** button.

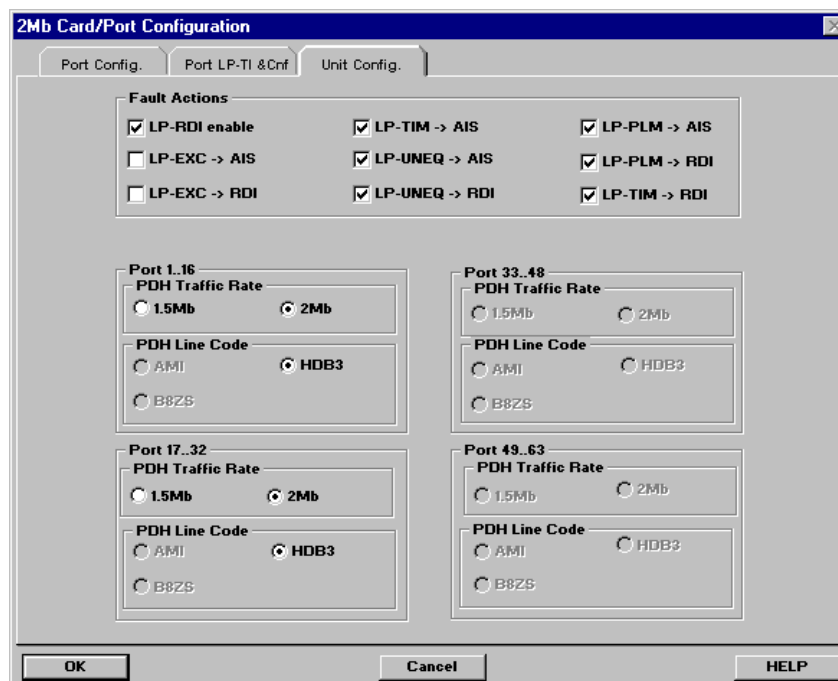
See Also:

2Mbit/s Configuration

2Mbit/s Unit Configuration

(Unit Menu->Configuration->Unit Config)

By clicking on the **Unit Config.** button, the **Unit Configuration** folder is displayed.



To configure general parameters of the unit:

1. Define the fault actions to be performed, by selecting which pairs of received and emitted alarms must be used, by checking the relevant check boxes (the right indication is relevant to the emitted alarm, while the left one is the received alarm) (i.e. the check of **TU-AIS->RDI** check box, means that if a TU-AIS is detected, an RDI indication is sent towards the remote equipment).
2. Select, for the different ports, the traffic rate (1.5 or 2Mbit/s), by checking the relevant radio button.
3. Select, for the different ports, the line code (AMI, HDB3, B8ZS), by checking the relevant radio button.
4. Confirm the settings by clicking on the **OK** button.

----- This settings, once defined for one port of the group, are fixed for the remaining fifteen ports.

----- The above parameters must be changed before equipping the ports.

See Also:

2Mbit/s Configuration

34-45Mbit/s Configuration

The channels of a 3x34 Mbit/s or a 3x45Mbit/s unit must be equipped, then several parameters, such as the path trace identifier (byte J1 of POH) or fault actions to be performed as consequence of some detected events, has to be configured.

By selecting the **Configuration** item in a 3x34Mbit/s or a 3x45Mbit/s unit menu, the **34/45Mb Card/Port Configuration** window is displayed.

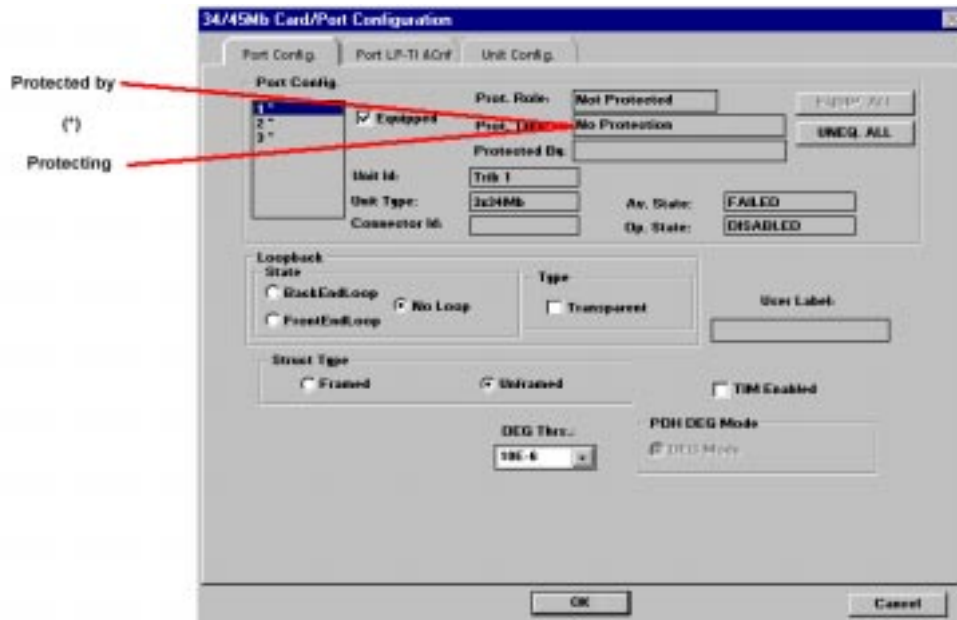
See Also:

34-45Mbit/s Port Configuration, 34-45Mbit/s Path Information Configuration, 34-45Mbit/s Unit Configuration

34-45Mbit/s Port Configuration

(Unit Menu->Configuration->Port Config.)

By clicking on the **Port Config.** button, the **Port Configuration** folder is displayed.



This window displays the following fields:

Prot. Role

displaying the protection type of the unit.

Prot. Type

displaying the protection role of the unit.

Protected By

displaying the protecting unit.

To configure the 34-45Mbit/s port (or module):

1. Select the port number to be configured by double clicking on it in the relevant scroll list.
2. Set the port as **Equipped** by checking the relevant check box (only a Not Protected unit can be equipped).
By using the **Equip. All** button, all the ports can be equipped together.
3. Set (if necessary) the Trace Identifier Mismatch Enable, by checking the **TIM Enabled** check box.
4. Define the threshold for the **DEG** of the PDH signal, by using the relevant scroll list (values of BER from 10^{-5} to 10^{-9})

NOTE (*) The indication Protected By or Protecting is displayed according to the protection role of the selected unit.

To create a loopback on the 34-45Mbit/s port:

- 5.** Select the **State** of the loopback (Back End, Front End or No Loop), by checking the relevant radio button.
- 6.** Define the type of the loopback (Transparent or Not Transparent) by checking or not the **Transparent** check box (in the Not Transparent loopback AIS is injected downstream from the loopback point).
- 7.** Type in the user label field (max. 16 characters) as reminder for the specific port.
- 8.** Define the Signal Structure Type (**Framed** or **Unframed**) by checking the relevant check box.
- 9.** Confirm the settings by clicking on the **OK** button.

For examples of loopbacks see **STM-1 Port Configuration**.

----- This folder is also used to unequip the configured 34-45Mbit/s ports.

See Also:

34-45Mbit/s Configuration, Loopback List

34-45Mbit/s Path Information Configuration

(Unit Menu->Configuration->Port LP-TI & Cnf)

By clicking on the **Port LP-TI & Cnf** button, the **Path Trace Configuration** folder is displayed.

The screenshot shows the '34/45Mb Card/Port Configuration' dialog box with the 'Port LP-TI & Cnf' tab selected. The dialog has three tabs: 'Port Config.', 'Port LP-TI & Cnf', and 'Unit Config.'. On the left, there is a list box with items 1, 2, and 3, where item 2 is selected. To the right of this list is a 'Signal Label' section with 'PL Received (hex):' and 'PL Expected:' fields. The 'PL Expected' field has a dropdown menu showing '34-45Mb Async'. A 'Refresh' button is located to the right of the 'Signal Label' section. Below the list box is the 'LP-TIM:' section, which contains 'Tx Mode' and 'Rx Mode' sub-sections. The 'Tx Mode' section has radio buttons for 'FixedByte' and 'AsciiString', and a checked 'Enabled' checkbox. The 'Rx Mode' section has radio buttons for 'FixedByte' and 'AsciiString'. To the right of these modes are several input fields for 'LP-TI (configured ascii string)', 'LP-TI (configured fixed byte)', 'LP-TI (expected)', and 'LP-TI (received)', each with a '(Ascii)' or '(Hex)' label. At the bottom of the dialog are 'OK', 'Cancel', and 'Help' buttons.

In the upper part of the folder the **Signal Label** fields display the received and expected values of payload label.

To configure the High Order Path Trace Identifier:

1. Define whether the Trace Identifier management is enabled or not, on the transmitted signal.

If the Trace Identifier management is enabled:

2. Select the type of High Order Path Trace Identifier (byte J1 of VC-3) to be sent:

Fixed Byte**ASCII String (fifteen bytes word)**

by checking the relevant check box

3. Insert the values of the Trace Identifier to be sent, into the relevant text fields (for the ASCII String insert the text value in the upper fields, while the hexadecimal value is automatically displayed in the lower fields).

----- When the Trace Identifier management is not enabled, a fixed value (one byte) is sent.

4. Select the type of High Order Path Trace Identifier to be used as expected:

Fixed Byte**ASCII String (fifteen bytes word)**

by checking the relevant check box

5. Insert the expected value of the Trace Identifier, into the relevant text field (insert the text value in the upper fields, while the hexadecimal value is automatically displayed in the lower fields).

6. Confirm the settings by clicking on the **OK** button.

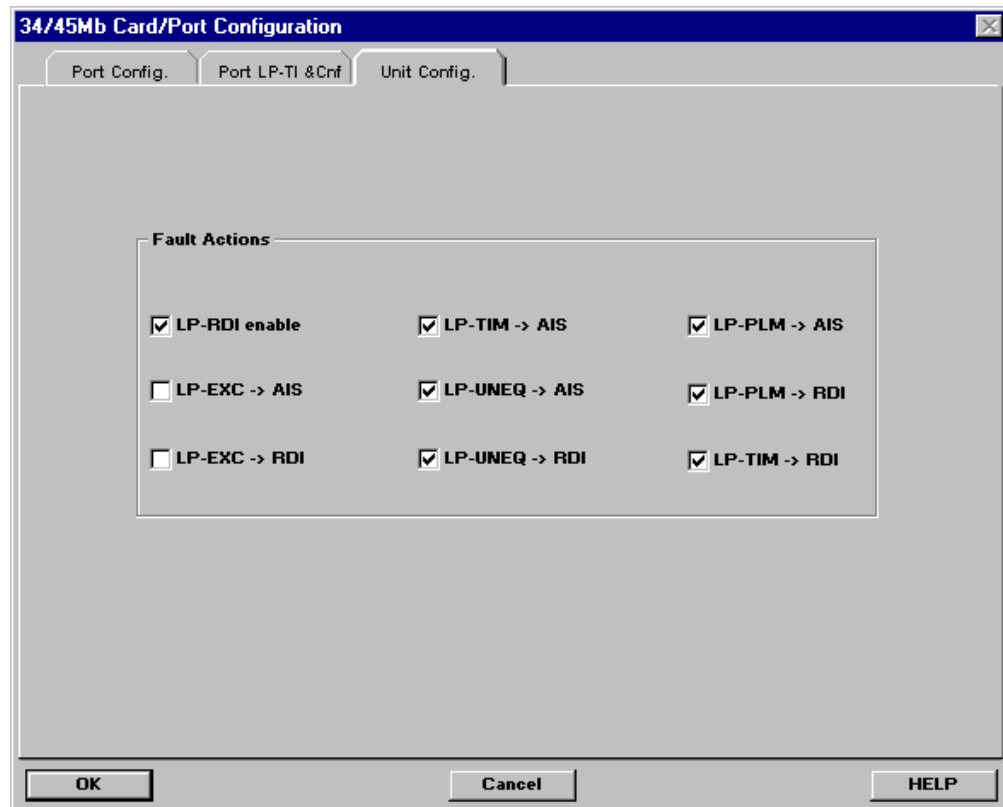
See Also:

34-45Mbit/s Configuration

34-45Mbit/s Unit Configuration

(Unit Menu->Configuration->Unit Config.)

By clicking on the **Unit Config.** button, the **Unit Configuration** folder is displayed.



To configure general parameters of the unit:

1. Define the fault actions to be performed, by selecting which pairs of received and emitted alarms must be used, by checking the relevant check boxes (the right indication is relevant to the emitted alarm, while the left one is the received alarm) (i.e. the check of **LP-EXC->RDI** check box, means that if a LP-EXC is detected, an RDI indication is sent towards the remote equipment).
2. Confirm the settings by clicking on the **OK** button.

----- This settings, once defined for one port of the group, are fixed for the remaining two ports.

See Also:

34-45Mbit/s Configuration

140Mbit/s Configuration

The channel of a 140Mbit/s unit must be equipped, then several parameters, such as the path trace identifier (byte J1 of POH) or fault actions to be performed as consequence of some detected events, has to be configured.

By selecting the **Configuration** item in a 140Mbit/s unit menu, the **140Mb Card/Port Configuration** window is displayed.

See Also:

140Mbit/s Port Configuration, 140Mbit/s Path Information Configuration, 140Mbit/s Unit Configuration

140Mbit/s Port Configuration

(Unit Menu->Configuration->Port Config.)

By clicking on the **Port Config.** button, the **Port Configuration** folder is displayed.

140Mb Card Configuration

Port Config. | Port RS/HP-TI Cnf. | Unit Config.

Port Config.

1*

☒ Equipped

Prot. Role: Not Protected

Prot. Type: No Protection

Protected By:

Unit Id: Trib 3

Unit Type: 1x140Mb

Connector Id:

Av. State: DEPENDENCY

Op. State: DISABLED

Loopback State

☐ BackEndLoop ☒ No Loop ☐ FrontEndLoop

Type

☐ Transparent

Struct Type

☐ Framed ☒ Unframed

☐ TIM Enabled

DEG Thrs.: 10E-6

PDH DEG Mode

☒ DEG Mode

User Label:

OK Cancel HELP

To configure the 140Mbit/s port (or module):

1. Select the port number to be configured by double clicking on it in the relevant scroll list.
2. Set the port as **Equipped** by checking the relevant check box (only a Not Protected unit can be equipped).
3. Set (if necessary) the Trace Identifier Mismatch Enable, by checking the **TIM Enabled** check box.
4. Define the threshold for the **DEG** of the PDH signal, by using the relevant scroll list (values of BER from 10^{-5} to 10^{-9})

NOTE (*) The indication Protected By or Protecting is displayed according to the protection role of the selected unit.

To create a loopback on the 140Mbit/s port:

- 5.** Select the **State** of the loopback (Back End, Front End or No Loop), by checking the relevant radio button.
- 6.** Define the type of the loopback (Transparent or Not Transparent) by checking or not the **Transparent** check box (in the Not Transparent loopback AIS is injected downstream from the loopback point).
- 7.** Type in the user label field a string (max. 11 characters) as reminder for the specific port.
- 8.** Define the Signal Structure Type (**Framed** or **Unframed**) by checking the relevant check box.
- 9.** Confirm the settings by clicking on the **OK** button.

For examples of loopbacks see **STM-1 Port Configuration**.

----- This folder is also used to unequip the configured 140Mbit/s port.

See Also:

140Mbit/s Configuration, Loopback List

140Mbit/s Path Information Configuration

(Unit Menu->Configuration->Port HP TI & Cnf)

By clicking on the **Port HP-TI & Cnf** button, the **Path Trace Configuration** folder is displayed.

140Mb Card Configuration

Port Config. | Port RS/HP-TI Cnf. | Unit Config.

Signal Label

PL Received (hex):

PL Expected : 140Mb Async

Refresh

HP-TI

Tx Mode

☐ FixedByte ☒ AsciiString

☒ Enabled

HP-TI (configured ascii string): [010101010101010101010101010101] [Ascii]

[010101010101010101010101010101] [Hex]

HP-TI (configured fixed byte): 01 [Hex]

Rx Mode

☒ FixedByte ☐ AsciiString

HP-TI (expected): [010101010101010101010101010101] [Ascii]

[010101010101010101010101010101] [Hex]

HP-TI (received): [] [Ascii]

[] [Hex]

Received Mode: [] [Hex]

OK Cancel HELP

This window displays the following fields:

PL Received (hex)

displaying the received payload label.

Received Mode

displaying the mode (fixed byte or ASCII string) selected for the receive side.

In the upper part of the folder the **Signal Label** fields display the received and the expected values of payload label.

To configure the High Order Path Trace Identifier:

1. Define whether the Trace Identifier management is enabled or not, on the transmitted signal.

If the Trace Identifier management is enabled:

2. Select the type of High Order Path Trace Identifier (byte J1 of VC-4) to be sent:

Fixed Byte**ASCII String (fifteen bytes word)**

by checking the relevant check box

3. Insert the values of the Trace Identifier to be sent, into the relevant text fields (for the ASCII String insert the text value in the upper fields, while the hexadecimal value is automatically displayed in the lower fields).

----- When the Trace Identifier management is not enabled, a fixed value (one byte) is sent.

4. Select the type of High Order Path Trace Identifier to be used as expected:

Fixed Byte**ASCII String (fifteen bytes word)**

by checking the relevant check box

5. Insert the expected value of the Trace Identifier, into the relevant text field (insert the text value in the upper fields, while the hexadecimal value is automatically displayed in the lower fields).

6. Confirm the settings by clicking on the **OK** button.

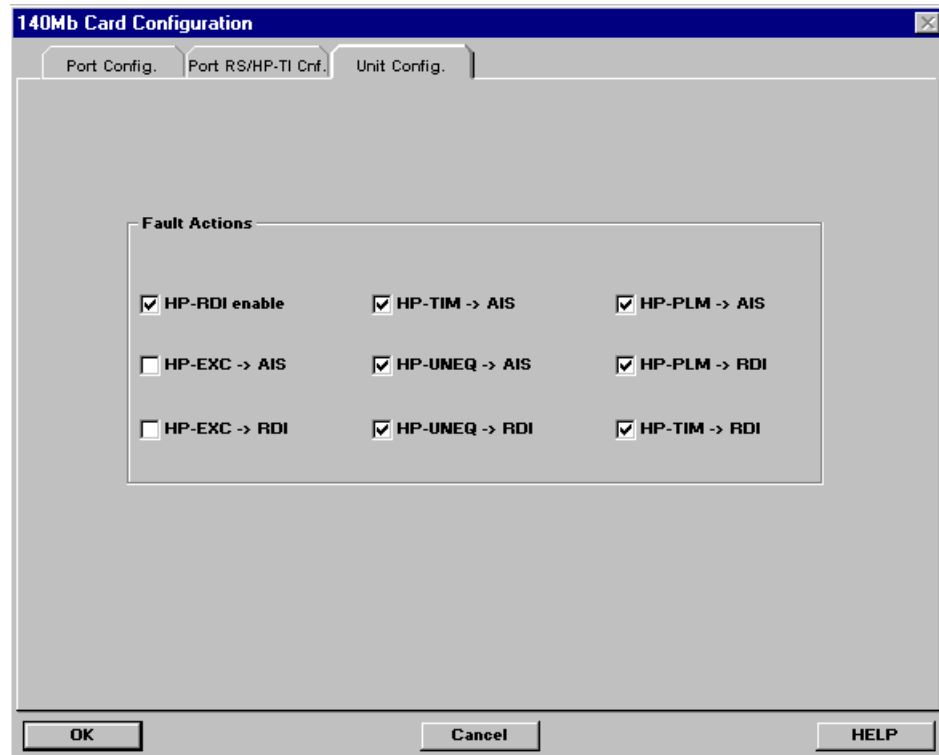
See Also:

140Mbit/s Configuration

140Mbit/s Unit Configuration

(Unit Menu->Configuration->Unit Config)

By clicking on the **Unit Config.** button, the **Unit Configuration** folder is displayed.



To configure general parameters of the unit:

1. Define the fault actions to be performed, by selecting which pairs of received and emitted alarms must be used, by checking the relevant check boxes (the right indication is relevant to the emitted alarm, while the left one is the received alarm) (i.e. the check of **HP-EXC->RDI** check box, means that if a HP-EXC is detected, an RDI indication is sent towards the remote equipment).
2. Confirm the settings by clicking on the **OK** button.

See Also:

140Mbit/s Configuration

Auxiliary Unit Configuration

The telephone number and the channels to be used as EOW, G703 and V11 can be configured.

By selecting the **Configuration** item in the Auxiliary Unit menu, the **Auxiliary unit connections** window is displayed.

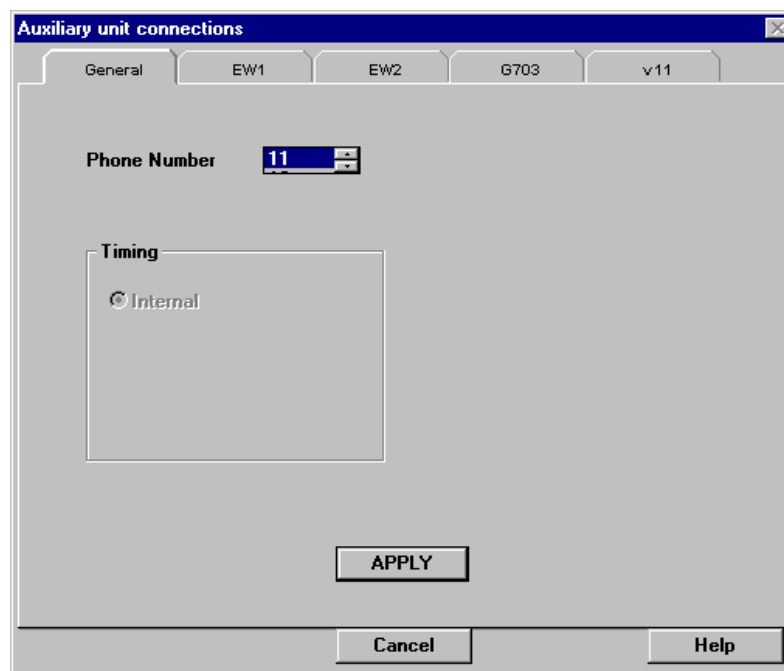
See Also:

Auxiliary General Configuration, EOW1 and EOW2 Configuration

Auxiliary General Configuration

(Unit Menu->Configuration->General)

The **General** folder is used to assign the EOW telephone number to the equipment. The possible selectable numbers are from 11 to 99.



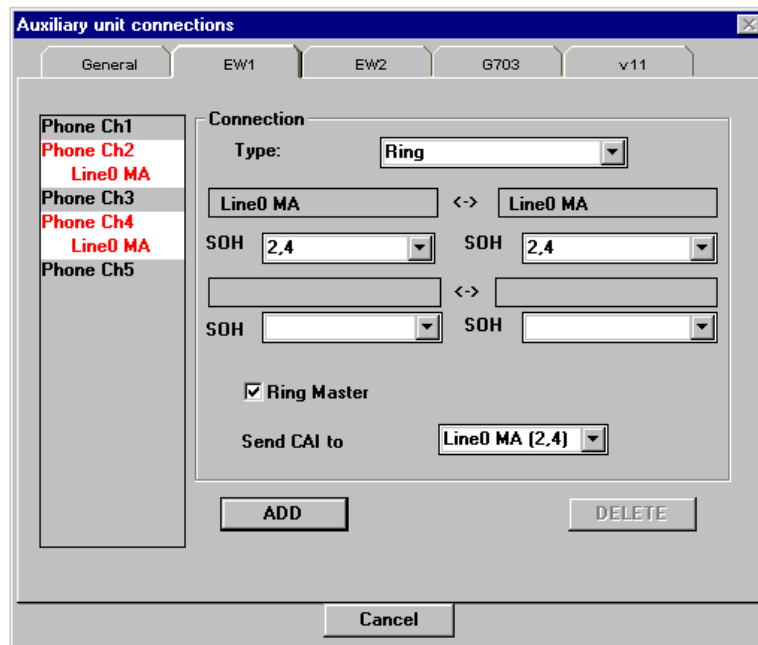
To configure the Auxiliary Unit:

- 1.** Select the desired phone number by acting on the relevant scroll list.
- 2.** Confirm the settings by clicking on the **APPLY** button.

EOW1 and EOW2 Configuration

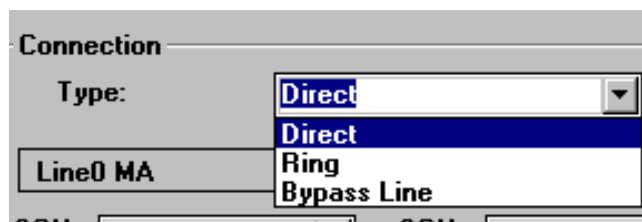
(Unit Menu->Configuration->EW1 or EW2)

The **EW1** or **EW2** folders, are used to create the EOW connections respectively for the Area 1 and Area 2.



To configure the EOW Areas:

1. Select either **EW1** or **EW2** folders (depending on the EOW Area to be configured).
2. Select the connection type to be configured, by using the **Type** scroll list.



For a direct connection:

1. Select the line or tributary interface to be used for carrying the EOW channel, by double clicking on it in the list.
2. Select the SOH byte to be used as 2.4 (E1), 2.7 (F1) , 9.7 (E2) or any of the SOH bytes configured as Data, Audio and Data, etc.
3. Use the **ADD** button to confirm the creation of the EOW channel.

The configured EOW channel will be displayed followed by the symbol '<->'.

For a direct connection by means of an EOW extension:

1. Select the **Ext. Analog** item, by double clicking on it in the list.

----- Selecting the **Ext. Analog** item the **Direct** connection will be automatically selected; in fact the EOW extension can be used only for a direct connection type.

2. Use the **ADD** button to confirm the creation of the EOW extension.

The creation of the EOW extension will be notified by means of the symbol '<->' after the **Ext. Analog** item.

This option allows to create an external service telephone channel between two equipment that have not common SDH connection.**For a bypass connection:**

1. Select the line or the tributary interface to be used for carrying the incoming EOW channel, by double clicking on it in the list.
2. Select the SOH byte to be used on the incoming EOW channel as 2.4 (E1), 2.7 (F1), 9.7 (E2) or any of the SOH bytes configured as Data, Audio and Data, etc
3. Select the line or tributary interface to be used for carrying the outgoing EOW channel, by double clicking on it in the list.
4. Select the SOH byte to be used on the outgoing EOW channel as 2.4 (E1), 2.7 (F1) 9.7 (E2) or any of the SOH bytes configured as Data, Audio and Data, etc.
5. Use the **ADD** button to confirm the creation of the EOW channel.

The configured EOW channel will be displayed followed by the symbol '<->'.

For a ring connection:

1. Select the line or the tributary interface to be used for carrying the incoming EOW channel on the East side of the ring, by double clicking on it in the list.
2. Select the SOH byte to be used on the EOW channel on the East side of the ring as 2.4 (E1), 2.7 (F1) 9.7 (E2) or any of the SOH bytes configured as Data, Audio and Data, etc
3. Select the line or tributary interface to be used for carrying the EOW channel on the West side of the ring, by double clicking on it in the list.
4. Select the SOH byte to be used on the EOW channel on the West side of the ring as 2.4 (E1), 2.7 (F1) 9.7 (E2) or any of the SOH bytes configured as Data, Audio and Data, etc.

5. Define whether or not the current system is used as Ring Master, by checking the relevant check box.
6. If the current system has been configured as Ring Master, use the **Send CAI** to scroll list to define to which side of the EOW ring you wish to send the Ring Integrity Check Tone.
7. Use the **ADD** button to confirm the creation of the EOW channel.

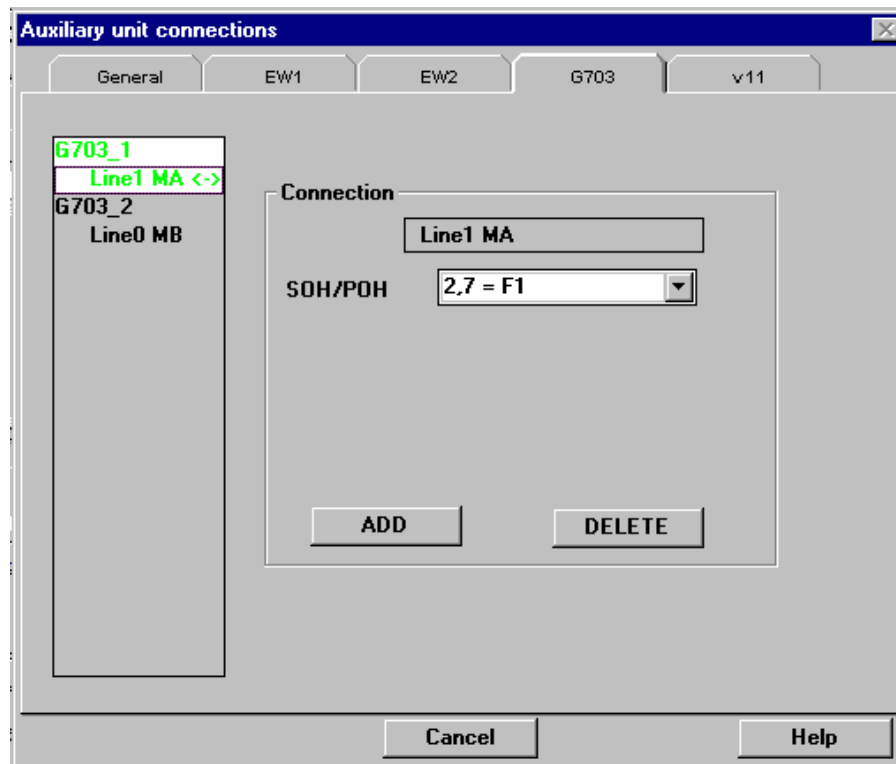
The configured EOW channel will be displayed followed by the symbol '<->'.
To remove configured EOW channels:

1. Select the desired EOW Area by clicking on the proper folder **EW1** or **EW2**.
2. Select the configured EOW channel you want to remove by clicking on it in the list.
3. Remove it by clicking on the **DELETE** button.

G703 Channel Configuration

(Unit Menu->Configuration->G703)

By clicking on the **G703** button, the **G.703 Area** folder is displayed.



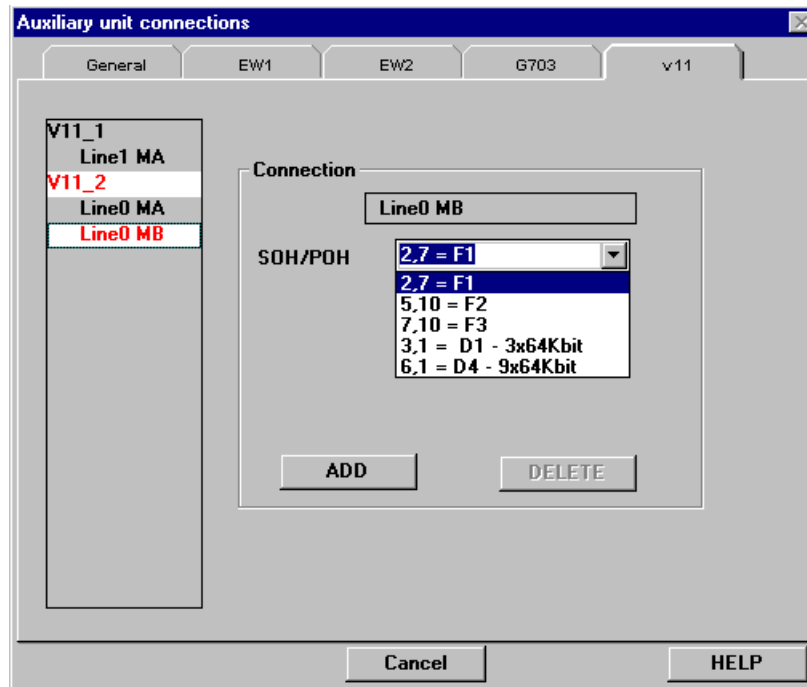
To configure the G.703 64kbit/s Auxiliary Channel:

- 1.** Select **G703** folders.
- 2.** Select the line or tributary interface to be used for carrying the auxiliary channel by double clicking on it in the list.
- 3.** Select a spare SOH/POH byte to be used to carry the auxiliary channel.
The bytes are displayed as: x-y, where x is the number of the row and y the number of the column.
- 4.** Use the **ADD** button to confirm the creation of the auxiliary channel.

V11 Channel Configuration

(Unit Menu->Configuration->V11)

By clicking on the **v11** button, the **V.11 Area** folder is displayed.



To configure the V.11 64kbit/s Auxiliary Channel:

1. Select **v11** folders.
2. Select the line or tributary interface to be used for carrying the auxiliary channel by double clicking on it in the list.
3. Select a spare SOH/POH byte to be used to carry the auxiliary channel.
The bytes are displayed as: x-y, where x is the number of the row and y the number of the column.

It is also possible to select the DCCr and the DCCm respectively as a 192kbit/s and 576kbit/s channels. They are displayed as:

DCCr = 3,1 = D1 - 3x64Kbit

DCCm = 6,1 = D4 - 9x64Kbit

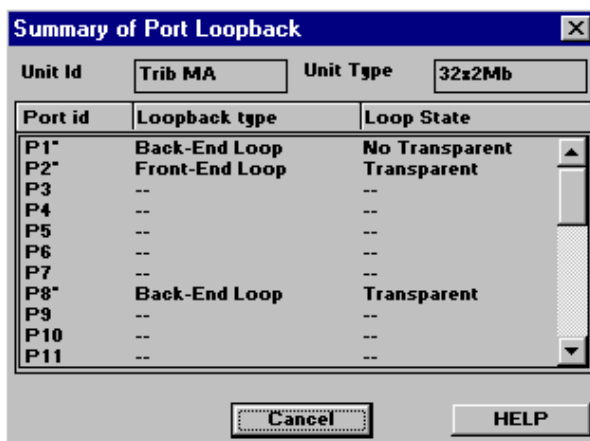
4. Use the **ADD** button to confirm the creation of the auxiliary channel.

Loopback List

(Unit Menu -> Loopback List)

This function is available on the 2Mbit/s units (or modules) only. It is used to display all the active loopbacks.

By selecting it, the **Summary of port Loopback** window will be displayed.



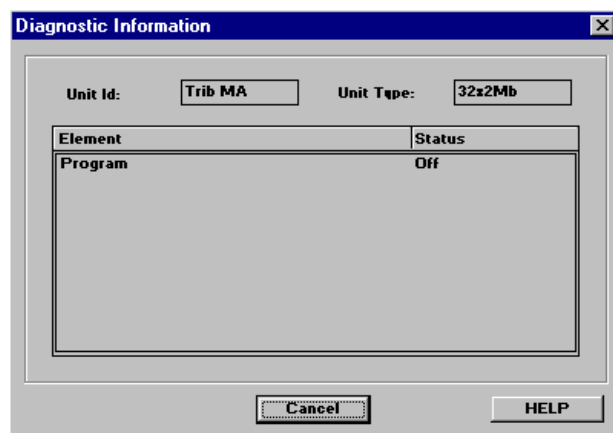
See Also:

2Mbit/s Port Configuration

Diagnostic

(Unit Menu ->Diagnostic)

This function is used for factory unit diagnostic only.



Software Reset

(Unit Menu ->Software Reset)

This function is available on all units (except the Controller module on MOST Unit).

Once performed, this function causes the reset of the application software of the unit and causes a temporary interruption of the existing traffic.

See Also:

Software Restart

Software Restart

(Unit Menu ->Software Restart)

This function is available on all units.

Once performed, this function causes the restart of the application software of the unit, without affecting the existing traffic.

----- The software reset is not implements for the line, switch and tributary modules of the MOST Unit.

See Also:

Software Reset

Bank Switch

(Unit Menu ->Bank Switch)

This function is available on all the units and the control circuit of the MOST units. This operation causes a switch of the active FLASH bank.

This operation must be performed, on each upgraded unit, after a software download operation.

See Also:

Bank Validation, Software Download

Bank Validation

(Unit Menu -> Bank Validation)

This function is available on all the units and the control circuit of the MOST units. This operation causes a validation of the active FLASH bank (the system will use the validated active FLASH bank for the following restarts).

This operation must be performed, on each upgraded unit, after a bank switch operation.

See Also:

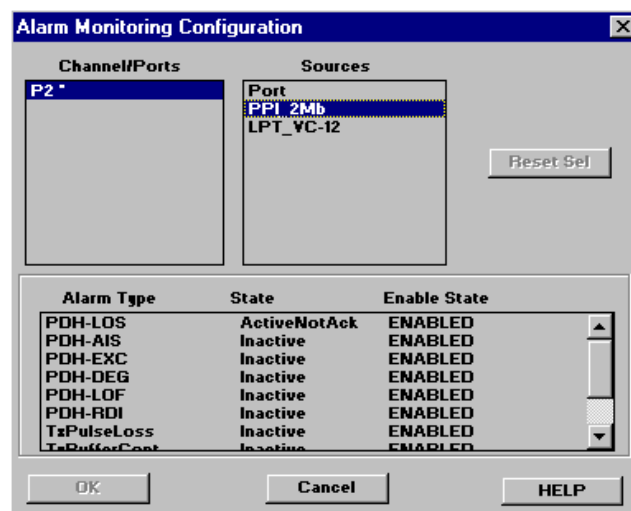
Bank Switch, Software Download

Alarm Monitoring

(Unit Menu -> Alarm Monitor)

This function allows the monitoring of all the alarms managed by the current unit. For each possible alarm source is displayed a list of the alarms, with their current *state* and *enable state*. It allows also the disabling of detection of some alarms, by changing their *enable state*.

By selecting it, the **Alarm Monitoring Configuration** window relevant to that unit will be displayed.



To access the alarm monitoring, proceed as follows:

1. Select one of the channels/ports by clicking on it in the **Channels/Ports** list.

2. Select an alarm source in the **Sources** list.

All the alarms managed by that source will be displayed , with their state and their enable state.

3. By double clicking on one of these alarms its *enable state* can be changed (from **ENABLED** to **DISABLED**).

4. Confirm the settings by clicking on the **OK** button.

The **Reset Sel** button is used to restore the default configuration before clicking the **OK** button.

This function is available for each unit.

See Also:

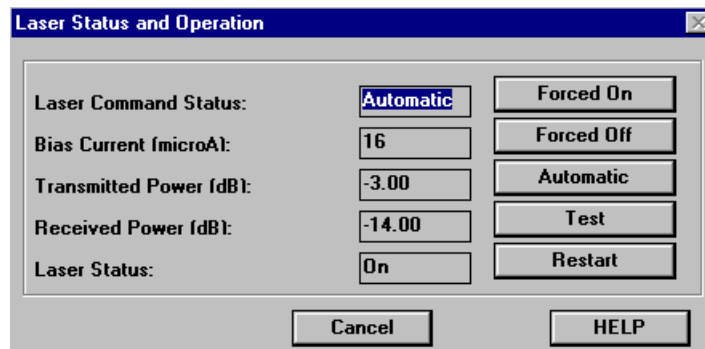
NE Log, Unit Active Alarms

Optical Info

(Unit Menu -> Laser Command)

This function allows to send commands to the optical interface and to read information on optical performances.

This function is available only for STM-1 optical units (or modules). By selecting it, the **Laser Status and Operation** window relevant to that unit will be displayed.



The window displays some optical parameters, such the BIAS current, the received and transmitted power and the laser status together with the laser command status (Automatic, Forced ON, Forced OFF).

To perform operation on the laser:

1. Use **Forced On** button to switch always ON the laser.
2. Use **Forced Off** button to switch always OFF the laser.
3. Use **Automatic** button to restore the ALS mode, for the laser (it is used to remove a previous change of laser command state by means of **Forced On** or **Forced Off** buttons).
4. Use **Test** button when the laser is OFF, to perform a 90 sec. laser restart, for testing purposes (as by using the switch of the front panel of the unit).
5. Use **Restart** button when the laser is OFF, to perform a laser restart (as by using the switch of the front panel of the unit).
6. Use **Cancel** to exit the window.

See Also:

STM-1 Optical Parameters Configuration