

FASTCraft™

Version 2.1


Craft Interface Software

USER MANUAL

for FlexAccess™ 9000 Systems

with a Model 9125 Core Controller Module

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Introduction

What is the *FlexAccess* system?

The *FlexAccess 9000* is an advanced multi-service access platform designed to deliver broadband data and voice services to all customers regardless of their distance from the Central Office or the digital loop carrier (DLC) cabinet. *FlexAccess* allows the telco to cost effectively reach very small to medium-sized groups of customers located at distances beyond 20 kft from the Central Office or the DLC.

Why use Craft Interface software?





The Craft Interface software is a graphical user interface (GUI) that provides either local or remote access to *FlexAccess* systems. It can be used to install, configure, and monitor these systems using a personal computer (PC). Two different licenses are available for FASTCraft. The basic, single computer license allows local and remote dial-up access. The extended site license (for up to 25 computers) provides remote IP access in addition to local and dial-up.

Access requires connection via personal computer (PC) or laptop. Two Craft Interface products are available:

- **FASTCraft** — Connects directly to the main unit through Craft port (on front panel) **or** over a phone line using dial-up access to provide **local** access.
- **FASTCraft extended** — Connects through the serial port and also inband over the Ethernet connection to provide **remote** access.

Notes and warnings

Notes and warnings appear throughout the document. One of these icons precedes each statement.

Icon	Description
	Note This is noteworthy information about the topic.
	Important This information is essential for you to know.
	Caution <i>Be careful.</i> In this situation you could do something to cause equipment damage or loss of data.
	Stop Immediately stop the process you are performing. Read and follow these instructions.

Manual overview

This manual contains the following chapters:

Chapter	Title	Description
1	Installation	System requirements; how to install the FASTCraft software
2	Launching the FASTCraft Software	Connect the Craft cable; launch the program; exit the program
3	Inventory Functions	Use the inventory status screens to test POTS lines, set the current date, and view history and error logs
4	Network Management	Set up the control profile, configure the network, and find the system/network status
5	ADSL Configuration	Set up the asymmetrical digital subscriber line (ADSL) and configure profiles
6	SHDSL Performance	Monitor signal quality and near-end block errors (NEBEs)
7	RFC1483 Transport Configuration	Create, load, and remove cross connections and traffic descriptors
8	Ethernet	Manage Ethernet functions
9	Alarms	Manage and monitor alarms
10	Users	Manage user accounts
11	Xmodem (<i>local access only</i>)	Upgrade firmware locally through the serial port
12	Firmware Manager	Upgrade firmware locally through the serial port or remotely through UDP
Appendix A	Default Profile Settings	Tables of Interleaved and Fast default profile settings
Appendix B	Color Codes	Color codes for the FASTCraft screens

This manual has been updated to specifically support the new 2.0 Mb SHDSL rate of the FlexAccess Model 9125 Ethernet Core Controller Module. If the Model 9124 ATM Core Controller Module is used, User Manual UM-9124CI should be used.

CHAPTER 1

Installation

This chapter contains procedures for installing and uninstalling the FASTCraft software program.

Number	Title	Page
Procedure 1-1	Install the software	4
Procedure 1-2	Uninstall the software	6

Requirements

The FASTCraft software requires about 20 MB of hard disk space for installation. The following minimum specifications are required to install this software:

- Pentium® microprocessor
- Microsoft® Windows® 98 operating system or later
- hard drive
- CD-ROM drive
- serial port
- screen resolution of 800 x 600 pixels or higher
- mouse or other compatible pointing device (desired but not required)
- DB9-to-DB9 female-male serial cable (required for local access only)
- external modem (required for dial-up access only)
- network interface card (NIC) (required for inband connection only)

Procedure 1-1 **Install the software**

To install the Craft Interface software on your hard drive:

- 1** Insert the FASTCraft CD-ROM into your computer's CD-ROM drive.
*The **Welcome** window (Figure 1) appears.*
- 2** Click **Next** and then **Next** again (Figure 2).
*The **Software License Agreement** window (Figure 3) appears.*
- 3** Click **Yes**.
Additional setup windows appear.

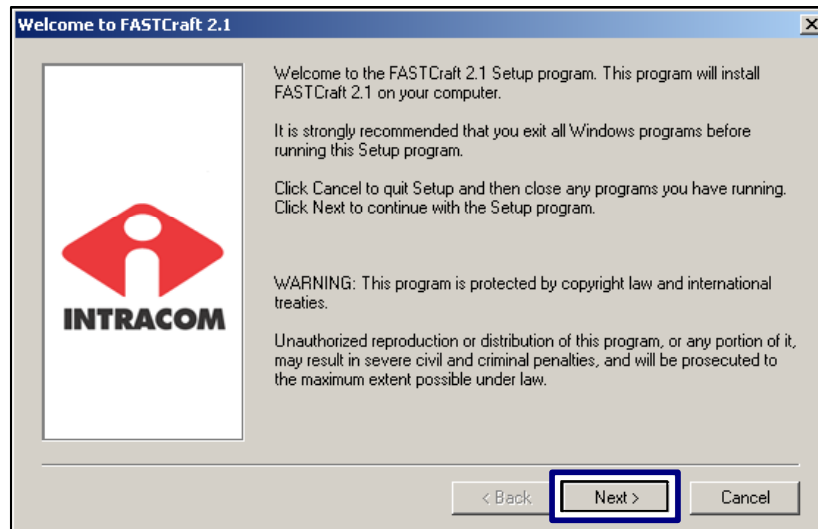


Figure 1 – ‘Welcome’ window



Figure 2 – ‘Important Notes’ window

Procedure 1-1 Install the software

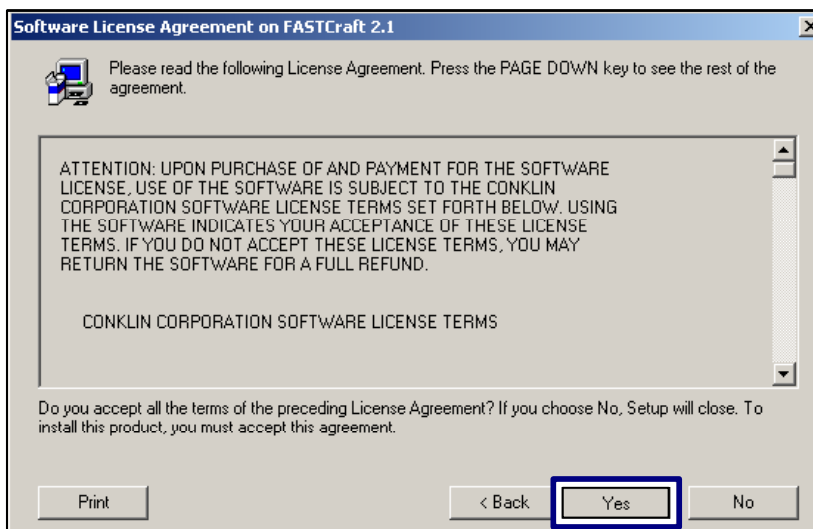


Figure 3 – ‘Software License Agreement’ window

- 4** Continue to click **Next** on subsequent screens until the **Finished** window (Figure 4) appears.
- 5** On the **Finished** window (Figure 4), click **Close**.
- 6** To open the user manual, double click **model9125_craft_um.pdf** in the **doc** folder (Figure 5).
*Hereafter, access the user manual in the directory **c:\intracom\craft**.*
- 7** Close all remaining FASTCraft setup windows.
A shortcut icon will appear on your Windows desktop.
- 8** Continue with Chapter 2, “Launching the FASTCraft Software.”

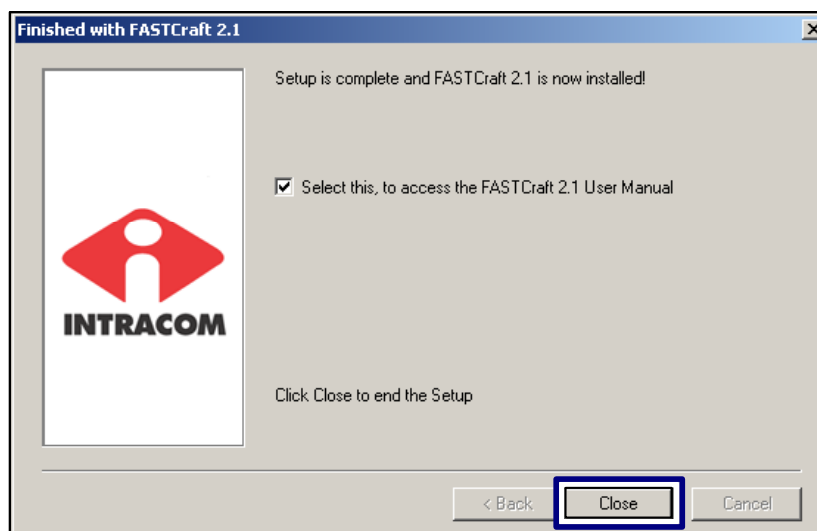


Figure 4 – ‘Finished’ window

Procedure 1-1 Install the software

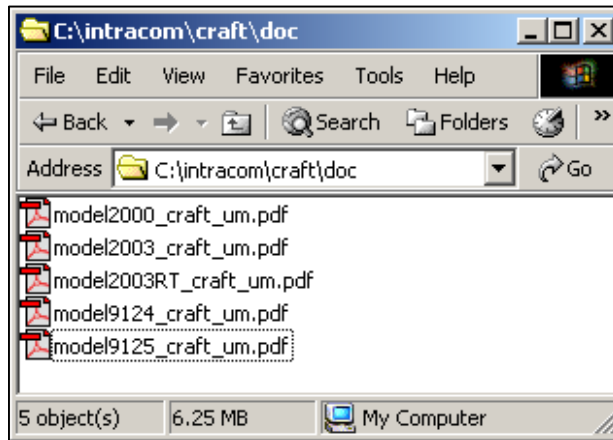


Figure 5 – Documents folder



You need Acrobat® Reader™ software installed on your PC in order to read the user manuals.

Visit www.adobe.com to download the Acrobat Reader software.

Procedure 1-2
Uninstall the software

To uninstall the Craft Interface software:

- 1 From your personal computer (PC) desktop, select **Start > Programs > FASTCraft 2.1 > Remove FASTCraft**.

Your computer removes all Craft Interface software files from the system. User-created files remain in the 'Intracom' directory until you remove them manual.

CHAPTER 2

Launching the FASTCraft Software

This chapter contains procedures for basic operation of the FASTCraft software program. The FASTCraft software allows you to access *FlexAccess* systems three ways:

- **Locally**, by connecting a PC to the **Craft** port on the front panel of the Core Controller card
- **Locally**, from a PC over a phone line using dial-up access
- **Remotely**, from a PC over the ethernet using UDP (inband) protocol

Number	Title	Page
Procedure 2-1	Connect the Craft cable (<i>local access only</i>)	7
Procedure 2-2	Launch the program	8
Procedure 2-3	Log in	18
Procedure 2-4	View the Version screen	19
Procedure 2-5	Switch to Command Line Interface format	20
Procedure 2-6	Exit the program	22

Procedure 2-1

Connect the Craft cable (*local access only*)

The Craft cable connects the Core Controller card to your computer. It enables you to configure and communicate with the *FlexAccess* cards in that shelf. **You will need a DB9-to-DB9 serial cable.**

To connect the Craft cable:

- 1 Using a DB9-to-DB9 cable, connect one end to an unused serial port on your computer. Refer to Table 1 for pinout designations.
- 2 Insert the male end of the cable into the Craft port on the front panel of the Core Controller card (Figure 6).

Table 1. DB9 pinouts

Signal type	DB9 pin #
TX	2
RX	3
Ground	5

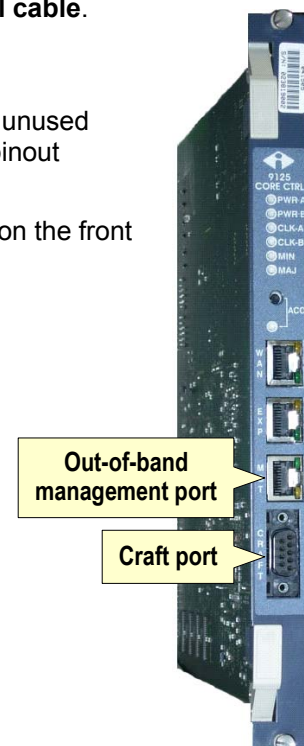


Figure 6 – Core Controller front panel

Procedure 2-2 Launch the program

You can launch the Craft Interface program to access the *FlexAccess* system **locally** or **remotely**, depending on which FASTCraft model you have ordered:

FASTCraft model	Access
Model 4000CI (FASTCraft)	serial port and dial-up
Model 4000CIR (FASTCraft extended)	serial port, dial-up, and inband

To launch the FASTCraft software program from a personal computer, complete the launch process for the connection method you wish to use. You only need to complete **one** of the processes to start the FASTCraft software.

Process	Page
Local access via serial port	8
Local access via dial-up connection	9
Remote access via inband IP connection	11

Local access via serial port

To access the *FlexAccess* systems locally:

- 1 On your desktop, double click on the **FASTCraft 2.1** icon.
The Communication window appears.
- 2 Select **Serial Port** and the port (**COM1** through **COM4**) to which the Craft cable is connected on your computer (Figure 7).
- 3 Click **Connect**.
The Login window appears.
- 4 Continue with Procedure 2-3.

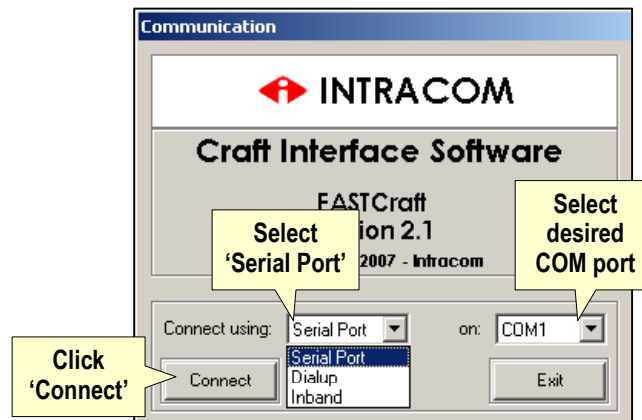


Figure 7 – Serial port access (local)

Procedure 2-2 Launch the program

Local access via dial-up connection

To access the *FlexAccess* systems using a PC and a modem connected to the core controller card front panel:

- 1 On your desktop, double click on the **FASTCraft 2.1** icon.



The **Communication** window appears.

- 2 Select **Dialup** and the port (**COM1** through **COM4**) to which the modem is connected on your computer (Figure 8).

- 3 Click **Yes** in the **Information** window.

- 4 Click **Connect**.

The **Dialup Connection** window (Figure 10) appears.

NOTE	If problems occur either in accessing your modem or establishing a connection, try adding one of the following initialization strings to your modem: AT&D0 or AT&D0&K0
-------------	--

- 5 To add a dial-up location, complete the fields under **New Session** and click **Create** (Figure 10).

Field	Definition
Alias	an identifying name for the location
Tel. No.	the telephone number for the location, including the country and the area code if necessary.

The new entry appears under **Available Sessions**.

- 6 Choose a site from the **Available Sessions** list and click on it.

The selected line is highlighted.

- 7 Click **Connect**.

An **Establishing connection** window appears while the modem is dialing, followed by a **Connection established** window.

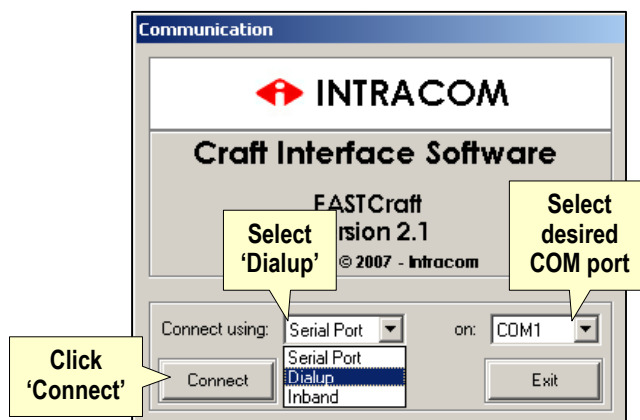


Figure 8 – Dial-up access (local)

Procedure 2-2 Launch the program

- 8 Click **Okay**.
The **Dialup Connection** window minimizes and the **Login** window appears.
- 9 Continue with Procedure 2-3.

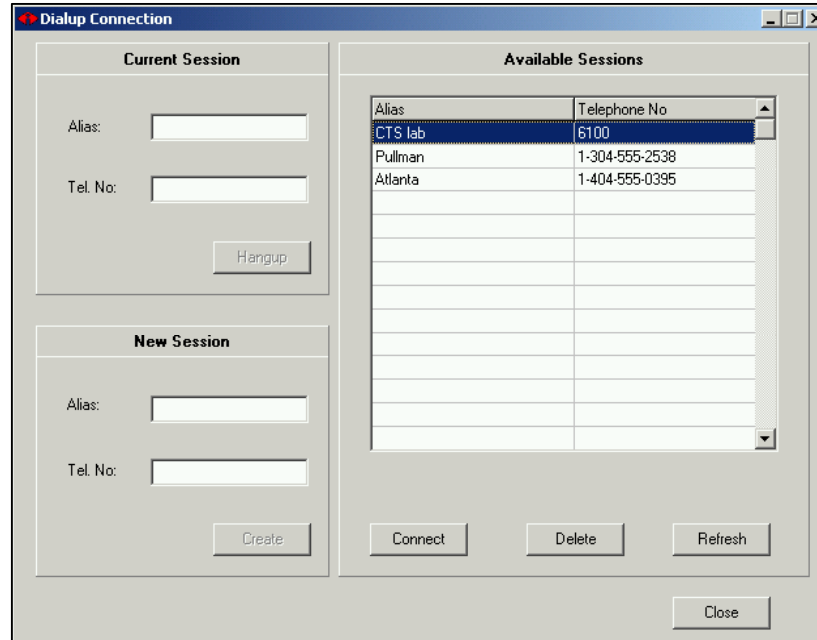


Figure 9 – 'Dialup Connection' window

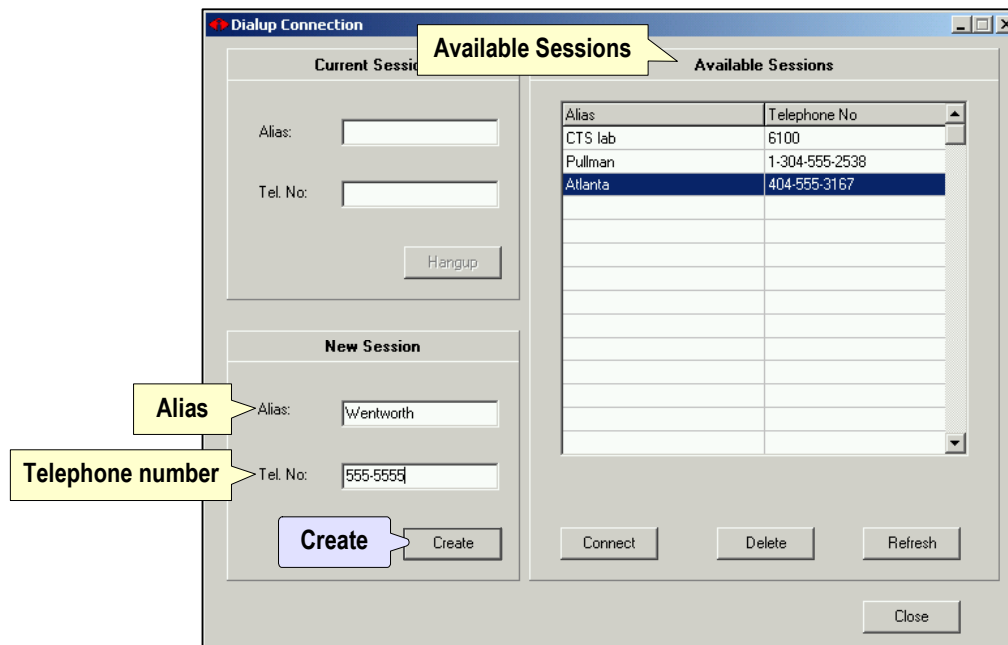


Figure 10 – Create a new session

Procedure 2-2 Launch the program

Remote access via inband IP connection (Extended license only)

To access the *FlexAccess* systems using a PC and an ethernet connection:

- 1 On your desktop, double click on the **FASTCraft 2.1** icon.

The **Communication** window appears.



FASTCraft 2.1

- 2 Select **Inband** (Figure 11).



The application constantly uses the UDP port 3946 when in a UDP session.

Consult your network administrator if either Network Address Translation (NAT) or Port Address Translation (PAT) takes place for the UDP/IP path between the application host PC and the managed node. The application may experience problems communicating to the managed node.

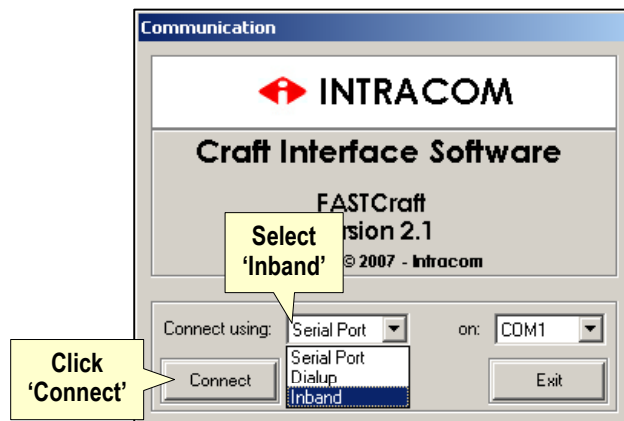


Figure 11 – Inband access (remote)



Do not attempt to open two concurrent applications, both using a UDP session, on the same host PC. This will create a conflict, and potentially neither application will operate correctly and reliably.



If IP communication between the FASTCraft host and the managed nodes traverses a firewall or routers with explicit access control lists, make sure that UDP port 3946 is not blocked. Such a setting would prevent FASTCraft from communicating to the managed nodes. Consult your network administrator or ÖVÖCustomer Technical Support for a resolution.

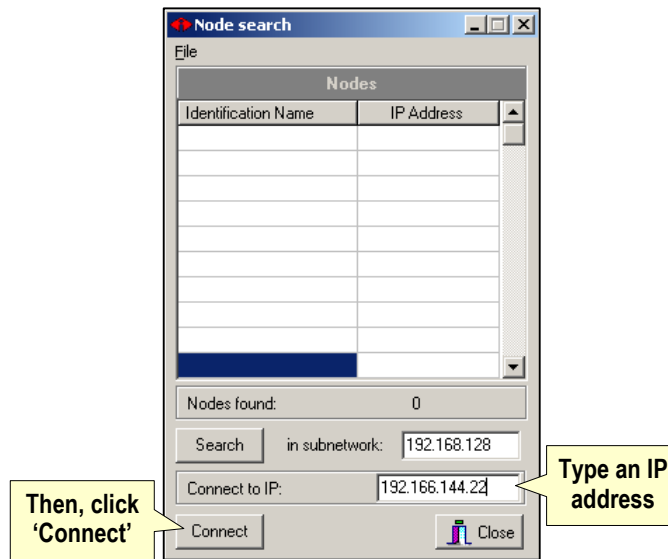
Procedure 2-2 Launch the program

- 3** Click **Connect**.
The FlexAccess node search window (Figure 12) appears.
- 4** Use any of three criteria to specify which *FlexAccess* system you will connect to remotely:
 - IP address
 - Subnetwork
 - Node List

By IP address

To specify a *FlexAccess* system by IP address:

- 1** On the **Node search** window, type the IP address in the **Connect to IP** field (Figure 12).
- 2** Click **Connect**.
The Login window appears.
- 3** Continue with Procedure 2-3.



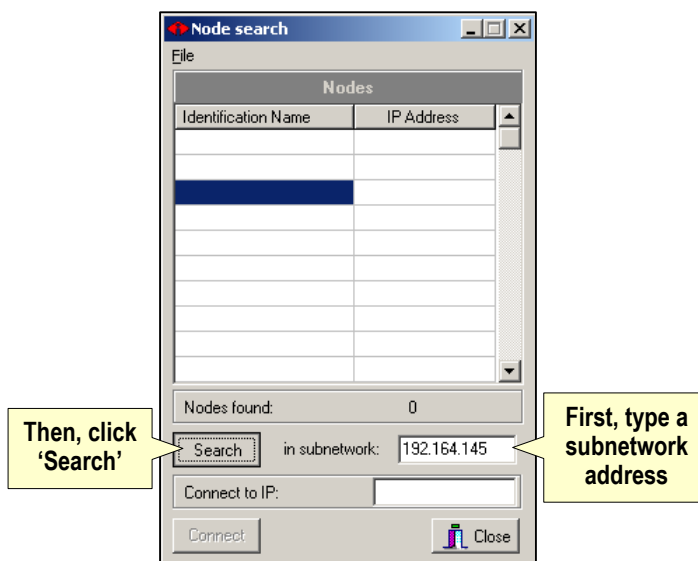
**Figure 12 – Connect to a system (by IP address)
(remote access only)**

Procedure 2-2 Launch the program

By subnetwork

To select from all nodes in the same subnetwork as the Craft host PC:

- 1 In the **in subnetwork** field, type the subnetwork address (Figure 13).
Note: The discovery of network nodes will not function for subnetworks outside of the one where the Craft host PC is located.
- 2 Click **Search**.
- 3 The **Node search** window appears with available nodes listed (Figure 14).
- 4 Click on the node name or IP address to select a node.
- 5 Click **Connect** (Figure 14).
*The **Login** window appears.*
- 6 Continue with Procedure 2-3.



**Figure 13 – Connect to a system (by subnetwork)
(remote access only)**

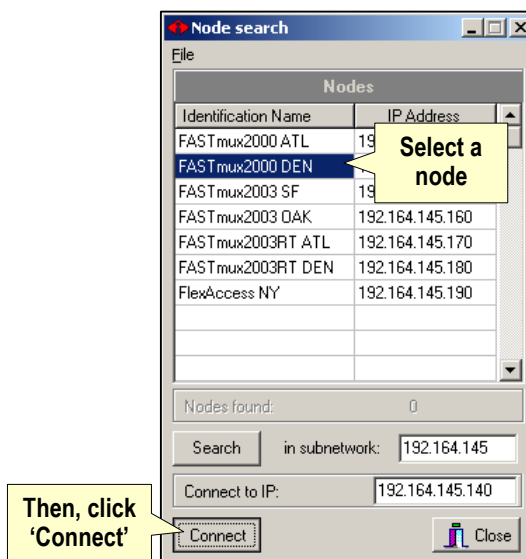


Figure 14 – Node search window (nodes listed)

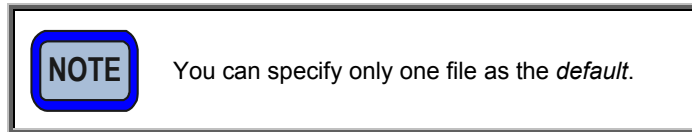
Procedure 2-2 Launch the program

Creating Node Lists

You will avoid keystrokes if you store node names and IP addresses in *Node Lists*. You can create node lists in the Node Search window. Once they are created, you can simply select a FlexAccess system from a list during the login process.

Create a Default List

The *Default List* will always appear automatically when you access FASTCraft on the computer where the software resides.



- 1 In the **Node Search** window, click in a blank line.
- 2 Under **Identification Name**, type a name to identify the system node.
- 3 Under **IP Address**, type the IP address for the system node.
- 4 Continue to add names and IP addresses to the list.
- 5 When your list is complete (for now, at least; you can revise it later), click on **File** and select **Save Default** (Figure 15).

*This list will appear automatically in the **Node Search** window.*

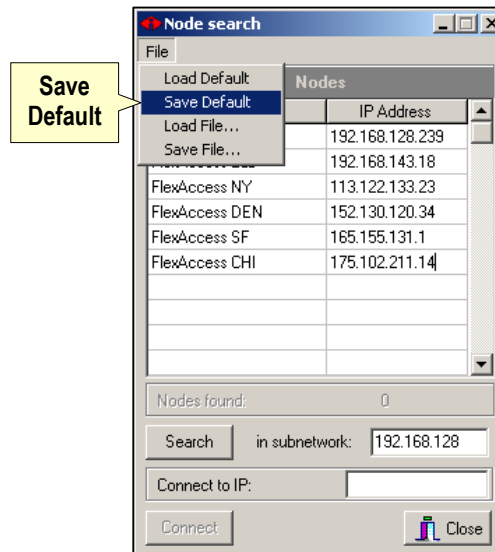


Figure 15 – ‘Save Default’ node list

Procedure 2-2 Launch the program

Create a Node List File

You can create a *Node List* file and save it on the computer where the software resides. Once a Node List file is saved, you can select it from the **Node Search** window during the login process.

NOTE

 When you exit FASTCraft, the *Default* node list will appear next time you access the system.

- 1 In the **Node Search** window, click in a blank line and create a list the same as described above under “Create a Default List.”
- 2 When your list is complete (for now, at least; you can revise it later), click on **File** and select **Save File** (Figure 16).
The Save As window (Figure 17) appears.
- 3 Name the file and save it on your computer.
- 4 Continue with Procedure 2-3.

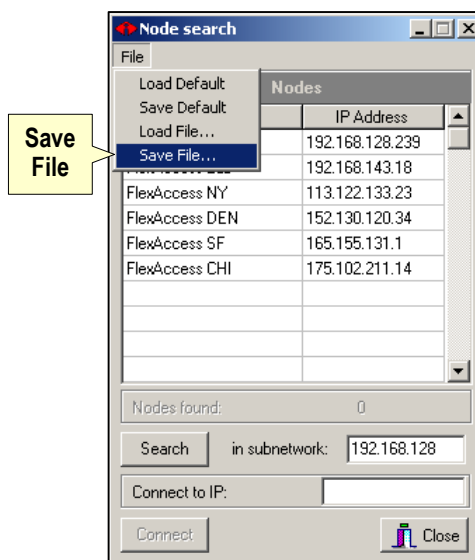


Figure 16 – Save a node list file

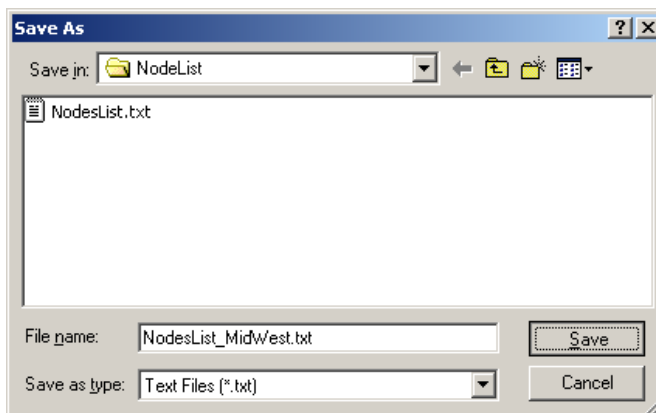


Figure 17 – ‘Save As’ window

Procedure 2-2 Launch the program

Load a Default/File

Once you have saved *Node List* files, you can load one when the Default is not appropriate. Likewise, when you've selected a Node List and wish access the Default list, you can select it.

To load a file:

- 1 In the **Node Search** window, click **File** (Figure 18).
- 2 From the drop-down list, select either **Load Default** or **Load File**.

Load Default: The Default List appears immediately.

Load File: An **Open** window (Figure 19) appears.
Navigate to the file you want and click **Open**.
The list you selected appears immediately.

- 3 Select the system node you wish to access and click **Connect** (Figure 20).
The Login window appears.
- 4 Continue with Procedure 2-3.

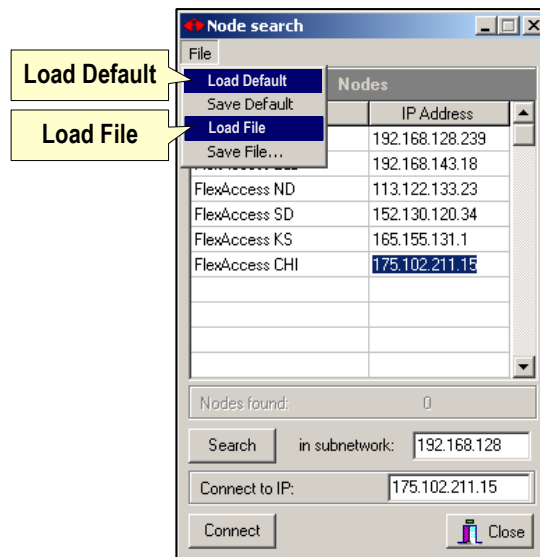


Figure 18 – Loading a Node List

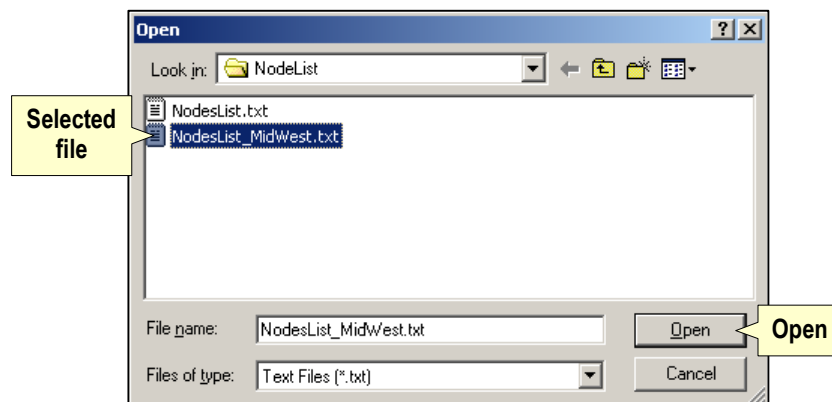


Figure 19 – Selecting a Node List

Procedure 2-2 Launch the program

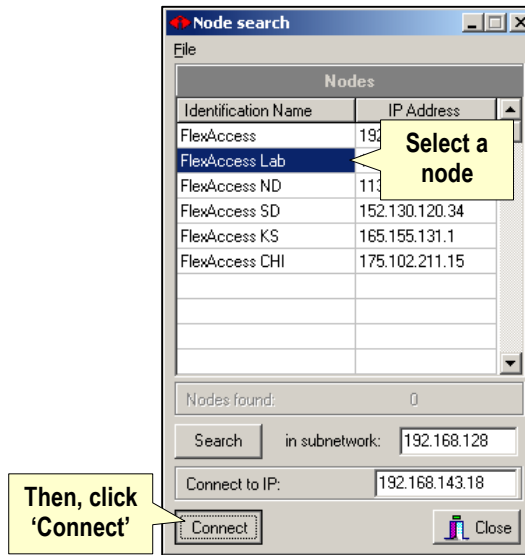


Figure 20 – Connect to a system (by Node List file)

Procedure 2-3 Log in

The FASTCraft software includes a login feature to protect the *FlexAccess* system.

To log in at the **Login** window (Figure 21):

- 1 Type the user name and password in the appropriate fields.
*When accessing the system for the first time, use the default user name (**admin**) and password (**admin9125**). Refer to Procedure 10-1 to set up your own user account.*
- 2 Click **OK**.
The FASTCraft Inventory screen (Figure 19) appears.

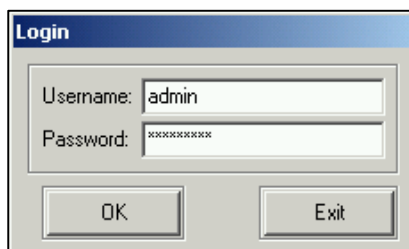


Figure 21 – ‘Login’ window

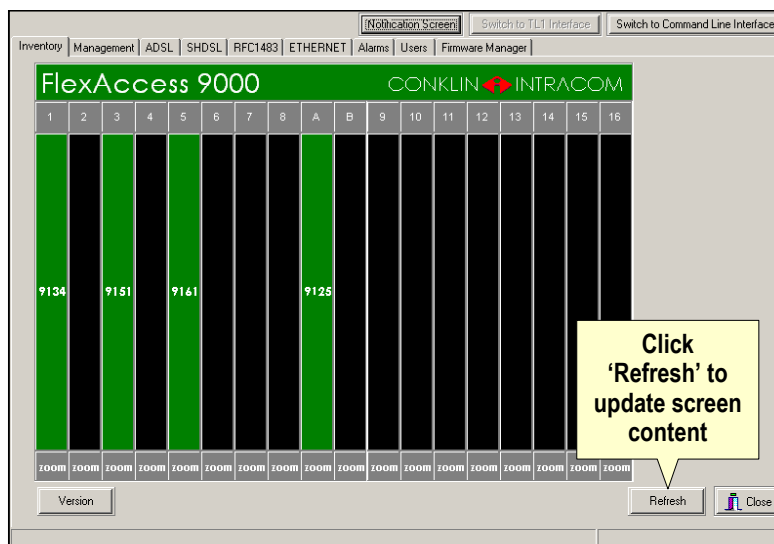
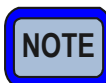


Figure 22 – FASTCraft screen (Inventory view)



The Inventory screen updates automatically every few minutes.

In addition, you may click **Refresh** at any time to update the screen. However, please *do not* press **Refresh** more than once within 30 seconds to avoid overloading the serial port or inband (UDP) link.

Procedure 2-4
View the Version screen

Click **Version** (Figure 23) on the **Inventory** screen to view the software version number and other information (Figure 24).

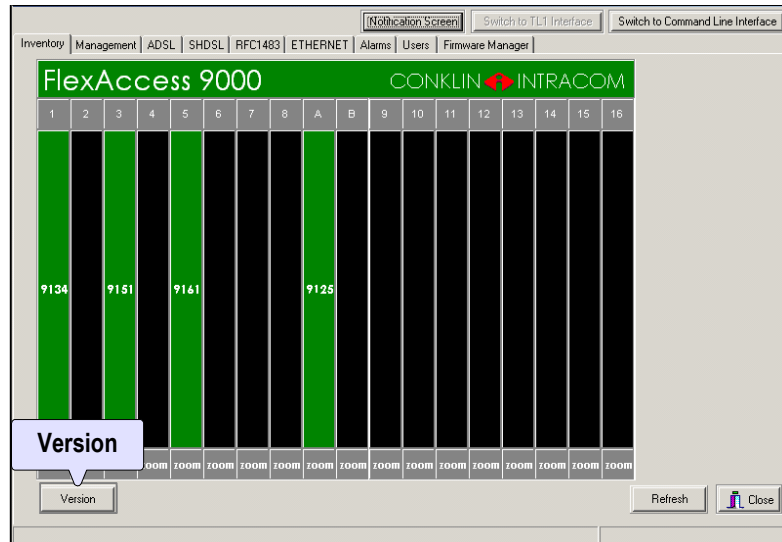


Figure 23 – Version access



Figure 24 – 'Version' window

Procedure 2-5 **Switch to Command Line Interface format**

It is possible to switch from FASTCraft software graphic user interface (GUI) format to the Command Line Interface (CLI) console format.

To switch to CLI format:

- 1 From any **FASTCraft** tab screen, click **Switch to Command Line Interface** (Figure 25).

*The **FASTCraft – Command Line Interface** screen (Figure 26) appears.*

- 2 Press **Enter** to view top-level CLI commands Figure 26
- 3 To return to the FASTCraft GUI format, click **Return to Graphical User Interface**.

*The main **FASTCraft** inventory screen appears.*

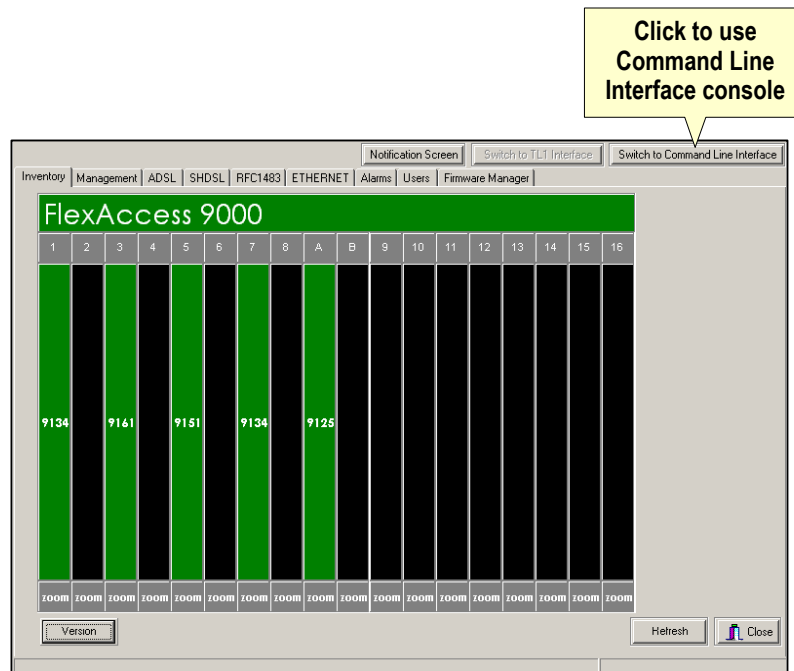


Figure 25 – ‘Switch to Command Line Interface’

Procedure 2-5 Switch to Command Line Interface format

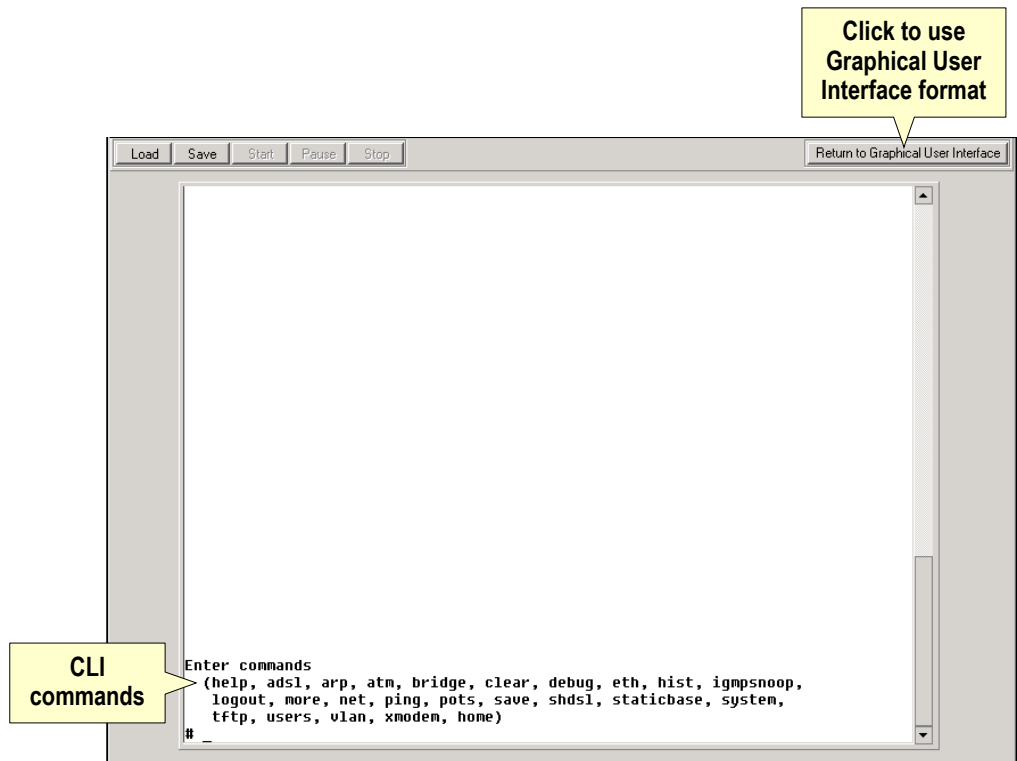


Figure 26 – Command Line Interface console screen

Procedure 2-6 **Exit the program**

To exit the FASTCraft software program:

- 1 Store or save any changes you wish to keep.
- 2 Click **Close** from most **FASTCraft** screens (Figure 27).

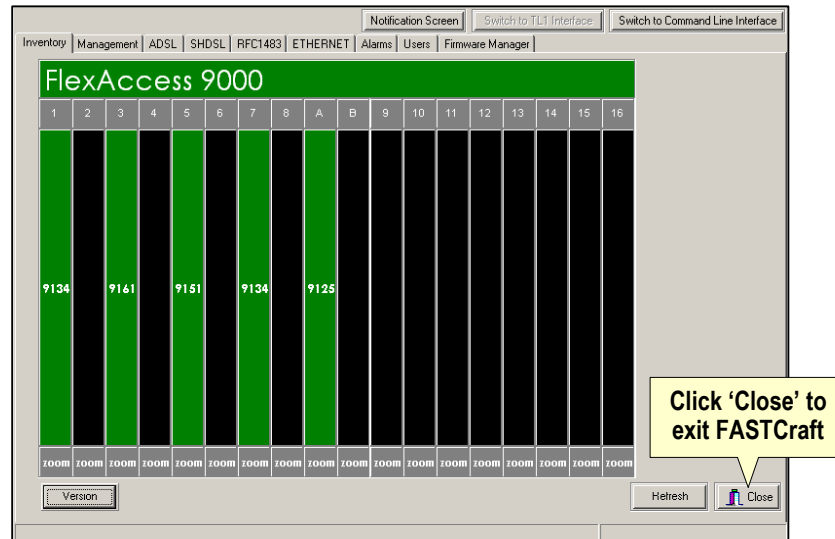


Figure 27 – Exiting FASTCraft

CHAPTER 3

Inventory Functions

This chapter describes basic maintenance procedures that can be completed from the FASTCraft **Inventory** screen.

Number	Title	Page
Procedure 3-1	Set the date and time	23
Procedure 3-2	Use the Inventory screen	25
Procedure 3-3	Test the POTS lines	31
Procedure 3-4	View the Notification Screen	35
Procedure 3-5	View the History Log	37

Procedure 3-1 Set the date and time



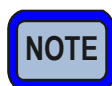
Perform this procedure **first** when installing a system in the field.

The date should be set on the Core Controller card in the following instances:

- as the first procedure at initial installation
- whenever power to the Core Controller card has been removed and restored, or reset

To set the date:

- 1** Click on the **Inventory** tab or the **Return to Inventory Screen** button.
*The main **Inventory** screen (Figure 28) appears.*
- 2** Click **zoom** at the bottom of the 9125 card icon.
*The **Inventory status** screen (Figure 29) appears.*
- 3** Click the **Set Date** button.
*The **Date Set** screen (Figure 30) appears.*
- 4** Enter the year, month, day, hour, minutes, and seconds in 24-hour format, and then click **Apply** to set the time.
- 5** Click **OK** on the **Information** notice that tells you the date and time have been successfully set.



For instructions for configuring the system from this screen (using **Traps Enabling** and **Power Supply Status** fields), refer to Procedure 4-2, "Configure the system."

Procedure 3-1 Set the date and time

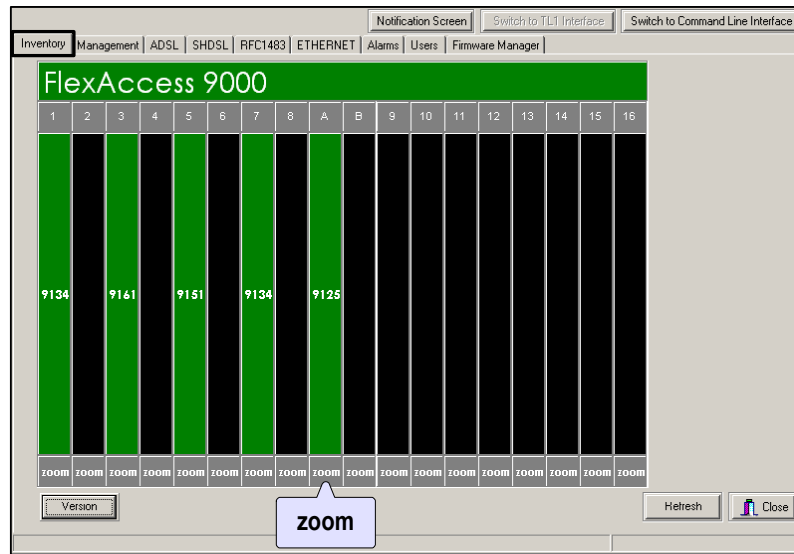


Figure 28 – 'Inventory' screen

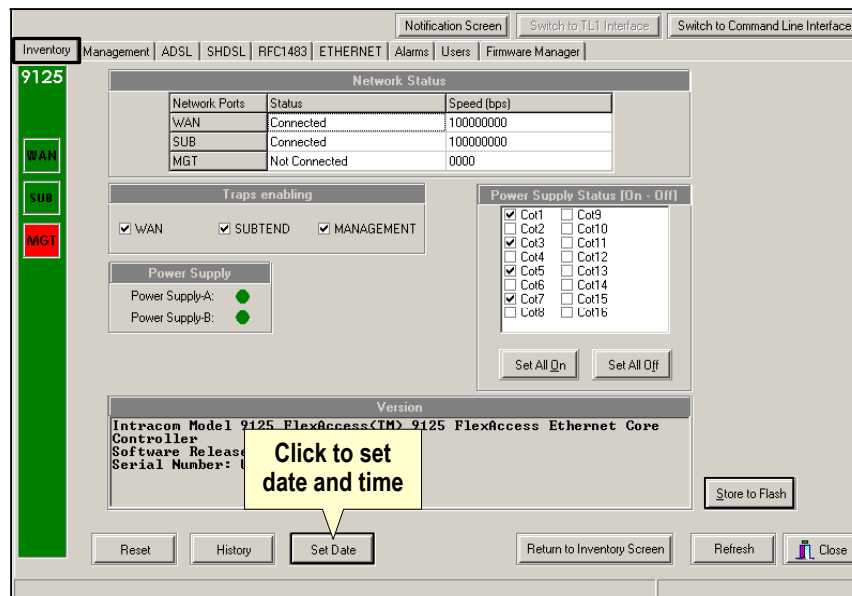


Figure 29 – Set date and time

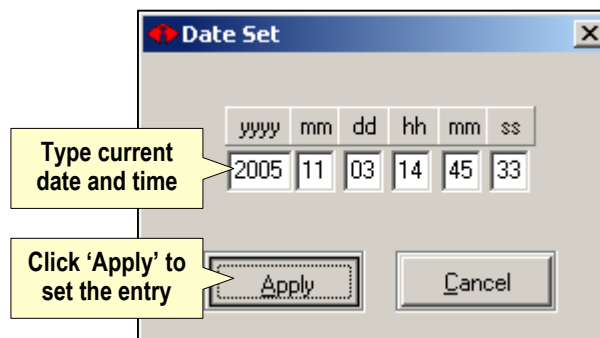


Figure 30 – 'Date Set' screen

Procedure 3-2 Use the Inventory screen

The **FASTCraft Inventory** screen (Figure 31) displays when you click on the **Inventory** tab near the top of the **FASTCraft** screen.

The graphics on the **Inventory** screen represent the circuit card slots in a *FlexAccess* shelf. The Core Controller card slot is labeled **A**, and application card slots for POTS, ADSL, or POTS+ADSL are labeled **1** through **16** on a 19-inch (Model 9121) shelf or **1** through **20** on a 23-inch (Model 9122) shelf.

The slot labeled **B** is not used at this time.

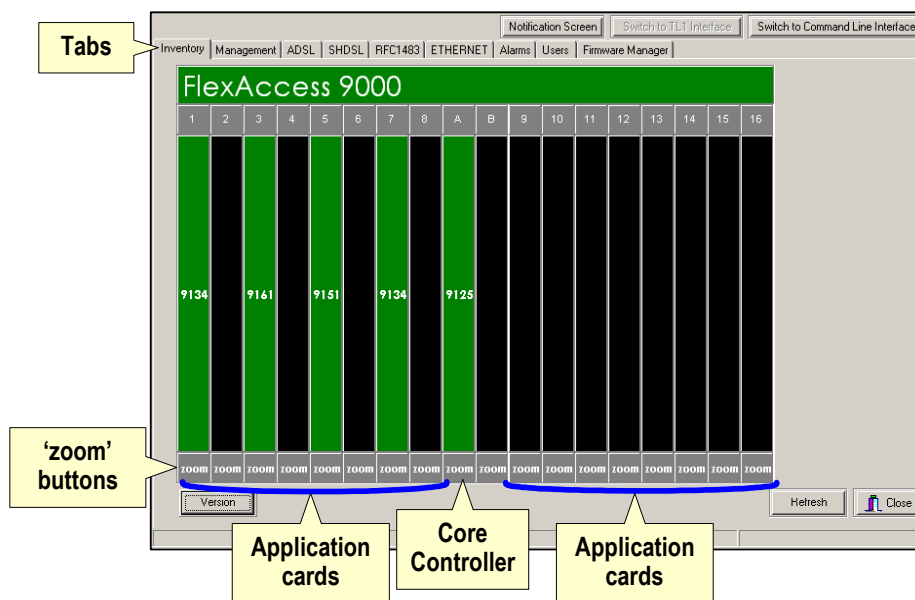


Figure 31 – 'Inventory' screen

Procedure 3-2 Use the Inventory screen

Inventory screen icon color codes

On the Inventory screen, the graphics representing the cards and the upper part of the shelf are color coded as follows (refer to Figure 31):

Color	Definition
<i>Shelf</i>	Note: Shelf colors represent alarm status in general on the shelf (both core card and application cards).
green	no alarms exist in the shelf
yellow	a Minor alarm exists, but no Major alarms
olive green	both Major and Minor alarms exist
red	a Major alarm exists, but no Minor alarms
<i>Individual cards</i>	Note: Individual card colors represent alarm status for the specific card.
black	slot is empty
green	slot is occupied and there are no alarms
yellow	slot is occupied and there is a Minor alarm but no Major alarms
olive green	slot is occupied and there are both Major and Minor alarms
red	slot is occupied and there is a Major alarm but no Minor alarms
	IMPORTANT: If the red slot is identified with an M , then the wrong type of module is occupying that slot.

Procedure 3-2 Use the Inventory screen

Inventory status screen (Core Controller card)

Click **zoom** at the bottom of the 9125 Core Controller card icon to view its Inventory status screen (Figure 32).

Indicators provide wide area network (WAN) status information at a glance. Refer to Table 2 for color codes.

Refer to Procedure 4-2, “Configure the system,” to find instructions for monitoring and configuring the network using this screen. Refer to Procedure 3-5, “View the History Log,” to find instructions for navigating in the History Log.

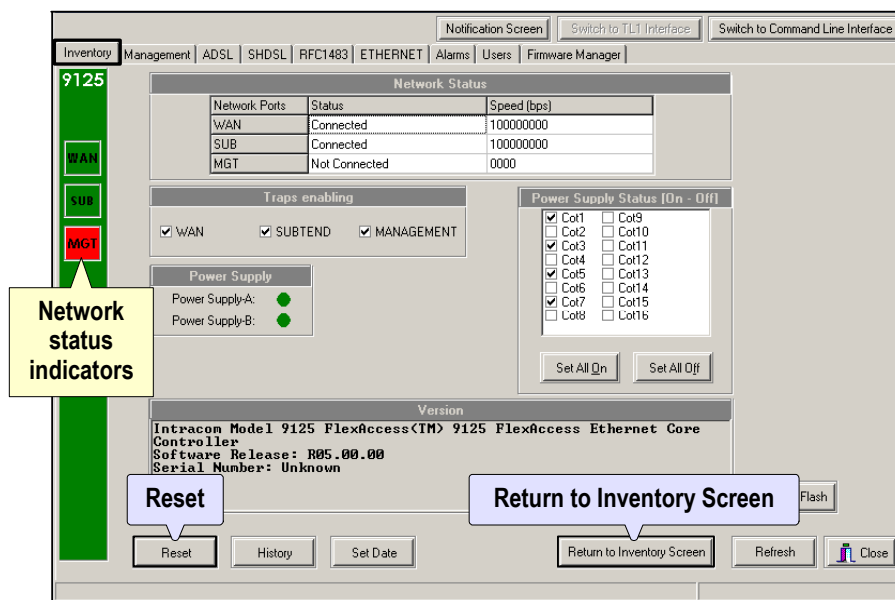


Figure 32 – Inventory status screen (Core Controller card)

Table 2. WAN status indicator color codes

Indicator color	Description
WAN status	
green	connected
gray	resetting
red	not connected
Power Supply	
green	power is ON
gray	power is not connected

NOTE Pressing **Reset** causes service interruption for several minutes to all connected customers on this shelf.

Procedure 3-2 Use the Inventory screen

Inventory status screen (ADSL card)

Click zoom at the bottom of a 9151 card icon to view its Inventory status screen (Figure 33). Table 3 provides definitions of screen features.

Refer to Procedure 4-2, “Configure the system,” to find step-by-step instructions for monitoring and configuring the network using this screen.

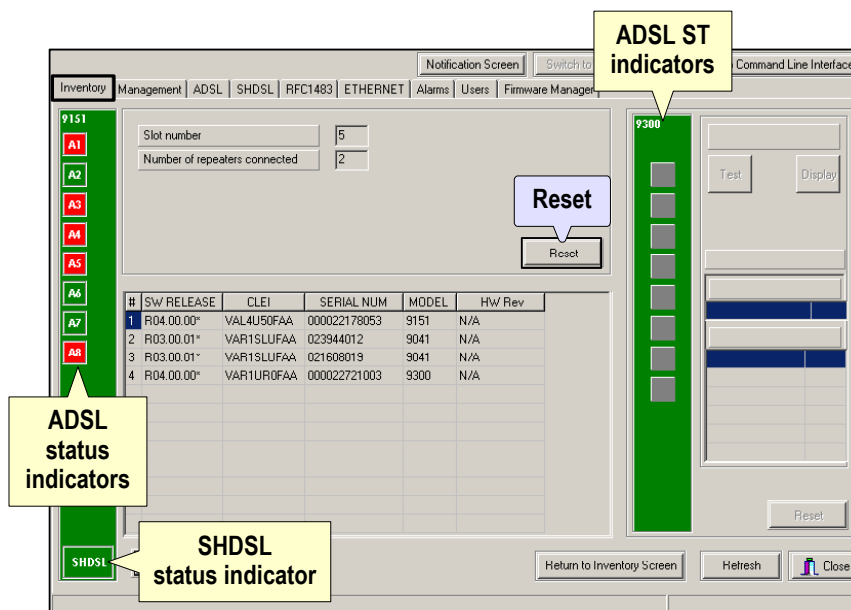


Figure 33 – Inventory status screen (ADSL card)

Table 3. Status indicator color codes (ADSL card)

Indicator color	Description
ADSL card status indicator	
gray	Corresponding channel set to admin down
green	Corresponding channel set to admin up and reported as operational
red	Corresponding channel set to admin up and reported as not operational
ADSL ST status indicator	
green	ADSL link is synchronized
red	ADSL link is not synchronized
SHDSL status indicator	
green	SHDSL link is synchronized
red	SHDSL link is not synchronized

NOTE Pressing **Reset** causes service interruption for several minutes to all connected customers on this card.

Procedure 3-2 Use the Inventory screen

Inventory status screen (POTS card)

Click **zoom** at the bottom of a 9134 card icon to view its Inventory status screen (Figure 34). Table 4 provides definitions of screen features.

Refer to Procedure 3-3, “Test the POTS lines,” to find step-by-step instructions for testing individual POTS channels using this screen.

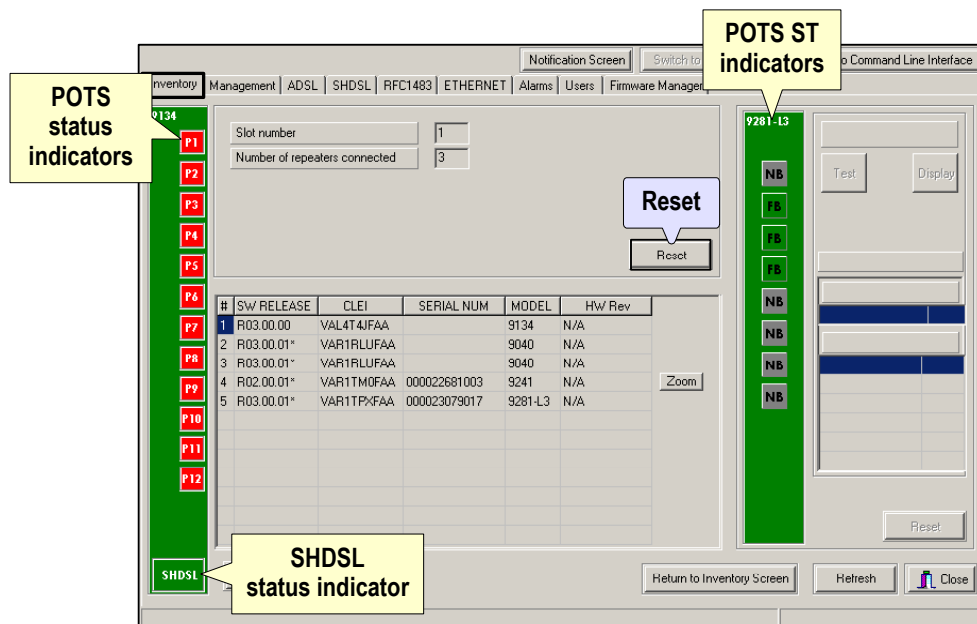


Figure 34 – Inventory status screen (POTS card)

Table 4. Status indicator color codes (POTS card)

Indicator color	Description
POTS card status indicator	
gray	Corresponding channel not assigned
yellow	Corresponding channel assigned and busy
red	Corresponding channel assigned and idle
POTS ST status indicator	
black	Corresponding channel not assigned
green	Corresponding channel in Forward Battery (FB)
olive green	Corresponding channel in Reverse Battery (RB)
gray	Corresponding channel in No Battery (NB)
blue	Corresponding channel under test
SHDSL status indicator	
green	SHDSL link is synchronized
red	SHDSL link is not synchronized

NOTE Pressing **Reset** causes service interruption for several minutes to all connected customers on this card.

Procedure 3-2 Use the Inventory screen

Inventory status screen (POTS+ADSL card)

Click **zoom** at the bottom of a 9161 card icon to view its Inventory status screen (Figure 35). Table 5 provides definitions of screen features.

Refer to Procedure 4-2, “Configure the system,” to find step-by-step instructions for using this screen to monitor and configure the network.

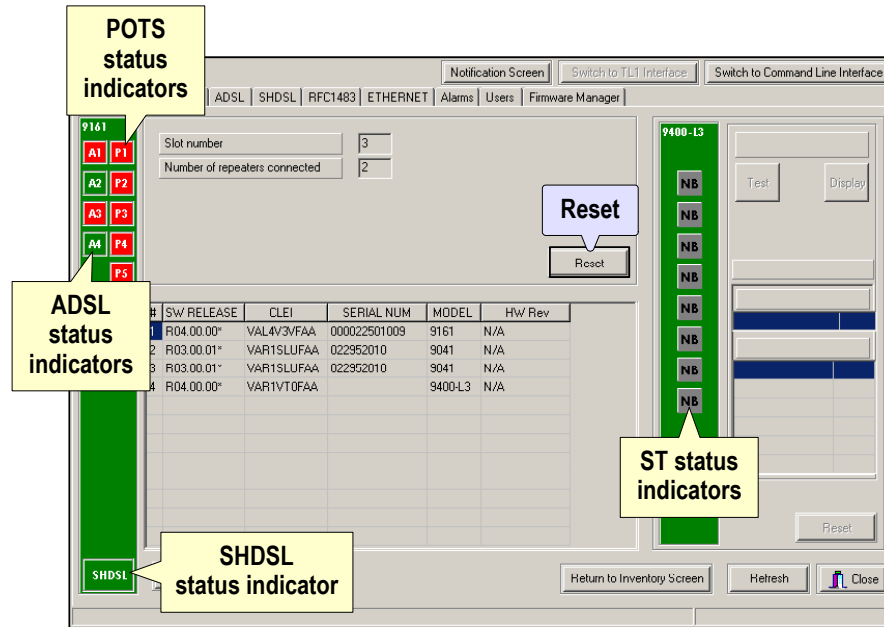


Figure 35 – Inventory status screen (POTS+ADSL card)

Table 5. Status indicator color codes

Indicator color	Description
Card status indicator	ADSL
gray	Corresponding channel set to admin down
green	Corresponding channel set to admin up and reported as operational
red	Corresponding channel set to admin up and reported as not operational
	POTS
gray	Corresponding channel not assigned
yellow	Corresponding channel assigned and busy
red	Corresponding channel assigned and idle
ST status indicator	
black	Corresponding channel not assigned
green	Corresponding channel in Forward Battery (FB)
olive green	Corresponding channel in Reverse Battery (RB)
gray	Corresponding channel in No Battery (NB)
blue	Corresponding channel under test
SHDSL status indicator	
green	SHDSL link synchronized
red	SHDSL link not synchronized

NOTE Pressing **Reset** causes service interruption for several minutes to all connected customers on this shelf.

Procedure 3-3 Test the POTS lines

POTS lines can be tested from the Inventory status screen of any POTS or POTS+ADSL card. This test includes both the channel and the customer drop.

To test a POTS line:

- 1 From the main **Inventory** screen, click **zoom** at the bottom of the card to be tested.

*The **Inventory status** screen (Figure 36) appears.*

- 2 Check the POTS status indicator for the channel you want to test. The status indicator should be red, indicating that the line is idle.

- 3 Select an ST channel to be tested.

If you wish to	Then
test a channel on the terminating ST	<ol style="list-style-type: none"> a. From the card's Inventory status screen, click on an ST channel to be tested. Note: Test only those channels with talk battery applied to the COT (they appear as FB or RB). You cannot test channels without talk battery (NB). <i>The Test button becomes active (Figure 36).</i> b. Go to Step 4.
test a channel on a non-terminating Quad POTS ST	<ol style="list-style-type: none"> a. Click the Zoom button on the card's Inventory status screen (Figure 37). <i>The Model 9241 window (Figure 38) appears.</i> Note: The Zoom button appears only with the non-terminating Quad POTS ST (9241). b. In the Model 9241 window, click on an ST channel to be tested. <i>The Test button becomes active.</i> c. Go to Step 4.

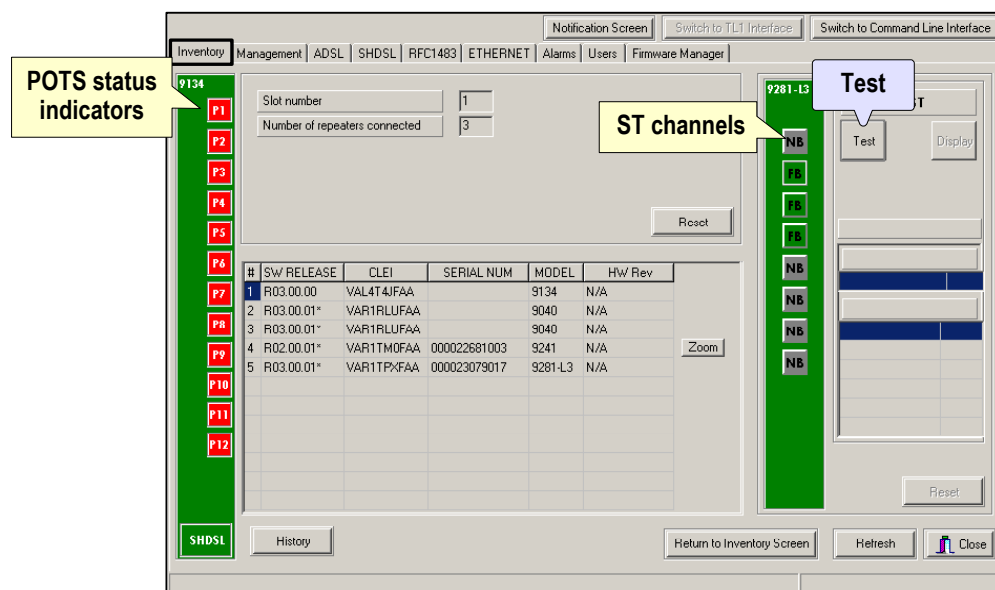


Figure 36 – Channel test (terminating ST)

Procedure 3-3 Test the POTS lines

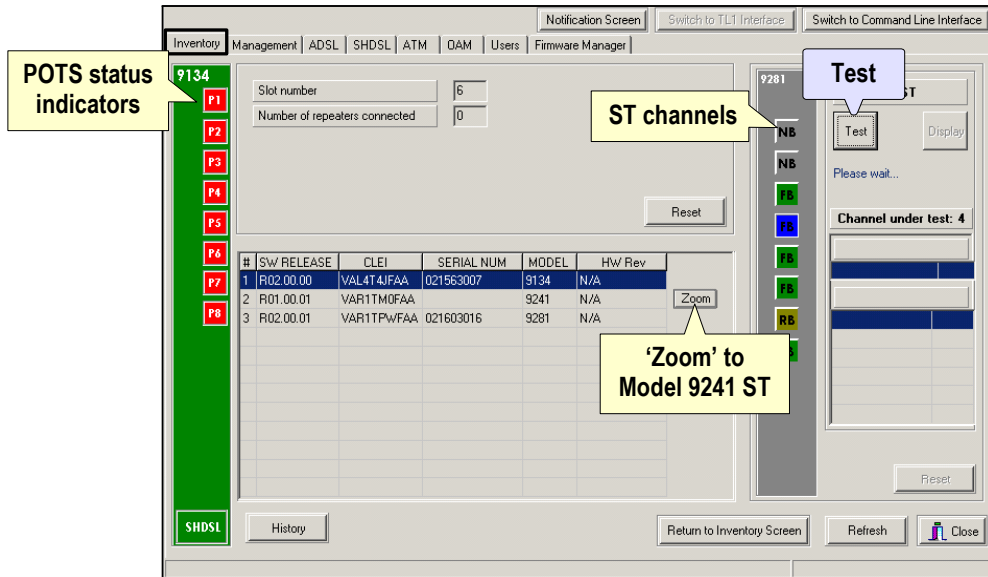


Figure 37 – Channel test (non-terminating quad POTS ST)

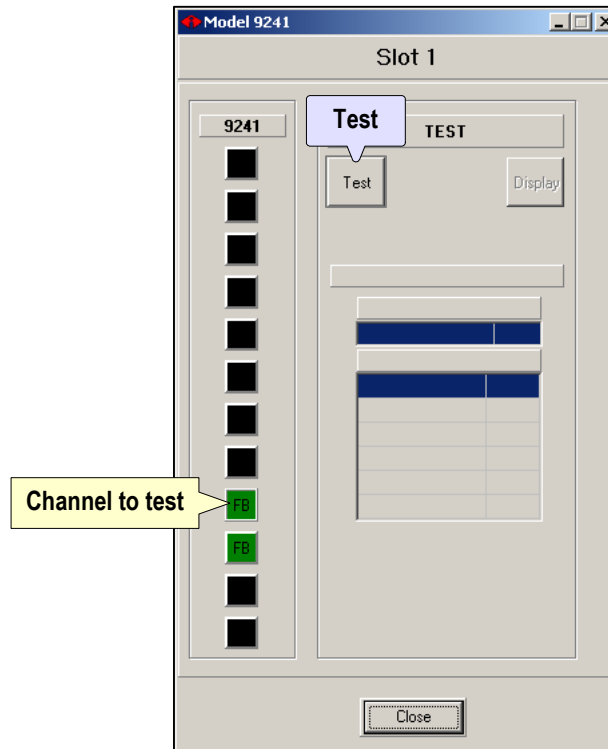
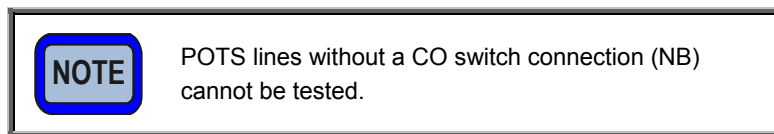


Figure 38 – 'Model 9241' window

Procedure 3-3 Test the POTS lines

- 4 Click **Test** to begin testing the selected channel.
A warning message indicates that the test is intrusive (Figure 39).



- 5 Click **Yes** to continue the test. The test takes about 10 seconds.
*The **Display** button becomes active when the test is complete.*
- 6 Click **Display** to show the results of the channel test.
*The test results appear on the **Inventory status** screen (Figure 40, Figure 41).*

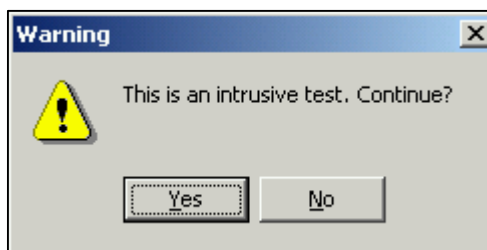


Figure 39 – Intrusive test warning

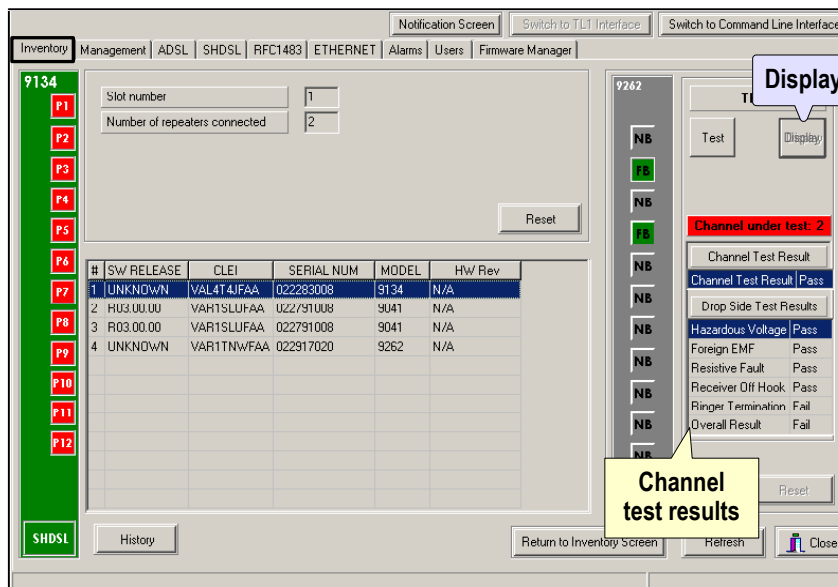


Figure 40 – Channel test results on the Inventory status screen

Procedure 3-3 Test the POTS lines

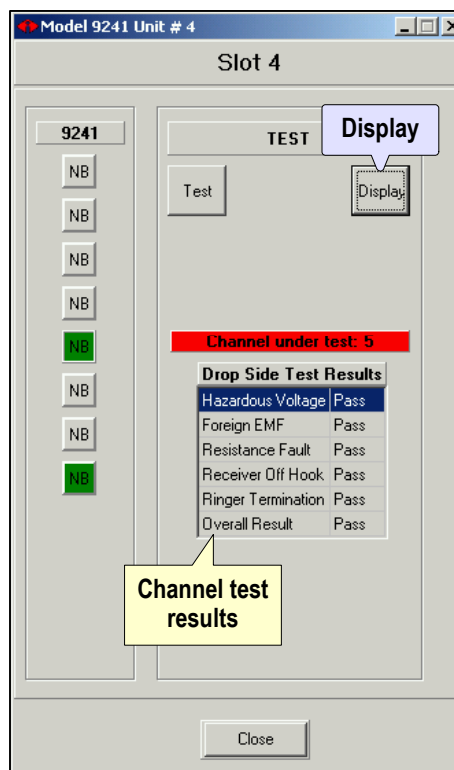


Figure 41 – Channel test results on the Model 9241 screen

Procedure 3-4 View the Notification Screen

On the **Notification** screen, the FlexAccess system notifies you of events that occur in the system.

To view the **Notification** screen:

- 1 On the **Inventory** screen or the **Inventory status** screen for any card, click **Notification Screen** (Figure 42) to view error text output.

Error text output appears within brackets [] (Figure 43). Event indicators function as follows:

Indicator	Description
MAJOR	
gray	no major event has been received for a period of 30 seconds
red	a major event has been received
MINOR	
gray	no minor event has been received for a period of 30 seconds
yellow	a minor event has been received

- 2 Click **Close** to return to the **Inventory** screen or **Inventory status** screen.

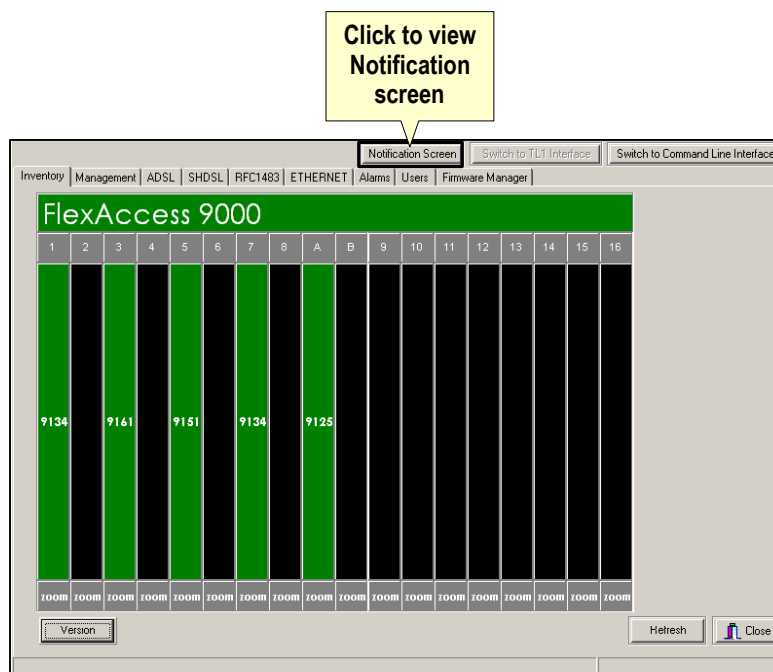


Figure 42 – ‘Notification Screen’ access

Procedure 3-4 View the Notification Screen

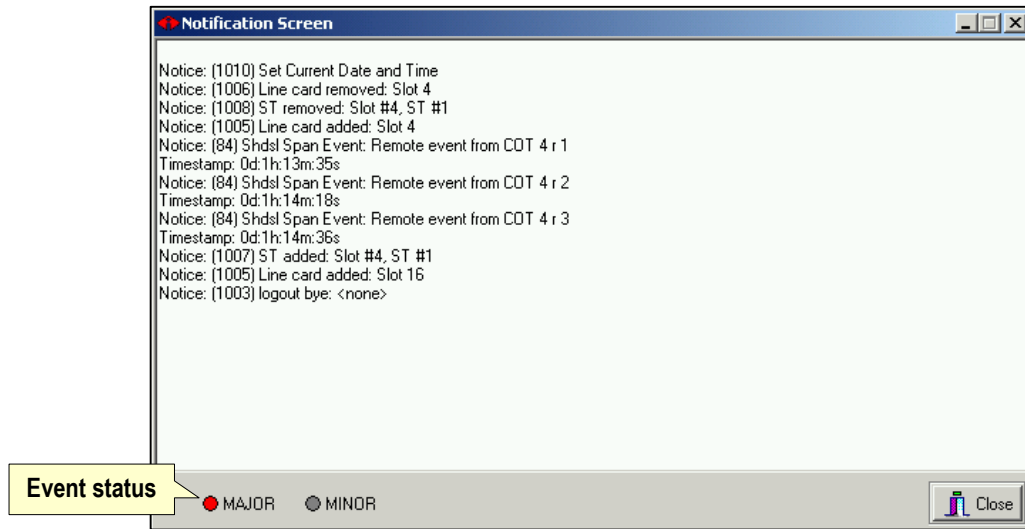


Figure 43 – 'Notification Screen'

NOTE Notifications are visible for as long as the window is kept open. While the window is closed, incoming notifications will continue to be stored in the History log. To view past events, click **History** on the status screen for the system you wish to monitor (refer to Procedure 3-5, "View the History Log").

Procedure 3-5 View the History Log

On the **Inventory status** screen for any card, click **History** (Figure 44) to view that system's performance history.

To view the History Log:

- 1 Click **zoom** to access the Inventory status screen for the card you wish to view.
- 2 Click **History**.

The **History Log** screen (Figure 45) appears, with the most recent notifications listed first. Table 6 describes the button functions.

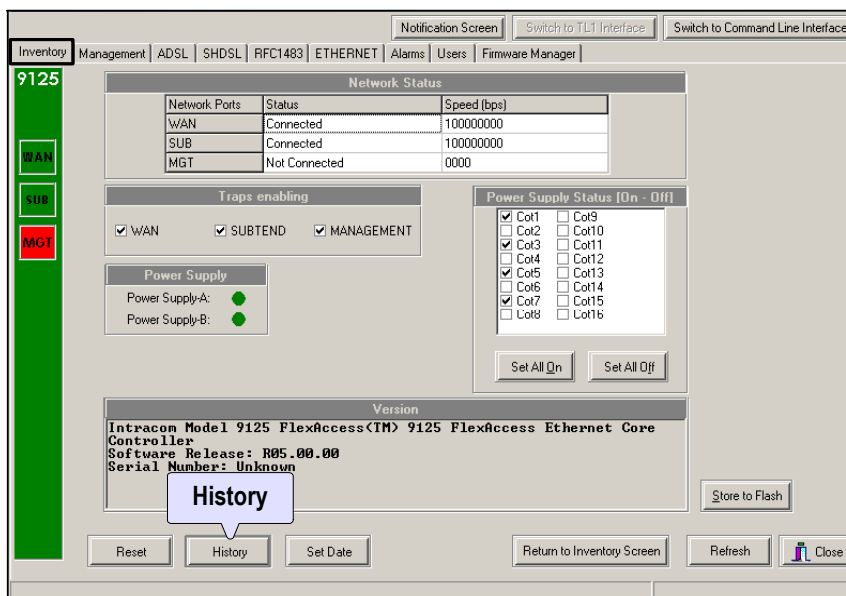


Figure 44 – 'History Log' access

Table 6. History Log button functions

Button	Description
Prev 100	Displays previous group of 100 notifications.
GOTO Start	Displays the beginning of the log (starting with the most recent notification).
Next 100	Displays next group of 100 notifications.
Save Screen	Saves this entire History Log to a file.
Refresh Page	Updates the History Log displayed.
Close	Returns to the Inventory status screen.

Procedure 3-5 View the History Log

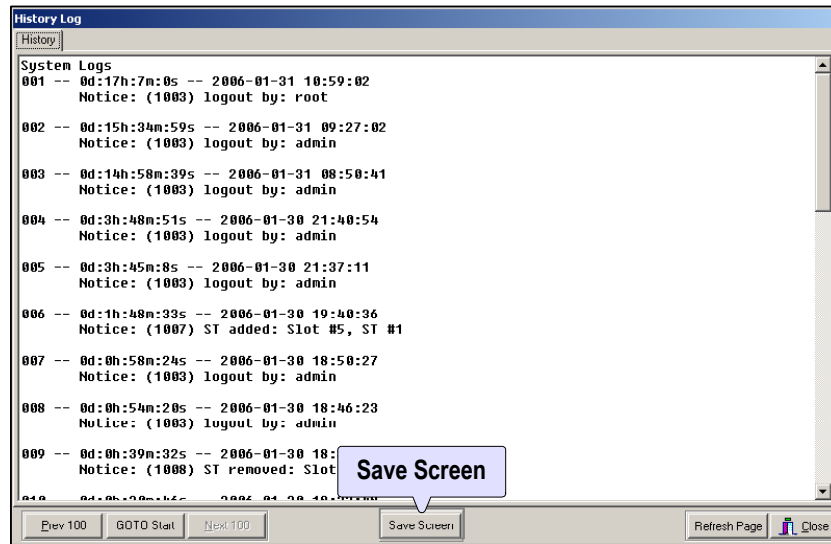


Figure 45 – 'History Log' screen

- 3 To save this entire History Log to a file, click **Save Screen**.
A **Save As** window (Figure 46) appears.
- 4 Complete the fields to save to the desired location.
- 5 Click **Close** to return to the Inventory status screen.

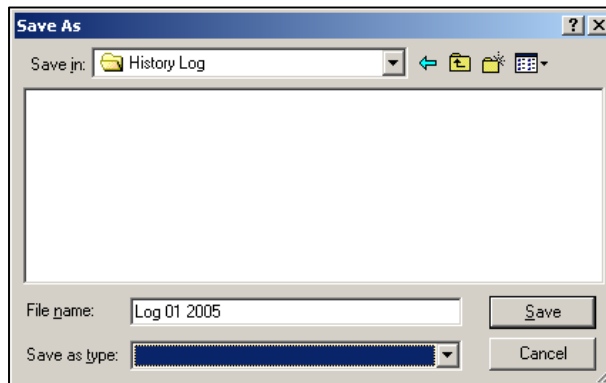


Figure 46 – 'Save As' window

CHAPTER 4 Network Management

This chapter contains procedures for managing the systems in the *FlexAccess* shelf using the FASTCraft software.

Number	Title	Page
Procedure 4-1	Set up the management network	39
Procedure 4-2	Configure the system	42
Procedure 4-3	Determine system status	44

Procedure 4-1 Set up the management network

IMPORTANT

Only "admin" users may perform this procedure.

To configure an IP address or manage TFTP control:

- 1 Click on the **Management** tab.

The **Management** screen (Figure 47) appears.

NOTE

Grayed-out fields on the **Management** screen are not editable. Editable fields have a white background.

The screenshot shows the 'Management' screen with the following sections and callouts:

- 'Management' tab**: Points to the 'Management' tab in the top navigation bar.
- IP configuration**: Points to the 'IP configuration' section, which includes fields for IP Address (192.168.143.18), Netmask (255.255.255.0), Gateway (192.168.143.1), Mac Address (00:01:6E:09:00:03), and IP lock mode (address locked / DHCP).
- TFTP control**: Points to the 'TFTP control' section, which includes fields for Server Address (0.0.0.0), Source Filename (duluth), Destination Filename (seattle), and Status (idle), along with 'Put' and 'Stop' buttons.
- SNMP agent control**: Points to the 'SNMP agent control' section, which includes fields for Manager port (161), Read community (public), Write community (public), and five Trap dest fields (B1-B5).
- Management Channel**: Points to the 'Management Channel' section, which includes fields for Channel (inband), Frame Type (tagged), and VLAN ID.
- System identification**: Points to the 'System identification' section, which includes fields for Name (9125) and Location (CTS Lab).
- Click to activate changes**: Points to the 'Apply Changes' button.
- Click to save changes permanently**: Points to the 'Store to Flash' button.

Figure 47 – 'Management' screen

Procedure 4-1 Set up the management network

- 2 Type appropriate values in the editable (white) fields under these blocks (refer to Table 7 for field descriptions):
 - IP configuration
 - TFTP control
 - SNMP agent control
 - Inband channel control
 - System identification
- 3 Click **Apply Changes** to hold your changes (that is, activate all entries until the card is removed or reset).
- 4 Click **Store to Flash** to permanently save changes.
- 5 Continue with Procedure 4-2.



Changing the addressing fields while the system is in service may impact remote connectivity.



To avoid accidentally losing your entries, always click **Apply Changes**.

Procedure 4-1 Set up the management network

Table 7. Management screen field definitions

Field	Description
IP configuration	
IP Address	Unique 32-bit pattern that identifies a device in an IP network. (Not editable if using DHCP.)
Netmask	32-bit pattern that determines which bits of an IP address denote the network number and which denote the host number. Written in "dot" notation (e.g., 255.255.255.0). Your network administrator should provide this information.
Gateway	Router address. If the Gateway is set to any address other than 0.0.0.0, any packet that does not belong in the user subnet will go out through the Gateway.
Mac Address	Unique number that identifies an individual system. Assigned by the manufacturer. Not editable.
IP lock mode	<i>Not supported for Model 9125.</i>
TFTP control	
Server Address	Remote IP address for the TFTP server.
Source Filename	A filename on the Core Controller for a Put operation; a filename already on the TFTP server for a Get operation. Note: When Source and Destination filenames are complete, the Start button changes to Put or Get .
Destination Filename	A new filename to be saved on the TFTP server for a Put operation.
Status	State of the TFTP session.
Put / Get	Uploads/downloads a file to/from the server.
Stop	Ends TFTP operation in progress.
Management Channel	
Channel	Inband or Outband .
Frame Type	Tagged or Untagged .
VLAN ID	(2 thru 4094) Identification number of the virtual local area network. Used when management runs over tagged frames using a different VLAN ID than the ones used for user traffic. This VLAN ID is used by Craft only for management purposed. Note: By default Craft is managed using untagged frames. IMPORTANT: This change may cause communication loss with FlexAccess.
SNMP agent control	
Trap Manager #	IP address of the systems where SNMP traps will be sent (up to five addresses).
System identification	
Name	Unique name to identify the system.
Location	Location of the system.

Procedure 4-2 Configure the system

To configure the system:

- 1 Click on the **Inventory** tab or the **Return to Inventory** button.
The Inventory screen (Figure 48) appears.
- 2 Click **zoom** at the bottom of the 9125 card icon.
The Inventory status screen (Figure 49) appears.

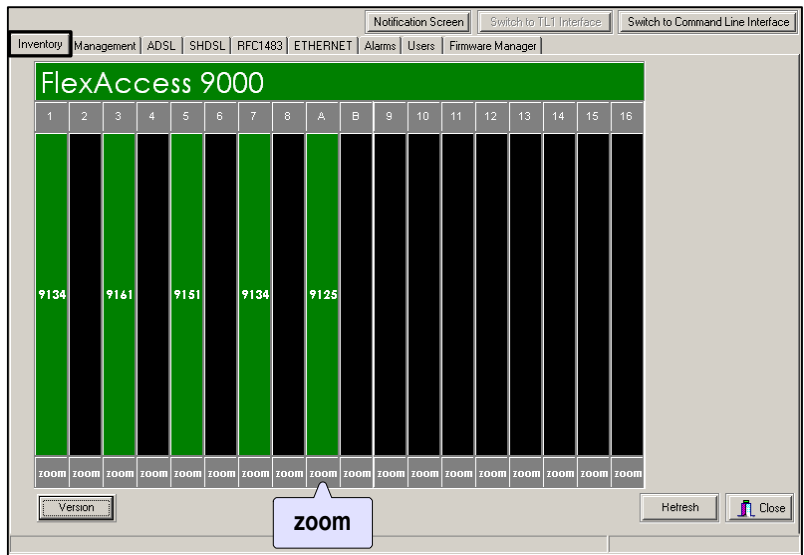


Figure 48 – 'Inventory' screen

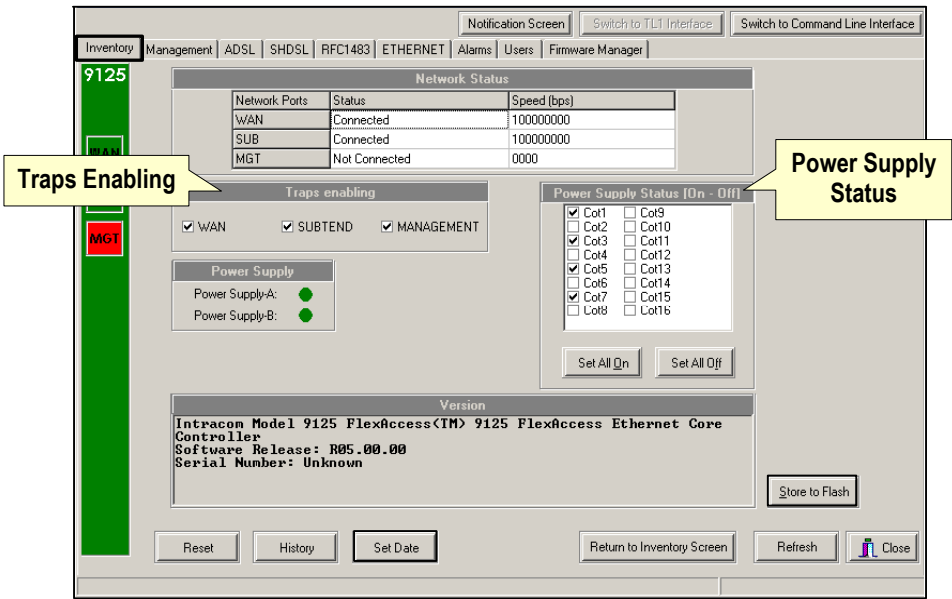


Figure 49 – Inventory status screen (Core Controller)

Procedure 4-2 Configure the system (continued)

- 3** Edit the fields. (Table 8 provides field definitions.)
- 4** Click **Save** to save your changes to system memory.
- 5** Continue with Procedure 4-3.

Table 8. Core card inventory status screen field definitions (Core Controller)

Block	Description
Traps Enabling	Current error trap settings. Check mark indicates alarm traps are enabled for these functions: WAN Subtend Management Note: Refer to Chapter 9, "Alarms."
Power Supply Status [On-Off]	Check mark indicates that span power for the SHDSL transport is active.



To avoid accidental contact with the span voltage during maintenance and installation, click **Power Supply Status** to deactivate/activate individual system span power. (You may also select **Set All On** or **Set All Off**.)

Does not apply to POTS cards (Model 9134).

Procedure 4-3
Determine system status

The FASTCraft software allows you to view system status from the **Inventory** screen. You may find this information useful when you configure the system.

To determine the status of the *FlexAccess* system:

- 1 From the main **Inventory** screen, click **zoom** at the bottom of the 9125 card icon. *The Core Controller Inventory status screen (Figure 50) appears.*

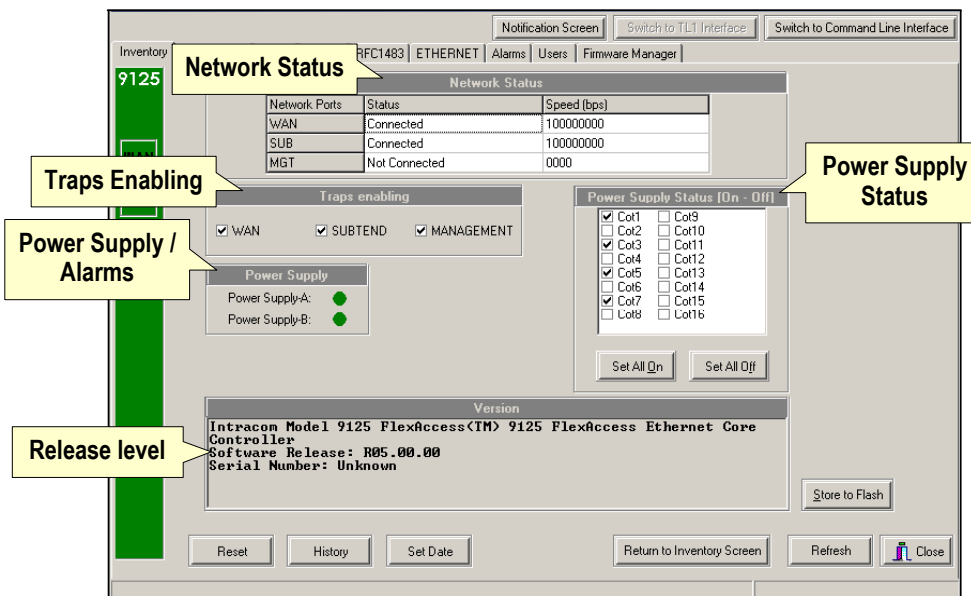


Figure 50 – Core Controller Inventory status screen

- 2 View the status in the various fields:

Field	Description
Network Status	Status and speed of the network ports:
WAN	Wide area network.
SUB	Subtend. Provides cascade connection with other 9125 core cards or other Ethernet DSLAMs.
MGT	Management. For outband management. CAUTION: If you use outband management, it must be on a different subnet than the one used for traffic in the WAN RJ45 port.
Power Supply	
Power Supply-A	green = On
Power Supply-B	gray = Off
Power Supply Status	Checked = On Unchecked = Off

CHAPTER 5

ADSL Configuration

This chapter contains procedures for configuring the asymmetrical digital subscriber line (ADSL) using the FASTCraft software.

Number	Title	Page
Procedure 5-1	Set up the ADSL	45
Procedure 5-2	Configure line profiles	47
Procedure 5-3	Configure alarm profiles	50
Procedure 5-4	Load profiles from a file	52

Procedure 5-1

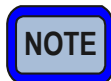
Set up the ADSL

The FASTCraft software provides profiles to help you set levels of service for each asymmetrical digital subscriber line (ADSL) channel in your system. You may also use this procedure to preprovision channels for cards not yet installed.

To set up an ADSL channel:

- 1 Click on the **ADSL** tab.
*The **ADSL** screen (Figure 51) appears.*
- 2 Select an expansion card using either of these methods:
 - Click on **Line card** selection arrows to scroll through cards in the system
– or –
 - Click on the appropriate **card icon**

*ADSL settings for channels on the selected line card appear under **ADSL status**.*



The **Monitor Information** box shows current transmission information for the channel selected under **ADSL status**.

- 3 Under **ADSL status**, click on a channel line to select it.

*Current transmission rates appear in categories under **Channel monitor**:*

*Channel bitrate interleaved
Channel bitrate fast
Relative capacity occupation
Noise margin
Output power
Attenuation
Attainable bitrate*

Procedure 5-1 Set up the ADSL

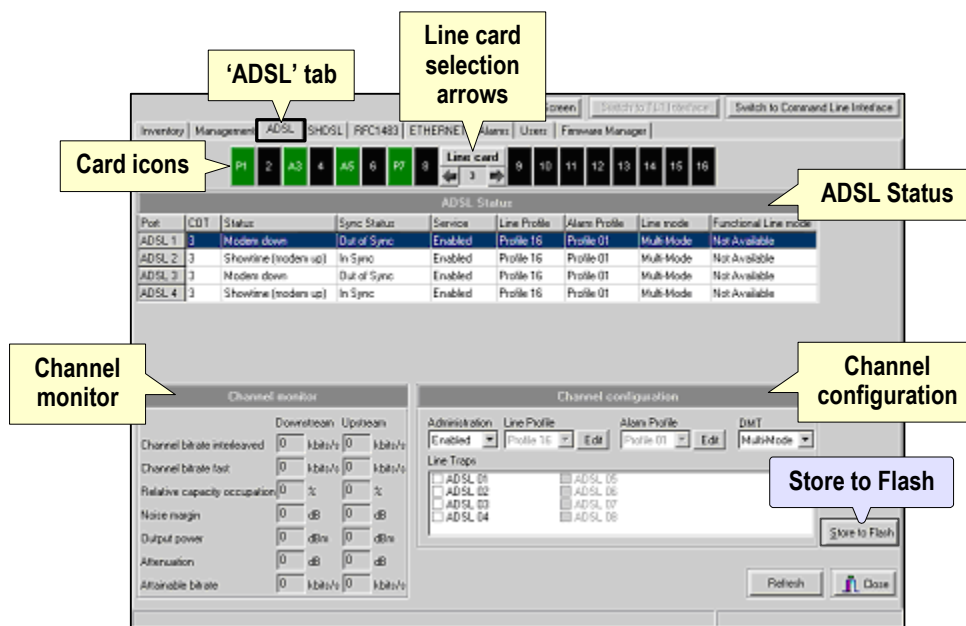


Figure 51 – ‘ADSL’ screen

- Under **Channel configuration**, pull down menus to make selections in each field for the channel you selected.

Administration	Disabled deactivates the channel. Enabled activates the channel.
Line Profile	Preset channel profiles. (01–16) To view default line profile settings, refer to Appendix A on page 98. To edit a profile, click Edit . (Refer to Procedure 5-2 for editing instructions.)
Alarm Profile	Preset alarm profiles. (01–16) To edit a profile, click Edit . (Refer to Procedure 5-3 for editing instructions.)
DMT	Discrete multitone mode options: T1.413 TM06006 G.992.1A G.992.1B G.992.2A Multi-Mode

New settings appear under ADSL Status.

- Click **Store to Flash** to save the settings to the system memory (FLASH).
- Continue with Procedure 5-2.

NOTE Your network administrator will specify the correct profile for the specific level of service for your system.

In general, **Interleaved** latency has better error correction, and **Fast** latency has shorter delays. In most data applications, either will work.

Procedure 5-2 Configure line profiles

Use this procedure to customize *line* profiles by changing the settings on preset (default) profiles. Refer to Appendix A, “Default Profile Settings,” for a list of default settings for the 16 line profiles.

To configure a line profile:

- 1 On the **ADSL** screen (Figure 52), select the port where you want to change the line profile settings.
- 2 In the **Line Profile** field, select the profile you wish to edit (**01** through **16**) in the drop-down menu, and then click **Edit**.

*The **Profile Manager** screen (Figure 53) shows current settings for the profile you selected.*

- 3 Edit the fields you wish to change (Table 9 describes the fields).
- 4 In the **Profile** field (in the upper left-hand corner), select any additional profiles to edit and make desired changes.

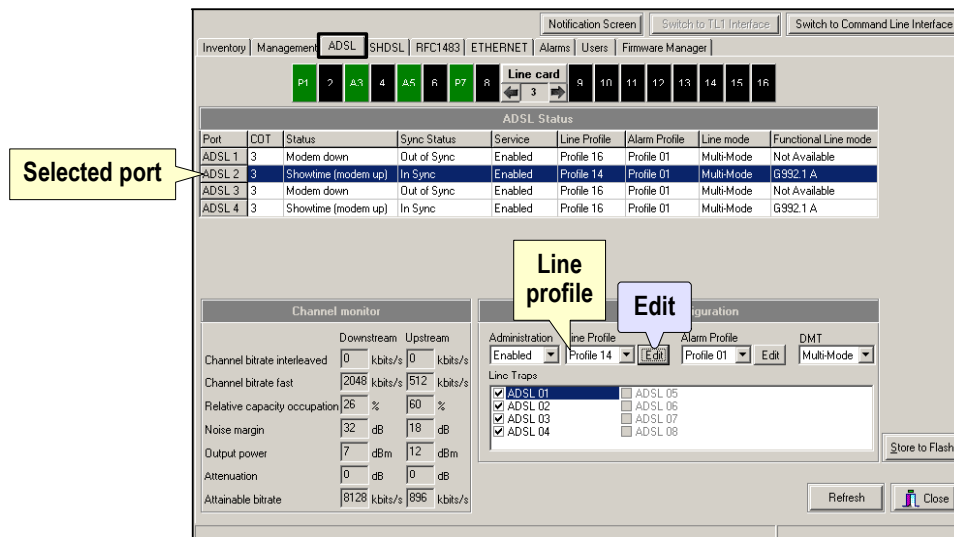


Figure 52 – Edit Line Profile

IMPORTANT

When you select a line profile for editing, that profile becomes assigned to the selected (highlighted) ADSL port.

For example, in Figure 52, **Profile 14** has been selected for editing and the Line Profile for ADSL 2 has changed to **Profile 14**.

Procedure 5-2 Configure line profiles

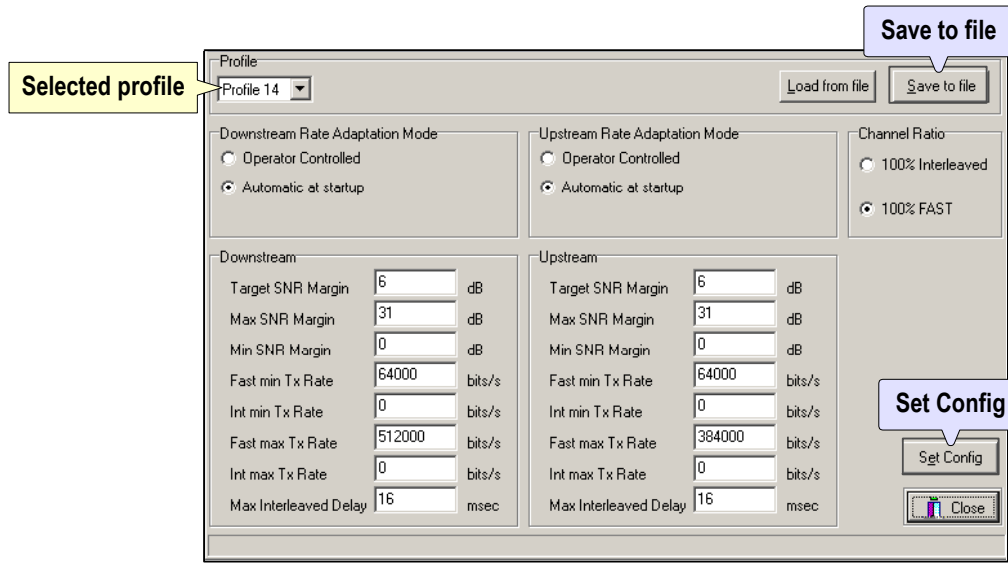


Figure 53 – ‘Profile Manager’ screen

Table 9. Line Profile Manager screen field descriptions

Field	Description
Downstream/Upstream Rate Adaptation Mode	Operator Controlled Automatic at startup
Channel Ratio	100% FAST = 100% Fast rate 100% Interleaved = 100% Interleaved rate
Downstream/Upstream	
Target SNR Margin	Target signal-to-noise ratio (<i>in decibels</i>)
Max SNR Margin	Maximum signal-to-noise ratio (<i>in decibels</i>)
Min SNR Margin	Minimum signal-to-noise ratio (<i>in decibels</i>)
Fast min Tx Rate	Fast minimum transmission rate (<i>in bits per second</i>)
Int min Tx Rate	Interleaved minimum transmission rate (<i>in bits per second</i>)
Fast max Tx Rate	Fast maximum transmission rate (<i>in bits per second</i>)
Int max Tx Rate	Interleaved maximum transmission rate (<i>in bits per second</i>) Note: Valid range for transmission rates is 0 through 2,048,000 bits per second in multiples of 32,000. (If you enter a value that is not a multiple of 32,000, the system will round the value down to the nearest valid multiple.)
Max Interleaved Delay	Maximum Interleaved delay (<i>in milliseconds</i>) (0, 4, 16)

NOTE Changeable fields are highlighted with a white background.

Procedure 5-2 Configure line profiles

5 Determine if you want to save the profile to FLASH and/or to a file:

If you want to	Then
save the profile to the <i>FlexAccess</i> system memory (FLASH)	Click Set Config .
save profile settings to a file for future downloading on this or other <i>FlexAccess</i> systems	<p>a. Click Save to File. A Save As window (Figure 54) appears.</p> <p>b. Complete the fields and click Save to save to the desired location (that is, the hard drive or a disk).</p> <p>c. Click Save.</p> <p>Note: To load the files you saved, go to Procedure 5-4, "Load profiles from a file."</p>

6 Click **Close** on the **Profile Manager** screen to return to the **ADSL** screen.

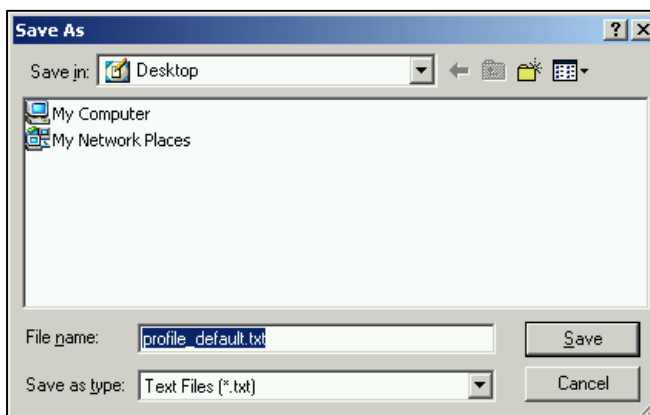


Figure 54 – ‘Save As’ window

Procedure 5-3 Configure alarm profiles

Use this procedure to customize *alarm* profiles by changing the settings on preset (default) profiles.

To configure an alarm profile:

- 1 On the **ADSL** screen (Figure 55), select the port where you want to change the alarm profile settings.
- 2 In the **Alarm Profile** field, use the drop-down menu to select the profile you want to edit (**01** through **16**) and then click **Edit**.

The Alarm Profile Manager screen (Figure 56) shows current settings for the selected profile.

- 3 Edit the fields you want to change.
- 4 In the **Profile** field (in the upper left-hand corner), select any additional profiles to edit and make desired changes.

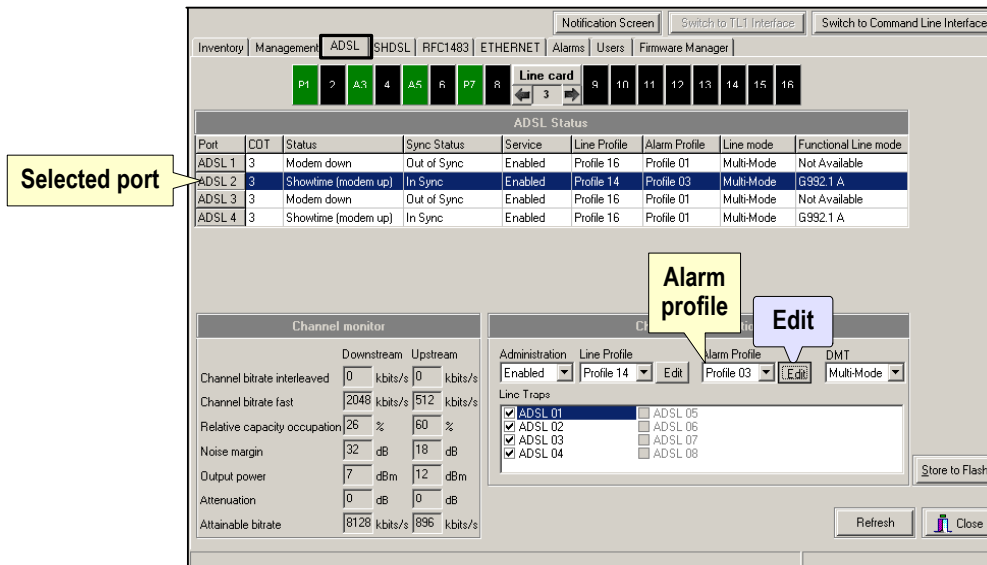
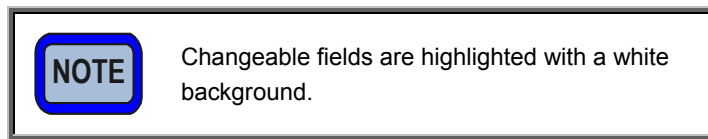
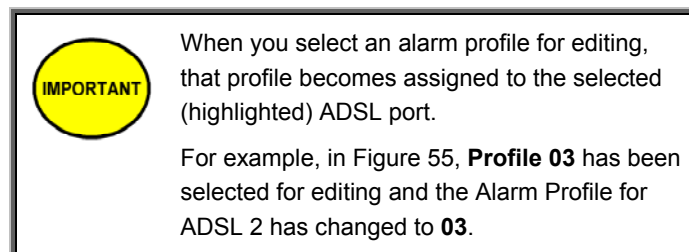


Figure 55 – Edit Alarm Profile



Procedure 5-3 Configure alarm profiles

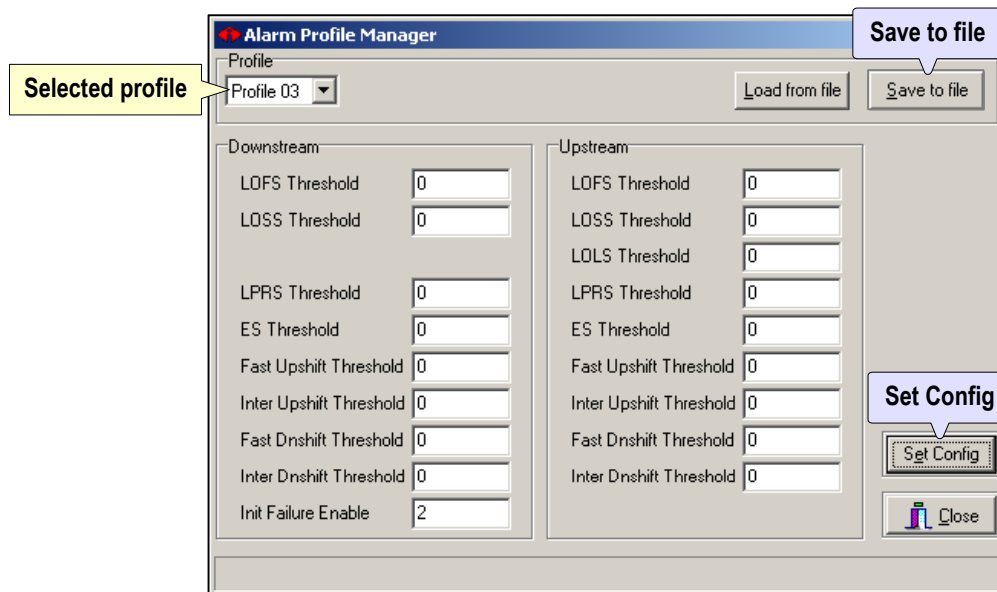


Figure 56 – ‘Alarm Profile Manager’ screen

- 5 Determine if you want to save the profile to FLASH and/or to a file:

If you wish to	Then
save the profiles to the <i>FlexAccess</i> system memory (FLASH)	Click Set Config .
save profile settings to a file for future downloading on this or other <i>FlexAccess</i> systems	<p>a. Click Save to File. A Save As window (Figure 57) appears.</p> <p>b. Complete the fields and click Save to save to the desired location (that is, the hard drive or a disk).</p> <p>c. Click Save.</p> <p>Note: To load the files you saved, go to Procedure 5-4, "Load profiles from a file."</p>

- 6 Click **Close** on the **Alarm Profile Manager** screen to return to the **ADSL** screen.

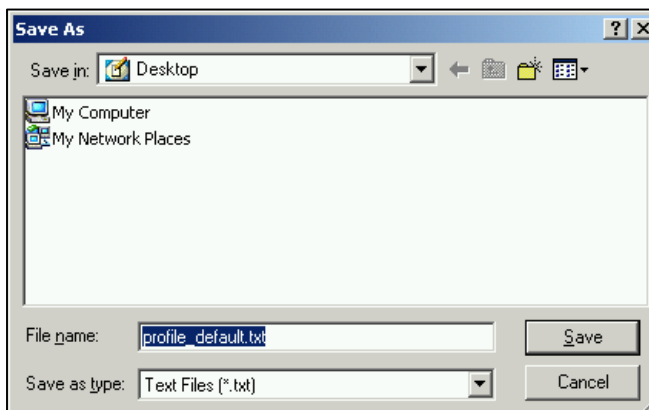


Figure 57 – ‘Save As’ window

Procedure 5-4 Load profiles from a file

The FASTCraft software allows you to load custom settings for line profiles from a previously saved file. For instructions for saving profiles to a file, refer to Procedure 5-2, step 5 (the procedure is the same for *line profiles* and *alarm profiles*).

To load profile settings to a FlexAccess system from a file:

- 1 On the **ADSL** screen, click **Edit** next to either the **Line Profile** or the **Alarm Profile** field (depending on which type of profiles you want to load).
- 2 From the **Profile Manager** screen (Figure 58) or the **Alarm Profile Manager** screen, click **Load from file**.
- 3 In the **Open** window (Figure 59), select the file you wish to load and click **Open**.
The profile parameters for the selected profile will display in the Profile Manager screen.
- 4 Click **Save Config**, and then **Close** to store your settings and exit the **Profile Manager** or **Alarm Profile Manager** screen.

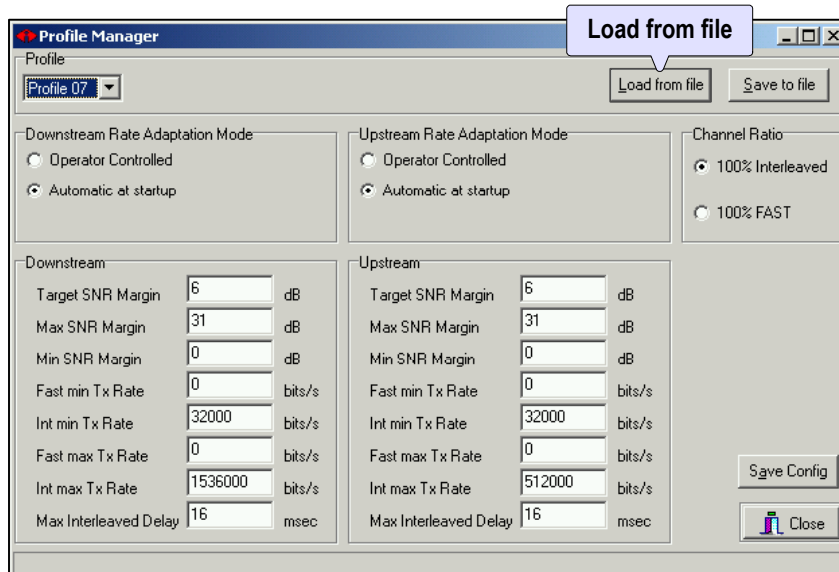


Figure 58 – Load from file

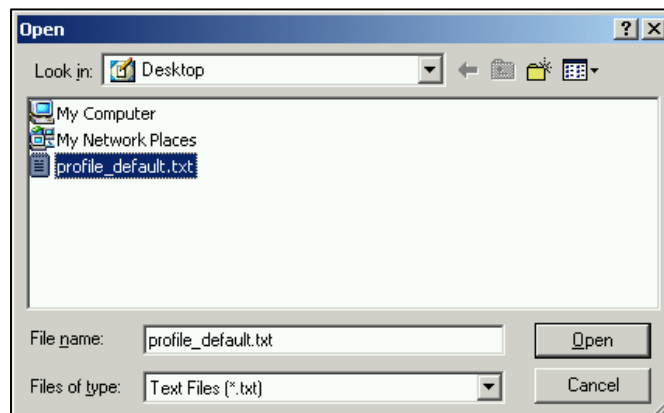


Figure 59 – 'Open' window

CHAPTER 6

SHDSL Performance

This chapter contains procedures for monitoring the single-pair high-speed digital subscriber line (SHDSL) performance.

Number	Title	Page
Procedure 6-1	Assign an SHDSL rate	53
Procedure 6-2	Retrieve performance data	55
Procedure 6-3	Collect NEBE data	58

Procedure 6-1

Assign an SHDSL rate



This procedure applies **only to** 9151 and 9151E cards that are firmware version 4.01 and above (system release 5.0), and to 9161 cards that are firmware version 4.02.03 and above (system release 5.1).

You can assign a specific SHDSL transport rate for 9151 and 9151E cards that are version 4.01 and above; and for 9161 cards that are version 4.02.03 and above.

To set an SHDSL rate for a 9151/9151E/9161 card:

- 1** Click on the **SHDSL** tab.
*The **SHDSL** screen (Figure 61) appears.*
- 2** Select the 9151/9151E/9161 card slot using either of these methods:
 - Click on **Line card** selection arrows to scroll through slots
 - or –
 - Click on the appropriate **slot icon***The SHDSL rate you select will be applied to the card you select in this step.*
- 3** Under **SHDSL Rate**, select a rate from the drop-down menu:
 - 512 (not available at this time—do not select)
 - 1024 (9151 and 9151E)
 - 1536 (9151, 9151E, and 9161)
 - 2048 (9151, 9151E, and 9161)
- 4** Click **Assign** to activate the selected rate.
Activation of the new rate will cause SHDSL resynchronization.
- 5** Click **Store to Flash** to save the selected rate.

When you assign a new SHDSL rate, you will cause the SHDSL to resynchronize.

Procedure 6-1 Assign an SHDSL rate

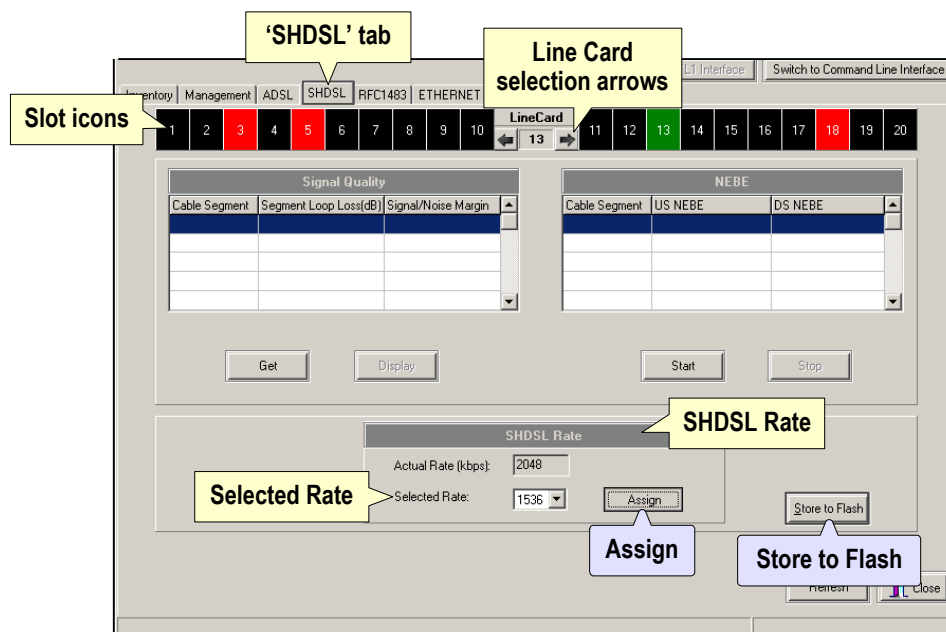


Figure 60 – Assign SHDSL rate

Procedure 6-2 Retrieve performance data

Use this procedure to retrieve SHDSL performance data for system segments.

To retrieve SHDSL performance data:

- 1 Click on the **SHDSL** tab.
*The **SHDSL** screen (Figure 61) appears.*
- 2 Select a card slot using either of these methods:
 - Click on **Line card** selection arrows to scroll through slots
– or –
 - Click on the appropriate **slot icon**

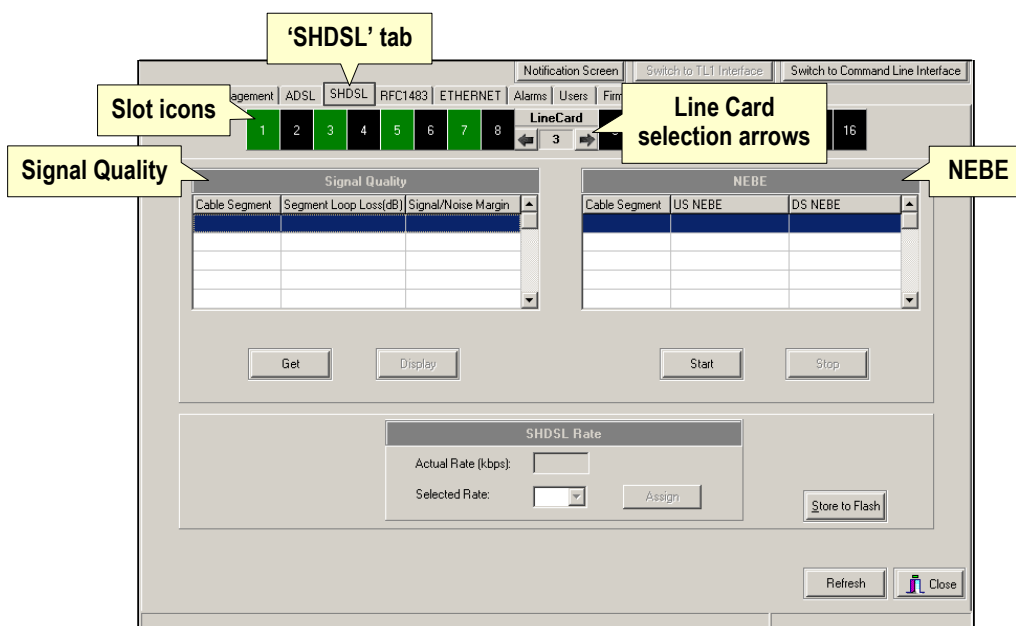


Figure 61 – 'SHDSL' screen

Procedure 6-2 Retrieve performance data

- 3 Click **Get** (Figure 62).
A "Please wait" message displays, followed by "Press Display to see results."
- 4 Click **Display** (Figure 63).
The SHDSL performance data appears (Figure 64). Table 10 describes the fields.

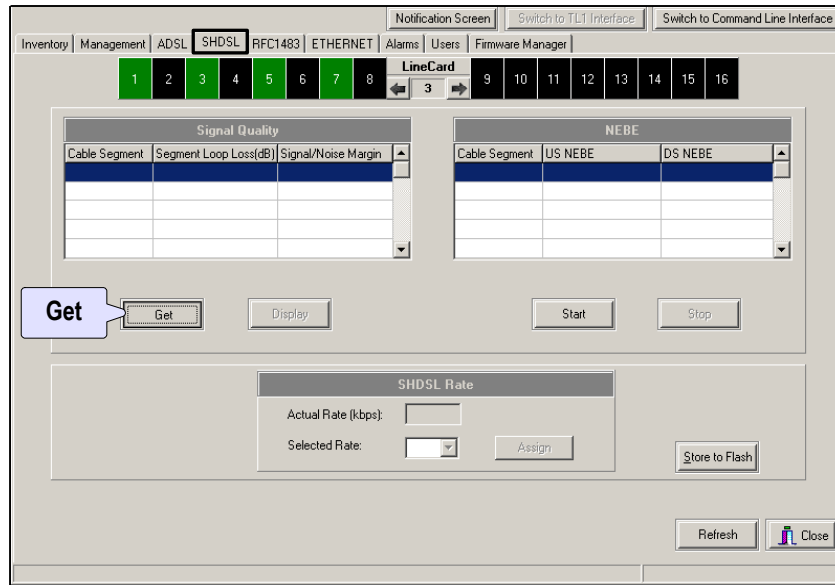


Figure 62 – Get performance data

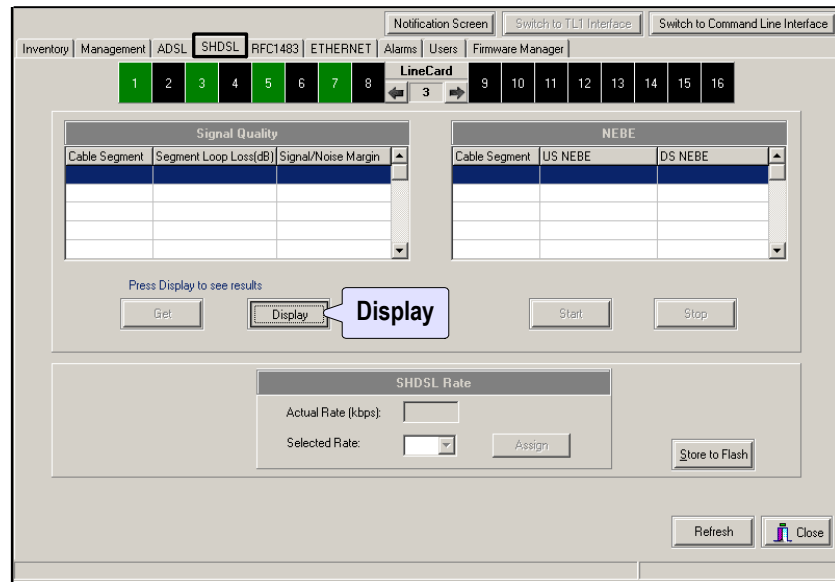


Figure 63 – Display performance data

Procedure 6-2 Retrieve performance data

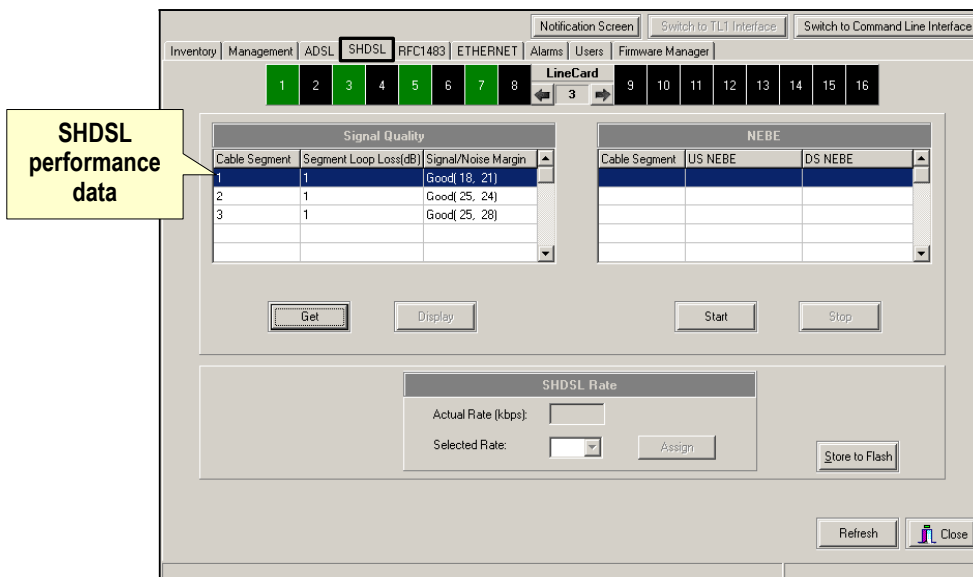


Figure 64 – Performance data displayed

Table 10. Signal Quality field descriptions

Field	Description
Cable Segment	Cable segment where error is occurring (Segments are numbered in order from near end to far end.)
Segment Loop Loss (dB)	Loop loss (in decibels) within segment
Signal/Noise Margin	General evaluation (Poor , Fair , or Good) of signal-to-noise ratios for segment

Procedure 6-3 Collect NEBE data

The FASTCraft software collects near-end block errors (NEBEs) in FlexAccess systems. FASTCraft identifies errors on the transport signal and isolates them by segment for the system you select.

To begin NEBE collection:

- 1 Click on the **SHDSL** tab.
*The **SHDSL** screen (Figure 65) appears.*
- 2 Select a card slot using either of these methods:
 - Click on **Line card** selection arrows to scroll through slots
– or –
 - Click on the appropriate **slot icon**
- 3 Below **NEBE**, click **Start**.

A "Please wait" message displays, followed by "Press Stop to see results."

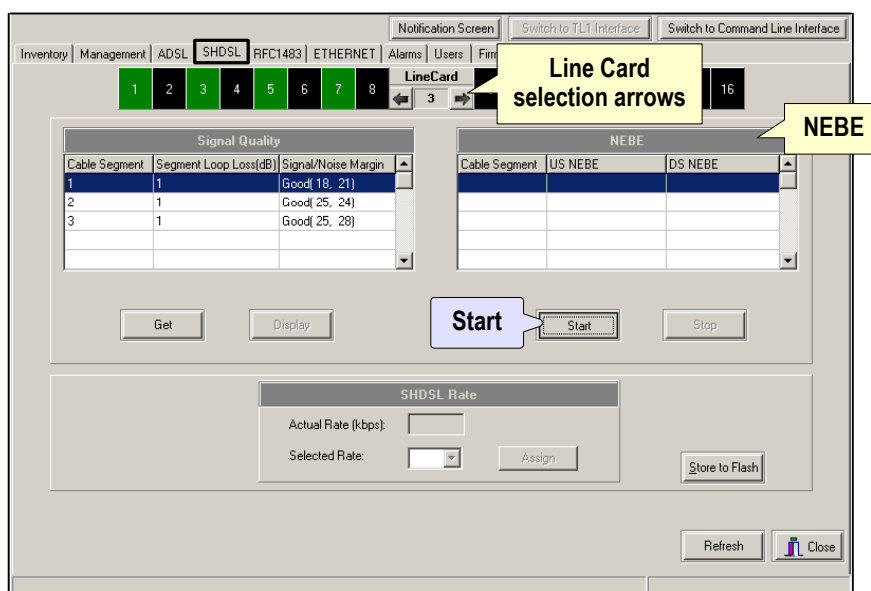


Figure 65 – Start NEBE data collection

Procedure 6-3 Collect NEBE data

- 4 Allow the amount of time to pass for which you wish to collect error data, and then click **Stop** (Figure 66).

*The number of upstream (US) and downstream (DS) errors that occurred since you clicked **Start** appear for each segment in the selected slot (Figure 67).*

- 5 Continue with Chapter 7, "RFC1483 Transport Configuration."

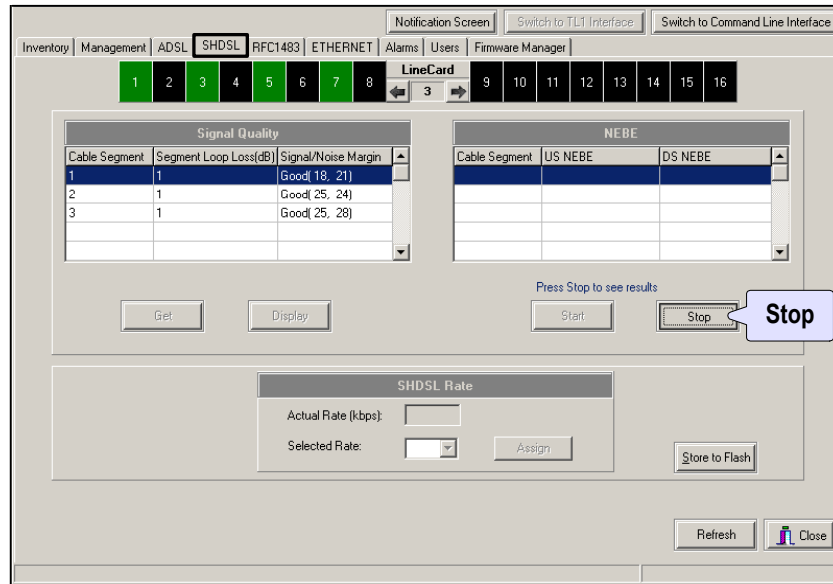


Figure 66 – Stop NEBE collection

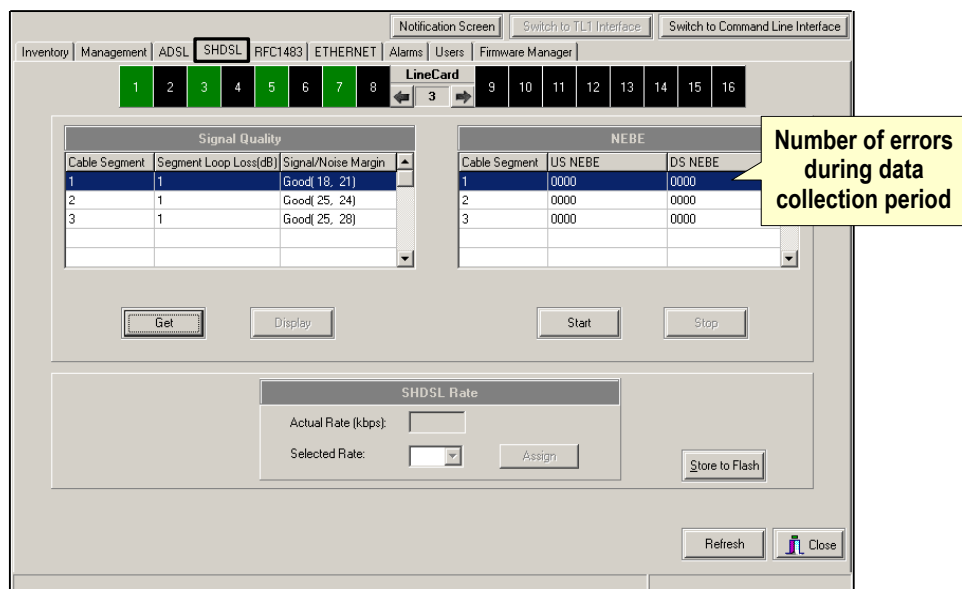


Figure 67 – NEBE data collected

APPENDIX A

Default Profile Settings

Table 12 and Table 13 provide default settings for the ADSL profiles for North American systems. Table 14 and Table 15 provide default settings for the ADSL profiles for European systems.

Table 12. ADSL Interleaved profile default settings (North American systems)

Parameter	Interleaved profile number							
	1	2	3	4	5	6	7	8
Downstream								
Target SNR margin (dB)	60	60	60	60	60	60	60	60
Max SNR margin (dB)	310	310	310	310	310	310	310	310
Min SNR margin (dB)	0	0	0	0	0	0	0	0
Fast Min Tx rate (bit/s)	0	0	0	0	0	0	0	0
Interleaved Min Tx rate (bit/s)	64000	64000	64000	64000	64000	64000	64000	64000
Fast Max Tx rate (bit/s)	0	0	0	0	0	0	0	0
Interleaved Max Tx rate (bit/s)	256000	512000	768000	2048000	384000	512000	1536000	2048000
Max Interleaved delay (ms)	16	16	16	16	16	16	16	16
Channel ratio	0	0	0	0	0	0	0	0
Upstream								
Target SNR margin (dB)	60	60	60	60	60	60	60	60
Max SNR margin (dB)	310	310	310	310	310	310	310	310
Min SNR margin (dB)	0	0	0	0	0	0	0	0
Fast Min Tx rate (bit/s)	0	0	0	0	0	0	0	0
Interleaved Min Tx rate (bit/s)	64000	64000	64000	64000	64000	64000	64000	64000
Fast Max Tx rate (bit/s)	0	0	0	0	0	0	0	0
Interleaved Max Tx rate (bit/s)	128000	256000	384000	256000	128000	384000	512000	512000
Max Interleaved delay (ms)	16	16	16	16	16	16	16	16
Channel ratio	0	0	0	0	0	0	0	0

NOTE

Follow these guidelines when you edit a profile:

- edit line rate numbers in integer multiples of 32 kbps.
- make sure that either the **Fast** or **Interleaved** field is non-zero. The system will not accept non-zero values in both fields.
- be sure to set a value of 0 (zero) for the **channel ratio** on **Interleaved** profiles.
- be sure to apply the same **channel ratio** for downstream and upstream profiles.

NOTE

To use a profile with G.lite dmt mode, make sure that:

- it is interleaved.
- it has a maximum line Tx rate of 1512000.
- it has a maximum line Rx rate of 512000.

Table 13. ADSL Fast profile default settings (North American systems)

Parameter	Fast profile number							
	9	10	11	12	13	14	15	16
Downstream								
Target SNR margin (dB)	60	60	60	60	60	60	60	60
Max SNR margin (dB)	310	310	310	310	310	310	310	310
Min SNR margin (dB)	0	0	0	0	0	0	0	0
Fast Min Tx rate (bit/s)	64000	64000	64000	64000	64000	64000	64000	64000
Interleaved Min Tx rate (bit/s)	0	0	0	0	0	0	0	0
Fast Max Tx rate (bit/s)	256000	512000	768000	2048000	384000	512000	1536000	2048000
Interleaved Max Tx rate (bit/s)	0	0	0	0	0	0	0	0
Max Interleaved delay (ms)	16	16	16	16	16	16	16	16
Channel ratio	100	100	100	100	100	100	100	100
Upstream								
Target SNR margin (dB)	60	60	60	60	60	60	60	60
Max SNR margin (dB)	310	310	310	310	310	310	310	310
Min SNR margin (dB)	0	0	0	0	0	0	0	0
Fast Min Tx rate (bit/s)	64000	64000	64000	64000	64000	64000	64000	64000
Interleaved Min Tx rate (bit/s)	0	0	0	0	0	0	0	0
Fast Max Tx rate (bit/s)	128000	256000	384000	256000	128000	384000	512000	512000
Interleaved Max Tx rate (bit/s)	0	0	0	0	0	0	0	0
Max Interleaved delay (ms)	16	16	16	16	16	16	16	16
Channel ratio	100	100	100	100	100	100	100	100

Table 14. ADSL Interleaved profile default settings (European systems)

Parameter	Interleaved profile number							
	1	2	3	4	5	6	7	8
Downstream								
Target SNR margin (dB)	60	60	60	60	60	60	60	60
Max SNR margin (dB)	310	310	310	310	310	310	310	310
Min SNR margin (dB)	0	0	0	0	0	0	0	0
Fast Min Tx rate (bit/s)	0	0	0	0	0	0	0	0
Interleaved Min Tx rate (bit/s)	64000	64000	64000	64000	64000	64000	64000	64000
Fast Max Tx rate (bit/s)	0	0	0	0	0	0	0	0
Interleaved Max Tx rate (bit/s)	256000	512000	768000	2048000	384000	512000	1536000	2048000
Max Interleaved delay (ms)	16	16	16	16	16	16	16	16
Channel ratio	0	0	0	0	0	0	0	0
Upstream								
Target SNR margin (dB)	60	60	60	60	60	60	60	60
Max SNR margin (dB)	310	310	310	310	310	310	310	310
Min SNR margin (dB)	0	0	0	0	0	0	0	0
Fast Min Tx rate (bit/s)	0	0	0	0	0	0	0	0
Interleaved Min Tx rate (bit/s)	64000	64000	64000	64000	64000	64000	64000	64000
Fast Max Tx rate (bit/s)	0	0	0	0	0	0	0	0
Interleaved Max Tx rate (bit/s)	128000	256000	384000	256000	128000	384000	512000	512000
Max Interleaved delay (ms)	16	16	16	16	16	16	16	16
Channel ratio	0	0	0	0	0	0	0	0

NOTE

Follow these guidelines when you edit a profile:

- Edit line rate numbers in integer multiples of 32 kbps.
- Make sure that either the **Fast** or **Interleaved** field is non-zero. The system will not accept non-zero values in both fields.
- Be sure to set a value of 0 (zero) for the **channel ratio** on **Interleaved** profiles.
- Be sure to apply the same **channel ratio** for downstream and upstream profiles.

Table 15. ADSL Fast profile default settings (European systems)

Parameter	Fast profile number							
	9	10	11	12	13	14	15	16
Downstream								
Target SNR margin (dB)	60	60	60	60	60	60	60	60
Max SNR margin (dB)	310	310	310	310	310	310	310	310
Min SNR margin (dB)	0	0	0	0	0	0	0	0
Fast Min Tx rate (bit/s)	64000	64000	64000	64000	64000	64000	64000	64000
Interleaved Min Tx rate (bit/s)	0	0	0	0	0	0	0	0
Fast Max Tx rate (bit/s)	256000	512000	768000	2048000	384000	512000	1536000	2048000
Interleaved Max Tx rate (bit/s)	0	0	0	0	0	0	0	0
Max Interleaved delay (ms)	16	16	16	16	16	16	16	16
Channel ratio	100	100	100	100	100	100	100	100
Upstream								
Target SNR margin (dB)	60	60	60	60	60	60	60	60
Max SNR margin (dB)	310	310	310	310	310	310	310	310
Min SNR margin (dB)	0	0	0	0	0	0	0	0
Fast Min Tx rate (bit/s)	64000	64000	64000	64000	64000	64000	64000	64000
Interleaved Min Tx rate (bit/s)	0	0	0	0	0	0	0	0
Fast Max Tx rate (bit/s)	128000	256000	384000	256000	128000	384000	512000	512000
Interleaved Max Tx rate (bit/s)	0	0	0	0	0	0	0	0
Max Interleaved delay (ms)	16	16	16	16	16	16	16	16
Channel ratio	100	100	100	100	100	100	100	100

APPENDIX B

Color Codes

Inventory screen color codes

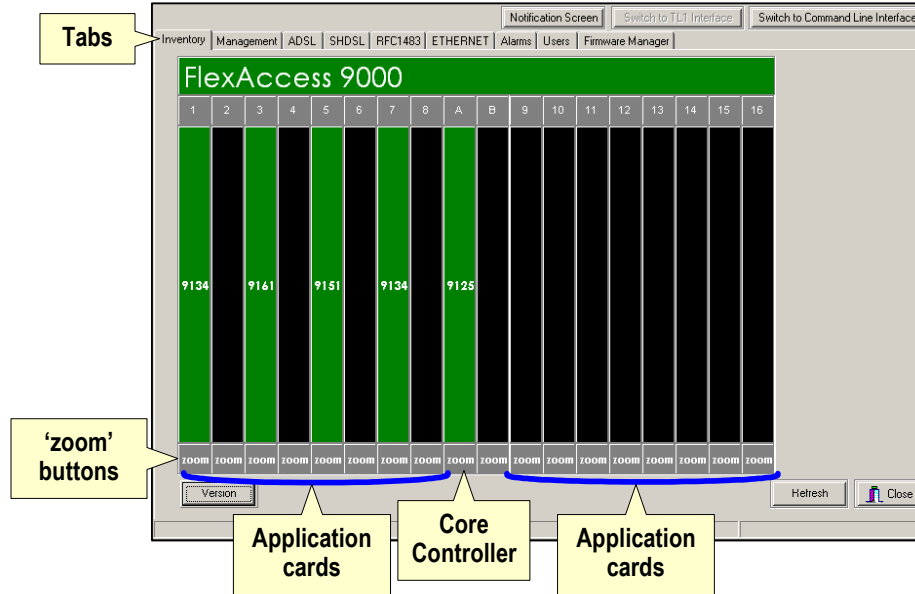


Figure 124 – Inventory screen color codes

Color	Definition
Shelf	Note: Shelf colors represent alarm status in general on the shelf (both core card and subscriber cards).
green	no alarms exist in the shelf
yellow	a Minor alarm exists, but no Major alarms
olive green	both Major and Minor alarms exist
red	a Major alarm exists, but no Minor alarms
Individual cards	
black	slot is empty
green	slot is occupied and there are no alarms
yellow	slot is occupied and there is a Minor alarm but no Major alarms
olive green	slot is occupied and there are both Major and Minor alarms
red	slot is occupied and there is a Major alarm but no Minor alarms
	Note: If the red slot is identified with an "M", then the wrong type of module is occupying that slot.

Inventory screen color codes (Core Controller card)

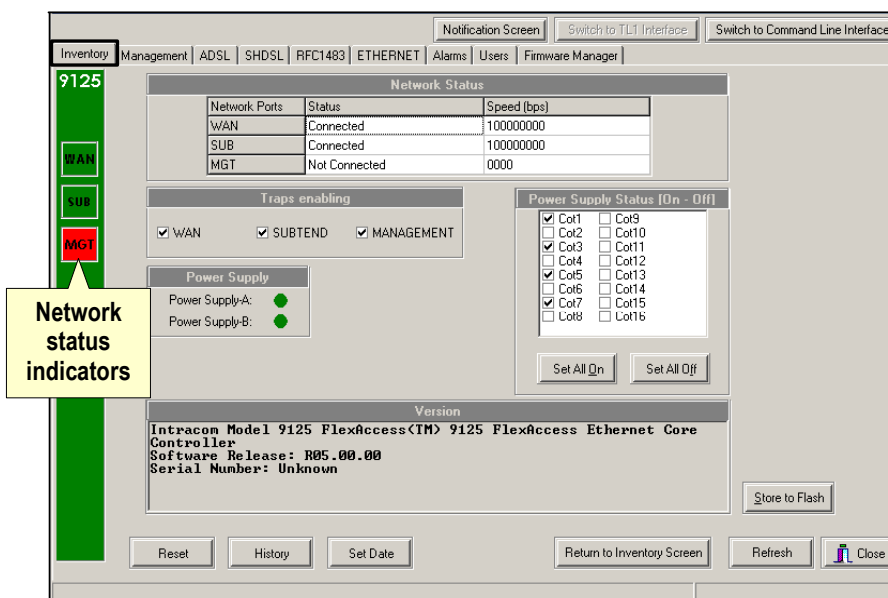


Figure 125 – Core Controller card Inventory screen color codes

Indicator color	Description
WAN status	Status for IMA group.
green	connected
gray	resetting
red	not connected
Power supply	
green	power is ON
gray	power is not connected
red	power is OFF

Inventory screen color codes (ADSL card)

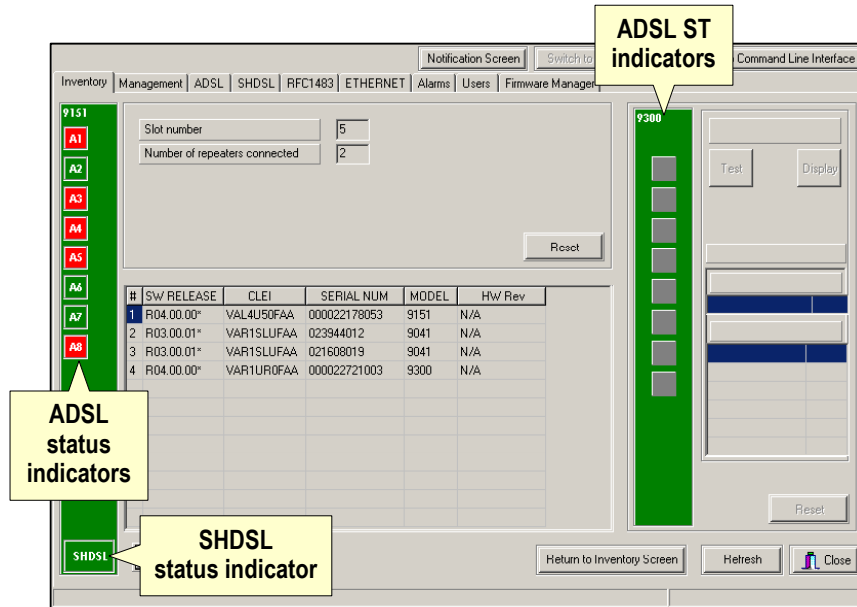


Figure 126 – ADSL card Inventory screen color codes

Feature	Description
ADSL card status indicator	
gray	Corresponding channel set to admin down
green	Corresponding channel set to admin up and reported as operational
red	Corresponding channel set to admin up and reported as not operational
ADSL ST status indicator	
gray	<i>ADSL ST status indicators are always gray.</i>
SHDSL status indicator	
green	SHDSL link is synchronized
red	SHDSL link is not synchronized

Inventory screen color codes (POTS card)

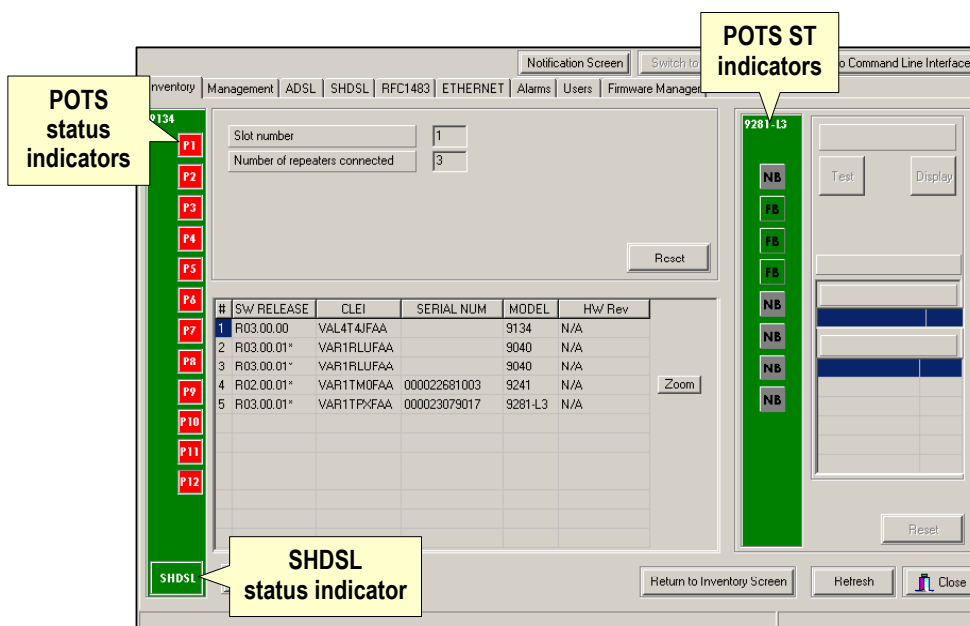


Figure 127 – POTS card Inventory screen color codes

Feature	Description
POTS card status indicator	
gray	Corresponding channel not assigned
yellow	Corresponding channel assigned and busy
red	Corresponding channel assigned and idle
POTS ST status indicator	
black	Corresponding channel not assigned
green	Corresponding channel in Forward Battery (FB)
olive green	Corresponding channel in Reverse Battery (RB)
gray	Corresponding channel in No Battery (NB)
blue	Corresponding channel under test
SHDSL status indicator	
green	SHDSL link is synchronized
red	SHDSL link is not synchronized

Inventory status screen (POTS+ADSL card)

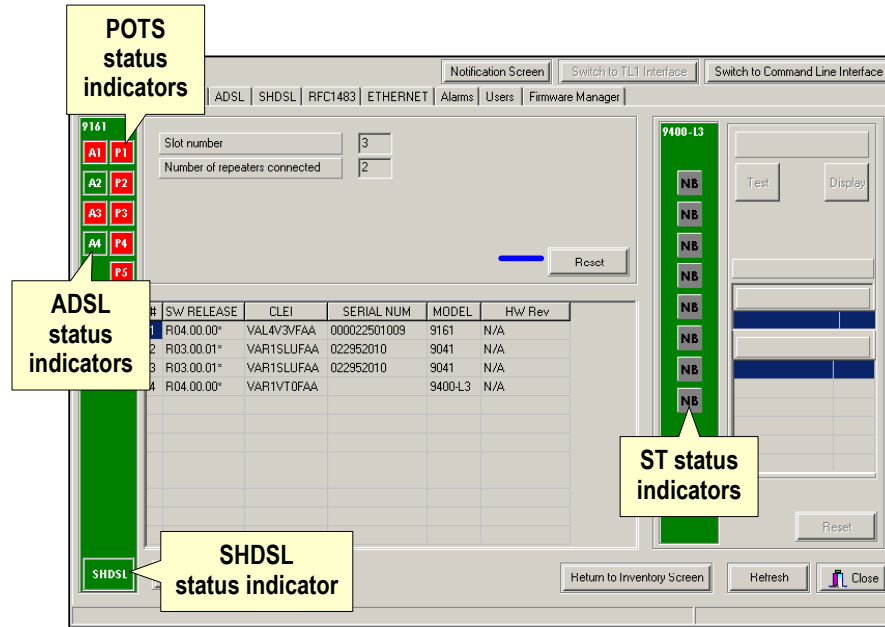


Figure 128 – Inventory status screen (POTS+ADSL card)

Feature	Description
Card status indicator	
ADSL	
gray	Corresponding channel set to admin down
green	Corresponding channel set to admin up and reported as operational
red	Corresponding channel set to admin up and reported as not operational
POTS	
gray	Corresponding channel not assigned
yellow	Corresponding channel assigned and busy
red	Corresponding channel assigned and idle
ST status indicator	
black	Corresponding channel not assigned
green	Corresponding channel in Forward Battery (FB)
olive green	Corresponding channel in Reverse Battery (RB)
gray	Corresponding channel in No Battery (NB)
blue	Corresponding channel under test
SHDSL status indicator	
green	SHDSL link is synchronized
red	SHDSL link is not synchronized