

Management Software

AT-S70

User's Guide

CONVERTEON Media Converter Products

Version 1.1.0

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Preface

This user's guide contains instructions on how to configure a Converteon chassis using the menu and interfaces of the AT-S70 management software.

How This Guide is Organized

This manual contains the following chapters and appendices:

- ❑ Chapter 1, "Overview" on page 14
- ❑ Chapter 2, "Starting a Local or Telnet Management Session" on page 19
- ❑ Chapter 3, "AT-S70 Management Security Features" on page 27
- ❑ Chapter 4, "Basic Parameters" on page 33
- ❑ Chapter 5, "Monitoring System Performance" on page 50
- ❑ Chapter 6, "Event Logs and Syslog Servers" on page 63
- ❑ Chapter 7, "Working with Line Cards and Other Modules" on page 71
- ❑ Chapter 8, "Operations, Administration, and Maintenance (OAM)" on page 86
- ❑ Chapter 9, "File Downloads and Uploads" on page 110
- ❑ Appendix A, "AT-S70 Default Settings" on page 129

This preface contains the following sections:

- ❑ "How This Guide is Organized" on page 9
- ❑ "Document Conventions" on page 10
- ❑ "Where to Find Web-based Guides" on page 11
- ❑ "Contacting Allied Telesyn" on page 12
- ❑ "Obtaining Management Software Updates" on page 13

Document Conventions

This document uses the following conventions:

Note

Notes provide additional information.



Caution

Cautions inform you that performing or omitting a specific action may result in equipment damage or loss of data.



Warning

Warnings inform you that performing or omitting a specific action may result in bodily injury.

Where to Find Web-based Guides

The installation and user guides for all Allied Telesyn products are available in portable document format (PDF) on our web site at **www.alliedtelesyn.com**. You can view the documents online or download them onto a local workstation or server.

Contacting Allied Telesyn

This section provides Allied Telesyn contact information for technical support as well as sales or corporate information.

Online Support

You can request technical support online by accessing the Allied Telesyn Knowledge Base: **www.alliedtelesyn.com/kb**. You can use the Knowledge Base to submit questions to our technical support staff and review answers to previously asked questions.

Email and Telephone Support

For technical support via email or telephone, refer to the Support & Services section of the Allied Telesyn web site: **www.alliedtelesyn.com**.

Returning Products

Products for return or repair must first be assigned a return materials authorization (RMA) number. A product sent to Allied Telesyn without an RMA number will be returned to the sender at the sender's expense.

To obtain an RMA number, contact Allied Telesyn's Technical Support group through the Allied Telesyn web site: **www.alliedtelesyn.com**.

Sales or Corporate Information

You can contact Allied Telesyn for sales or corporate information on our web site: **www.alliedtelesyn.com**. To find the contact information for your country, select Contact Us -> Worldwide Contacts.

Obtaining Management Software Updates

New releases of management software for our managed products are available for download from either of the following Internet sites:

- ❑ Allied Telesyn web site: **www.alliedtelesyn.com**
- ❑ Allied Telesyn FTP server: **<ftp://ftp.alliedtelesyn.com>**

If you prefer to download new software from the Allied Telesyn FTP server using your workstation's command prompt, you will need FTP client software and you must log in to the server. Enter "anonymous" as the user name and your email address for the password.

Chapter 1

Overview

The AT-S70 management software is intended for the Converteon Series chassis. The software is used to monitor and adjust the operating parameters of a chassis. Some of the functions you can perform with the software include:

- ❑ Enable and disable ports
- ❑ Configure port parameters, such as speed and duplex mode
- ❑ Assign an Internet Protocol (IP) address and subnet mask
- ❑ Access OAM information and statistics
- ❑ Download and upload image and configuration files
- ❑ Configure port security

The AT-S70 management software comes pre-installed on the AT-CV5M01 Control Processor Module (CPM) with default settings for all operating parameters. If the default settings are adequate for your network, you can use the chassis as an unmanaged chassis simply by connecting the unit to your network, as explained in the hardware installation guide, and powering ON the device.

Note

The default settings for the management software can be found in the Appendix A, “AT-S70 Default Settings” on page 129.

The AT-S70 management software and the management interface simplify the task of monitoring and managing the Converteon chassis and modules. This easy-to-use menu-oriented interface, which is provided by the AT-S70 management software, enables you to configure and manage all of the modules installed in the AT-CV5000 chassis.

There are three different ways to access the management software on a Converteon chassis. These methods are referred to in this guide as management session as listed below:

- ❑ Local management session
- ❑ Telnet management session
- ❑ SNMP management session

Note

To prevent unauthorized access, you can assign a password to the management software program that requires the user to enter the password when starting the interface. The default password for Manager access is "friend"; and the default password for Operator access is "operator".

Note

Once the password has been changed and is forgotten, you must call Technical Support to have it reset back to the default password. For Technical Support contact info, refer to "Contacting Allied Telesyn" on page 12.

The following sections in this chapter briefly describe each type of management session.

Local Management Session

You establish a local management session with a Converteon chassis by connecting a terminal or a PC with a terminal emulator program to the RS-232 Terminal Port on the CPM card installed in the front of the chassis, using the straight-through RS-232 management cable. This type of management session is referred to as “local” because you must be physically close to the chassis, such as in the wiring closet where the chassis is located.

After the session starts, a menu is displayed from which you can make selections to configure and monitor the chassis. You can configure all operating parameters of a chassis from a local management session.

Note

For instructions on starting a local management session, refer to “Starting a Local Management Session” on page 21.

A chassis does not need an Internet Protocol (IP) address for you to manage it locally. You can start a local management session on a chassis at any time. It will not affect the forwarding of frames by the device.

Telnet Management Session

You can use any management workstation on your network that has the Telnet application protocol to manage a Converteon chassis. This type of management session is referred to in this guide as a remote management session because you do not have to be in the wiring closet where the chassis is located. You can manage the chassis from any workstation on the network that has the application protocol.

To establish a Telnet management session with a chassis, there must be at least one Converteon chassis that has been assigned an Internet Protocol (IP) address. Only one chassis in a subnet needs to have an IP address.

Note

For instructions on how to start a Telnet management session, refer to "Starting a Telnet Management Session" on page 24.

A Telnet management session gives you access to nearly all operating parameters of a chassis. You can perform nearly all the same functions from a Telnet management session as you can from a local management session.

SNMP Management Session

The Converteon chassis can also be remotely managed via Simple Network Management Protocol (SNMP), such as HP Openview. This method, however, does not use the management interface.

If you intend to manage the chassis from a management workstation using an SNMP management program, you need to load the Management Information Base (MIB) file onto the management workstation. (The MIB file is available from the Allied Telesyn web site.) This requires that you use a MIB compiler to compile the file. To load the MIB file onto a management workstation, follow the instructions included with your MIB compiler. For instructions on how to compile the MIB file with your SNMP program, refer to your SNMP management documentation.

A familiarity with Management Information Base (MIB) objects is necessary for this type of management.

The AT-S70 software supports the following MIB:

- ❑ atcv5000.mib

For non-IP environments, you can use a MAC address to connect to a remote system as long as there are no routers between the two chassis.

Chapter 2

Starting a Local or Telnet Management Session

This chapter describes the procedures for starting a local or Telnet management session on a Converteon chassis. The sections in this chapter are:

- “Using the Terminal Interface” on page 20
- “Local Management Session” on page 21
- “Telnet Management Session” on page 24
- “Saving Your Parameter Changes” on page 26

Using the Terminal Interface

If you are using a DEC VT100 or ANSI (the default) terminal configuration, it is helpful to know how to select a menu option in the terminal interface.

Table 1 lists the instructions on how to move through the menus and select menu options.

Table 1. Menu Selection Options

When directed to	You must
Select an option	Highlight the option by pressing the Up (↑) or Down (↓) arrow key; then press <Return> or Type the first character of the desired option at the prompt and press <Return>. If two or more options have matching initial characters, type the initial characters until the option you want is highlighted; then press <Return>.
Enter information (for example, the IP address of a chassis)	Type the information and press <Return>.
Return to the previous screen	Press <Esc> or select the "Return to..." option at the bottom of the menu.

Enabled options in menus are preceded with a > symbol. In the following example, the first option is enabled:

```
>Enable this port
  Disable this port
```

When you press **<Enter>** to select a field in which you can enter a value, the -> symbol is displayed. For example:

```
System name:  ->
```

The -> symbol indicates that you can enter a new value for the parameter or change the existing value. Once you have entered a value, press **<Enter>**. Parameter changes are immediately activated on a Converteon module.

Local Management Session

On the AT-CV5M01 CPM card installed in the chassis is a port labelled “console”. You can use this port to establish a local (out-of-band) management session with an AT-S70 management software.

A local management session is so named because you must be close to the chassis, usually within a few meters, to start this type of management session. This means you must be where the chassis is located.

A chassis does not need an IP address to be managed from a local management session. You can start a local management session at any time on any Convertion chassis in your network. A local management session does not interfere with the flow of Ethernet traffic through the unit.

Starting a Local Management Session

To start a local management session, perform the following procedure:

1. Connect one end of a straight-through RS-232 cable with a DB-9 connector to the RS-232 Terminal Port on the AT-CV5M01 CPM card, as shown in Figure 1.

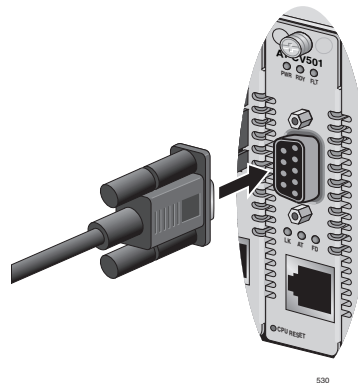


Figure 1. Connecting RS-232 Cable to AT-CV5M01 CPM's Console Port

2. Connect the other end of the cable to an RS-232 port on a terminal or PC with a terminal emulator program.
3. Configure the terminal or terminal emulation program as follows:
 - Bits per second: 1200 bps to 115200bps (default 115200) (see Note below)
 - Data bits: 8
 - Parity: None
 - Stop bits: 1
 - Flow control: None

Note

The Converteon chassis has an auto-detect feature on the serial port that automatically determines the speed of the local terminal. You activate this feature by pressing the Return or Enter key twice on your keyboard when you initially start the local interface or within five seconds after powering on or resetting the chassis. The chassis determines the speed of the terminal and automatically configures the speed of the “console” port accordingly. The chassis uses a data rate of 11520000 bits per second (bps). The chassis maintains the terminal port speed until the system is again powered ON or reset.

Note

The default settings for the terminal interface are for a DEC VT100 or ANSI terminal, or an equivalent terminal emulator program. Once you have started an management session, you can change some of these values.

4. Press **<Return>** key twice.
5. When prompted, enter a username and password.
 - To configure the chassis settings, enter “manager” as the username. The default password for manager access is “friend”.
 - To just view the settings, enter “operator” as the username. The default password for operator access is “operator”.
 - Usernames and passwords are case-sensitive.
 - For information on these two access levels, refer to “Management Access Levels” on page 31.

For instructions on how to change a password, refer to “Manager and Operator Passwords” on page 28.

After logging on, the Main Menu, as shown in Figure 2, is displayed.

```
Allied Telesyn AT-CV5M01 Management Module Software V1.1.0
                          CV-5000 Chassis

                          Main Menu

Module Status and Configuration
Administration
System Configuration
Remote Module Status
Quit
```

Figure 2. Main Menu

To make a selection, refer to “Using the Terminal Interface” on page 20.

Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Quitting from a Local Management Session

To end a local management session, return to the Main Menu and type **Q** for Quit.

You should always exit from a management session when you are finished managing a chassis. This can prevent unauthorized individuals from making changes to the configuration of a chassis would you leave your management workstation unattended.

Note

You cannot operate both a local management session and a Telnet management session on the same chassis simultaneously. You cannot have any number of Telnet sessions running if there is a local session running. Failure to properly exit from a local or Telnet management session may block future management sessions.

Telnet Management Session

You can use the Telnet application protocol from a workstation on your network to manage a Converteon chassis. This type of management session is referred to as remote management session because you do not have to be physically close to the chassis to start the session, such as with a local management session. Any workstation on your network that has the application protocol can be used to manage the chassis.

In terms of functionality, there are almost no differences between managing a chassis locally through the RS-232 terminal port and remotely with the Telnet application protocol. You see the same menu selections and have nearly the same management capabilities.

If the Converteon chassis is in a TCP/IP environment, remote management is possible only after the chassis has been assigned an IP address and subnet mask. Initially, this is accomplished by managing the chassis locally through the RS-232 port.

Starting a Telnet Management Session

To start a Telnet management session, specify the IP address of the chassis in the Telnet application protocol and enter a username and password when prompted.

To configure a chassis settings, enter “manager” as the user name. The default password for manager access is “friend”. To just view the settings, enter “operator” as the username. The default password for operator access is “operator”. User names and passwords are case sensitive. For information on the two access levels, refer to “Management Access Levels” on page 31.

The Main Menu of a Telnet management session is the same menu that you see in a local management session, shown in Figure 2 on page 22. Nearly all the functions from a local management session are available to you from a Telnet management session. The menus also function the same as with the local management session. To make a selection, refer to “Using the Terminal Interface” on page 20.

Note

You can run only one Telnet management session on a Converteon chassis at a time. Additionally, you cannot run both a Telnet management session and a local management session on the same chassis at the same time.

Note

You can have up to 10 sessions (1-manager and 9-operator) running simultaneously.

Quitting from a Telnet Management Session

To end a Telnet management session, return to the Main Menu and type **Q** for **Quit**.

You should always be sure to exit from a management session when you are finished managing a Converteon chassis. This can prevent unauthorized changes to a chassis' configuration should you leave your workstation unattended.

Note

You cannot operate both a local management session and a Telnet management session on the same chassis simultaneously. You cannot have any number of Telnet sessions running if there is a local session running. Failure to properly exit from a local or Telnet management session may block future management sessions.

Saving Your Parameter Changes

When changes are made to the chassis or to any of the line cards, the changes (except for the system date and time) are immediately activated and permanently saved onto the AT-CV5M01 CPM card as soon as you enter them. These changes are retained by the CPM card even when the chassis is reset or power cycled.

Saving the Configuration File Before Replacing an AT-CV5M01 CPM Card

When an AT-CV5M01 CPM is replaced, all the parameter settings saved on the CPM card are gone. Therefore, to keep the current parameter settings, make sure to upload the configuration file onto your computer or laptop before replacing the AT-CV5M01 CPM card. Once a new AT-CV5M01 CPM card is installed, you can then download the configuration file back onto the new CPM card.

Note

The 'CPM Switch Over' option under the **Administration** menu will be used in future feature sets. Additional hardware and system configuration required for proper functionality.

For instructions how to upload and download a configuration file, refer to Chapter 9, "File Downloads and Uploads" on page 110.

Chapter 3

AT-S70 Management Security Features

This chapter describes the security features in the AT-S70 software that can help prevent unauthorized individuals from changing the parameter settings of a Converteon chassis.

This chapter contains the following sessions:

- “Manager and Operator Passwords” on page 28
- “Console Timeout” on page 30
- “Management Access Levels” on page 31

Manager and Operator Passwords

The AT-S70 management software has two levels of management access: Manager and Operator. The Manager account allows you to configure all parameters of a Converteon chassis, while the Operator account only allows you to view the parameter settings. The default login name for Manager access is “manager” and the password is “friend”. The default login name and password for Operator access are both “operator”. Login names and passwords are case-sensitive.

Note

Once the password has been changed and is forgotten, you must call Technical Support to have it reset back to the default password. For Technical Support contact info, refer to “Contacting Allied Telesyn” on page 12.

Configuring the Management Passwords

To prevent unauthorized access to the management program, you can assign a password to the program. Any person who starts the interface will be required to enter the password, regardless of how they access the program (i.e., RS-232 port, Telnet, or SNMP management program). For detailed information on the management program, refer to Chapter 1, “Overview” on page 14.

To change the Manager or Operator password, perform the following procedure:

1. From the Main Menu, select **System Configuration**.

The System Configuration Menu, as shown in Figure 3 is displayed.

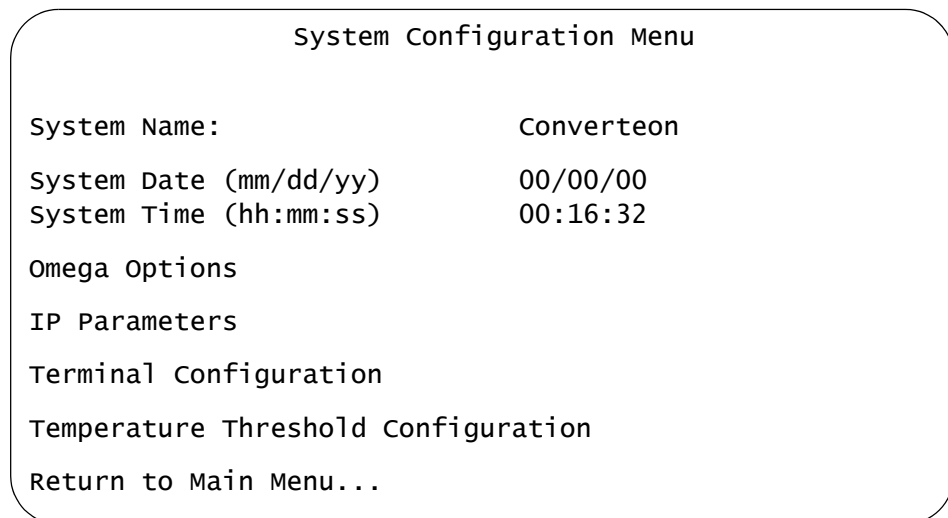


Figure 3. System Configuration Menu

2. From the System Configuration Menu, select **Omega Options**. The Omega Options Menu, as shown in Figure 4, is displayed.

Omega Options Menu

System Name:

Manager Password: *****

Operator Password: *****

Timeout: 10

> Local Omega Enabled
Disable Local Omega

> Remote Omega Enabled
No Remote Omega

Return to System Configuration Menu...

Figure 4. Omega Options Menu

3. From the Omega Options Menu, select the **Manager Password** to change the Manager password or **Operator Password** to change the Operator password.
4. Enter the password. When entered, the password is displayed as a series of asterisks. To delete the current password but not assign a new password, enter a space in the Manager Password field.
 - The default password for Manager access is “friend”.
 - The default password for Operator access is “operator”

The password is case-sensitive and can be from 0 to 20 alphanumeric characters.

Note

The password can consist of the letters A to Z in uppercase and lowercase, as well as the numbers 1 to 9. Do not use special characters, such as a space, asterisk (*), or exclamation point (!).

5. Press **<Return>**.

The new password is automatically saved by the management software. You will be required to enter the password the next time you start a management session.

6. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Console Timeout

This parameter causes the management software to automatically end a management session if it does not detect any activity from the local or remote management workstation after the specified period of time. This security feature can prevent unauthorized individuals from using your management workstation should you step away from your system while configuring a chassis. The default console time value is 10 minutes.

Setting a Console Timeout Value

To set a timeout value so that the program will end the session if there has been no management activity after the timeout value has expired, perform the following procedure:

1. From the Main Menu, select **System Configuration**.

The System Configuration Menu, as shown in Figure 3 on page 28, is displayed.

2. From the System Configuration Menu, select **Omega Options**.

The Omega Options Menu, as shown in Figure 4 on page 29, is displayed.

3. To configure the console timer, select **Timeout** and enter a value from **0** (zero) to **32,767** (in minutes). The default console time value is 10 minutes.

Note

Entering a value of 0 means there is no timeout. The Omega interface will not automatically end any session. A session is ended only if you end the session yourself. If you enter **0**, you must always properly quit after a management session in order not to block subsequent remote sessions and software downloads to the chassis.

A new console timer value takes affect the next time your start a local or remote management session.

4. Press **<Return>**.

The new timeout value is now active.

5. Press **<Esc>** or select the **"Return to ..."** option at the bottom of the menu, to save the settings and return to the previous menu.

Management Access Levels

There are two levels of management access in the AT-S70 management software: Manager and Operator. When you log in as a Manager, you can view and configure all operating parameters. When you log in as an Operator, you can only view the operating parameters; you cannot change any values.

You log in as a manager or an operator when you enter the appropriate username and password when you start an AT-S70 management session. To log in as a manager, type “manager” as the login name. The default password is “friend”. The username for operator is “operator” and the default password is also “operator”. The usernames and passwords are case sensitive.

Note

Once the password has been changed and is forgotten, you must call Technical Support to have it reset back to the default password. For Technical Support contact info, refer to “Contacting Allied Telesyn” on page 12.

Accessing the Management Software

There are three ways to access the management software on a Converteon chassis. These methods are referred to in this guide as management sessions. They are:

- Local management session, as described in “Local Management Session” on page 16.
- Telnet management session, as described in “Telnet Management Session” on page 17.
- SNMP management session, as described in “SNMP Management Session” on page 18.

You can configure one or more of these methods to enhance the security of the chassis by preventing unauthorized changes to the module and port configurations.

Configuring Management Access

To enable or disable a management access method, perform the following procedure:

1. From the Main Menu, select **System Configuration**.

The System Configuration Menu, as shown in Figure 3 on page 28, is displayed.

2. From the System Configuration Menu, select **Omega Options**.

The Omega Options Menu, as shown in Figure 4 on page 29, is displayed.

3. Adjust the settings as required.

The management access methods are described below:

> Local Omega Enabled

Disabled Local Omega

These two selections allow you to control whether the Omega interface can be accessed by connecting a terminal or PC to the RS-232 port on the management module. This is referred to as accessing the program locally. The default for this access method is enabled.

> Remote Omega Enabled

No Remote Omega

Accessing Omega remotely is accomplished with the Telnet program or an SNMP management program, such as HP Openview. The default for this access method is enabled.

4. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Chapter 4

Basic Parameters

This chapter contains a variety of information and procedures. There is a discussion on when to assign an IP address to a chassis and the different ways to it. There are also procedures for resetting the chassis, activating the chassis default settings, and more.

This chapter contains the following sections:

- ❑ “When Does a Converteon Chassis Need an IP Address?” on page 34
- ❑ “Configuring Basic Chassis Parameters” on page 35
- ❑ “Configuring the Chassis Temperature Threshold” on page 42
- ❑ “Pinging a Remote System” on page 43
- ❑ “Viewing the AT-S70 Software Version Number” on page 45
- ❑ “Resetting and Restarting the System” on page 46
- ❑ “Setting the RS-232 Terminal Baud Rate” on page 48

When Does a Converteon Chassis Need an IP Address?

One of the tasks to building or expanding a network is deciding which of the managed chassis need a unique IP address. In the past, the rule was that a managed chassis needed an IP address if you wanted to manage it remotely, such as with the Telnet application protocol or a web browser. However, if a network contained a lot of managed chassis, having to assign each one an IP address was often cumbersome and time consuming. It was also often difficult keeping track of all the IP addresses.

When you assign a chassis an IP address, you must also assign it a subnet mask. The chassis uses the subnet mask to determine which portion of an IP address represents the network address and which the node address. You must also assign the chassis a gateway address if the chassis and a remote management workstation are separated by a router. This gateway address is the IP address of the router through which the chassis and remote management workstation will communicate.

If you do not plan to remotely manage any of the Converteon Series chassis in your network, you do not need to assign any of them an IP address. The chassis can operate without an IP address and you will still be able to manage them completely using local management sessions.

Assigning an IP Address

Once you have decided which, if any, chassis on your network need an IP address, you have to access the AT-S70 software on the chassis and assign the addresses. There are actually two ways in which a chassis can obtain an IP address.

- ❑ The first method is for you to assign the IP configuration information manually. This procedure is explained in “Configuring the IP Address, Subnet Mask, and Default Gateway” on page 38.
- ❑ The second method is for you to activate the DHCP service on the chassis and have the chassis automatically download its IP configuration information from a DHCP server on your network. This procedure is explained in “Enabling and Disabling DHCP” on page 40.

Note

Initially assigning an IP address to a chassis or activating DHCP can only be done through a local management session.

Configuring Basic Chassis Parameters

The AT-S70 management software provides options to configure some basic parameters on the chassis.

This section contains the following procedures:

- ❑ “Assigning an IP Address” on page 34
- ❑ “Naming the System” on page 35
- ❑ “Setting the System Date and Time” on page 36
- ❑ “Configuring the System Location and Contact Information” on page 37
- ❑ “Configuring the IP Address, Subnet Mask, and Default Gateway” on page 38
- ❑ “Configuring the Manager IP Addresses” on page 39
- ❑ “Configuring SNMP Community Strings” on page 39
- ❑ “Enabling and Disabling DHCP” on page 40

Naming the System

To set the chassis name, perform the following procedure:

1. From the Main Menu, select **System Configuration**.

The System Configuration Menu, as shown in Figure 5, is displayed.

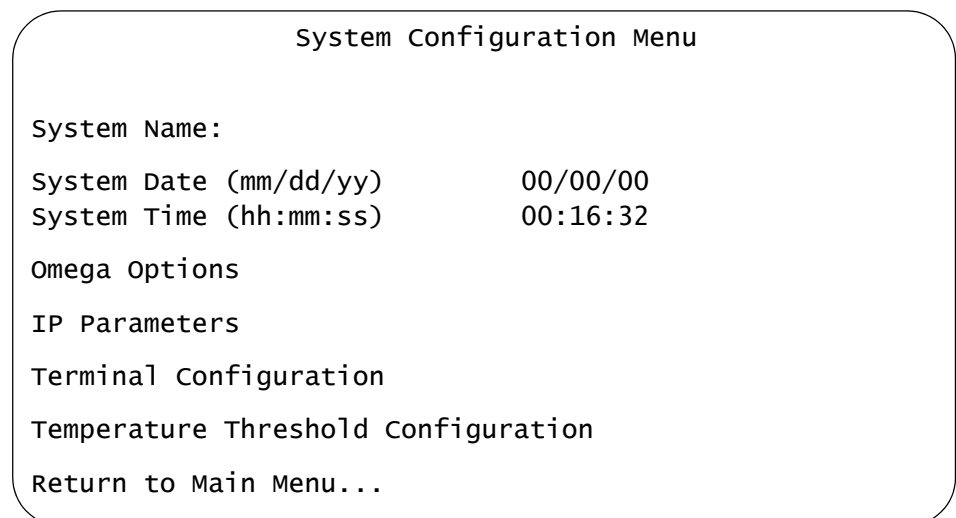


Figure 5. System Configuration Menu

2. From the System Configuration Menu, select the **System Name** field and enter a unique name for the chassis.

The name can be up to 40 characters, including spaces and special characters. If the system already has a name that you want to delete without entering a new name, press the space bar once.

3. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Note

Once the system name is entered and approved, it will be displayed at the top of every AT-S70 menu.

Setting the System Date and Time

Setting the system date and time is important if you configured the chassis to send traps to your management workstations. If the time is not set, traps do not contain the correct date and time. Therefore, it becomes difficult for you to determine when the events represented by the traps occurred.

One way to set the system date and time is manually setting it using the AT-S70 software menu interface. When you set the date and time manually, the chassis loses the values when it is reset or power cycled. Therefore, you must reset the values whenever you reset the chassis.

To set the system’s date and time, perform the following procedure:

1. From the Main Menu, select **System Configuration**. The System Configuration Menu, as shown in Figure 5 on page 35, is displayed.
2. Adjust the following parameters as necessary:

System Date(mm/dd/yy)

Enter a date for the system in the “mm/dd/yy”. Use two numbers to specify for the day, month, and year. Separate the values with slashes.

Select the System Time(hh:mm:ss)

Enter the new system real time in the “hh:mm:ss” format. Use two numbers to specify for the hours, minutes, and seconds. Separate the values with colons.

Note

If the AT-CV5M01 CPM card is reset or power cycled, the system and time settings will be lost. You will need to re-enter the date and time information.

3. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Configuring the System Location and Contact Information

To set the system's location and contact information, perform the following procedure:

1. From the Main Menu, select **System Configuration**. The System Configuration Menu, as shown in Figure 5 on page 35, is displayed.
2. From the System Configuration Menu, select **IP Parameters**. The IP Parameters Menu, as shown in Figure 6, is displayed.

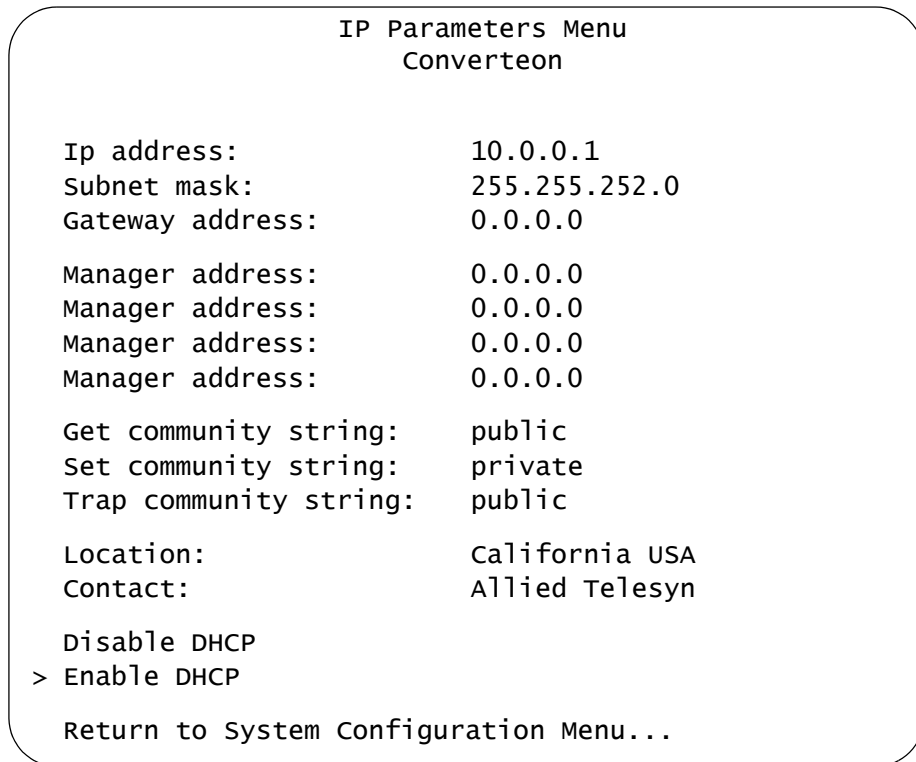


Figure 6. IP Parameters Menu

3. Adjust the following parameters as necessary:

Location

The location can be up to 20 alphanumeric characters, including spaces and special characters. If the system already has a location that you want to delete without entering a new location, press the space bar once.

Contact

The contact information includes the name, phone number, and other information that identifies the person responsible for managing the system. The contact information can be up to 20 alphanumeric characters, including spaces and special characters. If the system already has the contact information that you want to delete without entering new information, press the space bar once.

4. Press **<Esc>** or select the **"Return to ..."** option at the bottom of the menu, to save the settings and return to the previous menu.

Configuring the IP Address, Subnet Mask, and Default Gateway

The procedure in this section explains how to manually assign an IP address, subnet mask, and gateway address to the chassis from a local or Telnet management session. (If you want the chassis to obtain its IP configuration from a DHCP server on your network, go to the procedure “Enabling and Disabling DHCP” on page 40.)

To configure parameters for managing the chassis remotely, perform the following procedure:

1. From the Main Menu, select **System Configuration**.

The System Configuration Menu, as shown in Figure 5 on page 35, is displayed.

2. From the System Configuration Menu, select **IP Parameters**.
3. The IP Parameters Menu, as shown in Figure 6 on page 37, is displayed.
4. Make the necessary changes to the following parameters.

Ip address

This parameter specifies the IP address of the chassis. You must assign a chassis an IP address so it can be managed remotely using Telnet or an SNMP application. In addition, if the management workstation is separated from the chassis by a router, you must also provide a gateway address, which is the IP address of a router through which the chassis can communicate with the remote management workstation. The IP address must be entered in the format: xxx.xxx.xxx.xxx. The default value is 10.0.0.1.

Subnet mask

This parameter specifies the subnet mask for the chassis. You must specify a subnet mask to manage the chassis remotely. The mask address must be entered in the format: xxx.xxx.xxx.xxx. The default value is 255.255.252.0.

Gateway address

This parameter specifies the default router’s IP address. This address is required if you intend to remotely manage the chassis from a management workstation that is separated from the chassis by a router. The gateway address must be entered in the format: xxx.xxx.xxx.xxx. The default value is 0.0.0.0.

5. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Configuring the Manager IP Addresses

You can specify up to four network management workstations that will receive SNMP traps from the system.

To configure the management IP addresses, perform the following procedure:

1. From the Main Menu, select **System Configuration**.

The System Configuration Menu, as shown in Figure 5 on page 35, is displayed.

2. From the System Configuration Menu, select **IP Parameters**.

The IP Parameters Menu, as shown in Figure 6 on page 37, is displayed.

3. Adjust the following parameters as necessary:

Manager address(es)

This parameter specifies up to four IP addresses of network management workstations that will receive SNMP traps from the chassis. This is optional.

4. Press **<Esc>** or select the **"Return to ..."** option at the bottom of the menu, to save the settings and return to the previous menu.

Configuring SNMP Community Strings

To configure the SNMP community strings, perform the following procedure:

Note

SNMP access is disabled by default. To enable SNMP access, refer to "Configuring Management Access" on page 31.

1. From the Main Menu, select **System Configuration**.

The System Configuration Menu, as shown in Figure 5 on page 35, is displayed.

2. From the System Configuration Menu, select **IP Parameters**.

The IP Parameters Menu, as shown in Figure 6 on page 37, is displayed.

3. Adjust the following parameters as necessary.

Get community string

The default setting for this string is "public."

Set community string

The default setting for this string is "private."

Trap community string

The default setting for this string is “public.”

Use these parameters to set the SNMP community strings on the chassis. A community string can be up to thirteen characters. Community strings are case sensitive and can contain spaces and special characters, such as an exclamation point (!). Changes to the SNMP parameters are immediately activated on the chassis.

Note

For a list of actions that generate SNMP traps, refer to “SNMP Traps” on page 53.

4. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Enabling and Disabling DHCP

The DHCP application protocol was developed to simplify network management. It is used to automatically assign IP configuration information to the devices on your network, such as an IP address, subnet mask, and a default gateway address.

Naturally, for this to work there must be a DHCP server residing on your network and you must configure the service by entering in the MAC address of the chassis.

DHCP services typically allow you to specify how the IP address is to be assigned to the chassis. The choices are static and dynamic. If you choose static, the server always assign the same IP address to the chassis when the chassis is reset or powered ON. This is the preferred configuration. Because the DHCP services always assign the same IP address to a chassis, you will always know which IP address to use when you need to remotely manage a particular chassis.

If you choose dynamic, the DHCP server assigns any unused IP address that it has not already assigned to another device. This means that a chassis might have a different IP address each time you reset or power cycle the device, making it difficult for you to remotely manage the unit. The default is disabled.

Note

Enabling DHCP overrides any IP configuration settings that you manually assigned.

Note

The BOOTP, another protocol that performs an identical function, is not available on the Converteon chassis.

To enable or disable the DHCP client software, perform the following procedure:

1. From the Main Menu, select **System Configuration**.

The System Configuration Menu, as shown in Figure 5 on page 35, is displayed.

2. From the System Configuration Menu, select **IP Parameters**.

The IP Parameters Menu, as shown in Figure 6 on page 37, is displayed.

3. From the IP Parameters Menu, select one of the following parameters:

Disable DHCP

Disables DHCP services on the chassis.

> Enable DHCP

Enables DHCP services on the chassis. If you enabled DHCP, you must reset the chassis in order for the internal management module to start issuing DHCP requests to obtain its IP configuration. The default is enabled.

The Converteon chassis issues up to three requests for its IP configuration from the DHCP server. If the DHCP server does not respond, the chassis uses the assigned IP address, if one was manually assigned.

4. Press **<Esc>** or select the **"Return to ..."** option at the bottom of the menu, to save the settings and return to the previous menu.

Note

If you enable the DHCP client software, the chassis immediately begins to query the network for a DHCP server. The chassis continues to query the network for its IP configuration until it receives a response.

Any static IP address, subnet mask, and gateway address assigned to the chassis are deleted from the Administration menu and replaced with the values the chassis receives from DHCP server. If you later disable DHCP, these values are returned to their default settings. For the default settings, refer to Appendix A, "AT-S70 Default Settings" on page 129.

Configuring the Chassis Temperature Threshold

You can set a maximum temperature threshold for the chassis. Whenever a temperature threshold is exceeded, the chassis sends a trap to the management workstations.

To set the chassis temperature threshold, perform the procedure:

1. From the Main Menu, select **System Configuration**.

The System Configuration Menu, as shown in Figure 5 on page 35, is displayed.

2. From the System Configuration Menu, select **Temperature Threshold Configuration**.
3. The Temperature Threshold Configuration Menu, as shown in Figure 7, is displayed.

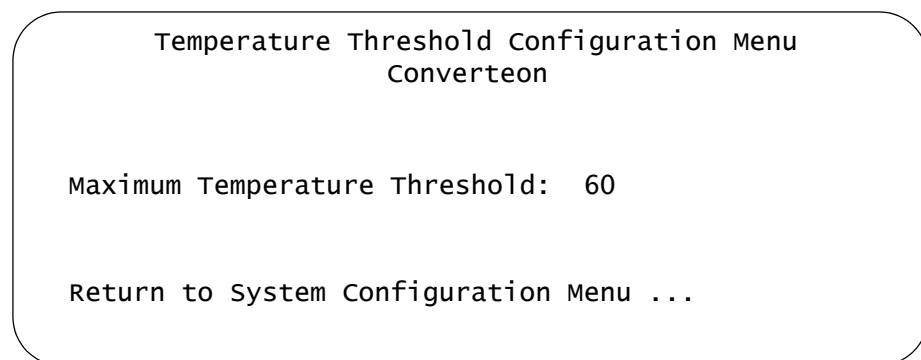


Figure 7. Temperature Threshold Configuration Menu

4. In the **Maximum Temperature Threshold**, the currently set temperature is displayed in Celsius (° C). Enter a number for the maximum temperature threshold. The highest possible maximum temperature is 75° C.
5. Press **<Esc>** or select the **“Return to ...”** option at the bottom of the menu, to save the settings and return to the previous menu.

Pinging a Remote System

You can instruct the chassis to ping a remote device on your network. This procedure is useful in determining whether a valid link exists between the chassis and another device. The chassis sends an Internet Control Message Protocol (ICMP) echo request to the end node. If the end node is operating and receives the request, it sends a reply to the chassis.

To instruct the chassis to ping a network device, perform the following procedure:

1. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 8, is displayed.

```
Administration Menu
Converteon

Image Download Through TFTP
Image Download Through XMODEM
LineCard Image Download Through XMODEM
LineCard Image Download Through TFTP
Upload Configuration Through TFTP
Download Configuration Through TFTP
Ping a remote system
Syslog Server Address:      Null (not configured)
Syslog Facility Code:      1
Event Log
Activity Monitor
> Start Log
  Stop Log

Diagnostics
CPM Switch Over
Reset Chassis and Restart Line Cards
Return to Main Menu...
```

Figure 8. Administration Menu

2. From the Administration Menu, select **Ping a remote system**.

The Ping window, as shown in Figure 9, is displayed.

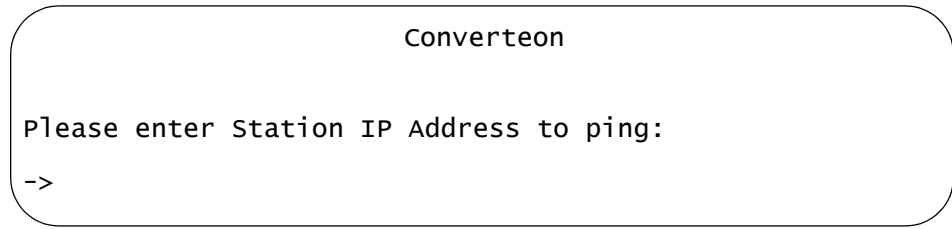


Figure 9. Ping Window

3. Enter the Station IP Address of the end-node you want the chassis to ping.
4. Press **<Return>**.

The Omega interface activates the Activity Monitor window. This window reports the results of the Ping command.

A ping command performed from a local or remote Omega session continues until you press any key to stop it.

5. Press **<Esc>** or select the "**Return to ...**" option at the bottom of the menu, to save the settings and return to the previous menu.

Viewing the AT-S70 Software Version Number

To view the latest version of the AT-S70 software release cycle installed in the chassis, perform the following procedure:

1. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 8 on page 43, is displayed.

2. From the Administration Menu, select **Diagnostics**.

The Diagnostic Menu, as shown in Figure 10, is displayed.

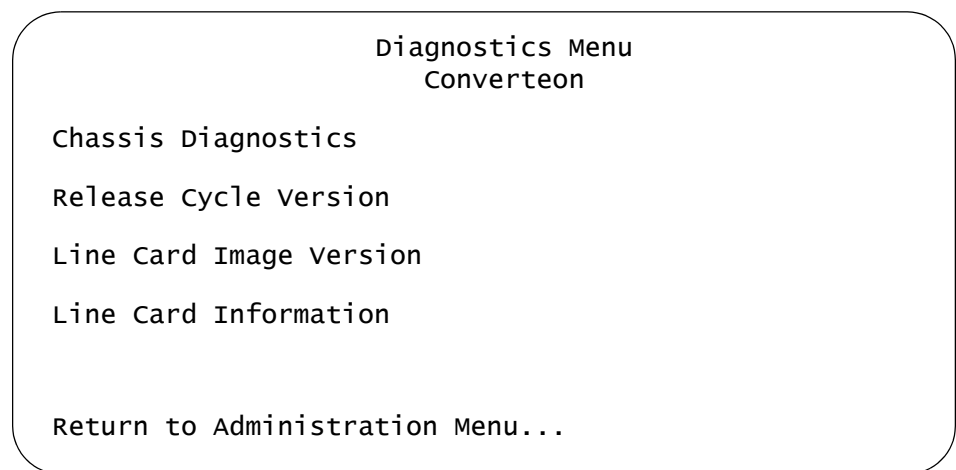


Figure 10. Diagnostics Menu

3. From the Diagnostics Menu, select **Release Cycle Version**.

The Release Cycle Menu window, as shown in Figure 11, is displayed.

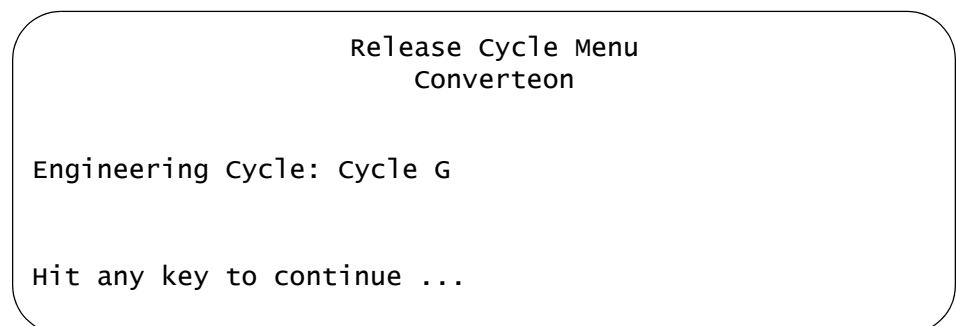


Figure 11. Release Cycle Menu

4. Press **<Esc>** or hit any key to continue.

Resetting and Restarting the System

When you reset a system, the system is also restarted. Resetting and restarting the system is a way to refresh all the statistics displays or overcome system errors. This process does not affect any system settings or return the system to its default values. However, it does terminate your management session and you must log in again after the reset is complete.

Note

If DHCP is enabled, then the IP address of the Converteon chassis MAY change after a reset or power cycle. For more information on how to enable DHCP, refer to “Enabling and Disabling DHCP” on page 40.

To reset a chassis, perform the following procedure:

1. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 8 on page 43, is displayed.

2. From the Administration Menu, select **Reset Chassis and Restart Line Cards**.

The Reset Chassis window, as shown in Figure 12, is displayed.

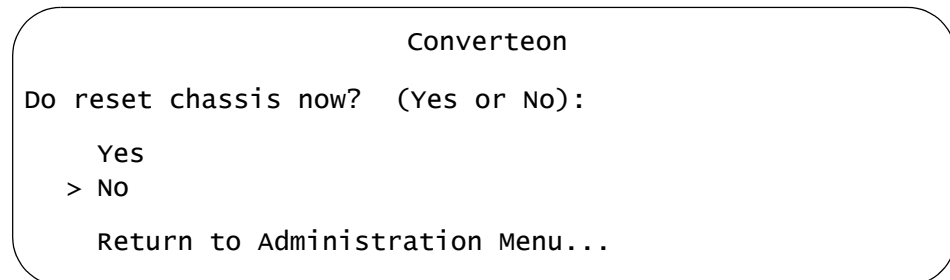


Figure 12. Reset Chassis Window

3. From the Reset Chassis window, select **Yes** to reset the system or **No** to cancel the command.

Note

Resetting the chassis also resets the line cards; therefore the traffic stops momentarily during the reset.

If Yes is selected, the prompt, as shown in Figure 13, is displayed.

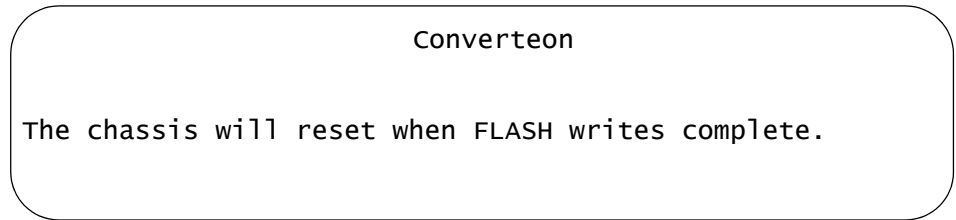


Figure 13. Resetting Chassis Confirmation Window

It takes a few seconds to reset the chassis. Once done, it returns to the Administration menu. The changes made are now saved to the FLASH PROM.

4. To resume managing the chassis, you must reestablish your management session by logging in again.

Setting the RS-232 Terminal Baud Rate

The default settings for the RS-232 port are:

- Bits per second: 1200 bps to 115200bps
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: None

To set the RS-232 port to a different baud rate, perform the following procedure:

1. From the Main Menu, select **System Configuration**.

The System Configuration Menu, as shown in Figure 5 on page 35, is displayed.

2. From the System Configuration Menu, select **Terminal Configuration**.

The Terminal Configuration Menu, as shown in Figure 14, is displayed.

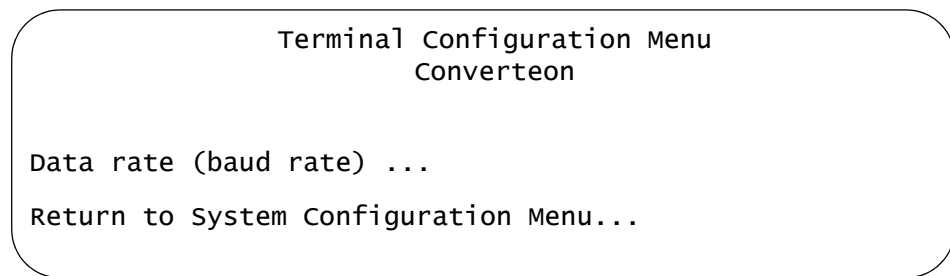


Figure 14. Terminal Configuration Menu

3. From the Terminal Configuration Menu, select **Data rate (baud rate)**.

The Terminal Data Rate Menu, as shown in Figure 15, is displayed listing the baud rates.

```
Terminal Data Rate Menu
Convertion

> 115200 bps
  57600 bps
  19200 bps
  9600 bps
  4800 bps
  2400 bps

Return to Terminal Configuration Menu...
```

Figure 15. Terminal Data Rate Menu

4. From the Terminal Data Rate Menu, select the baud rate you want.

Possible baud rates are:

- 115200 bps (default)
 - 57600 bps
 - 19200 bps
 - 9600 bps
 - 4800 bps
 - 2400 bps
5. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Changes to the baud rate take effect the next time you start a local management session.

Chapter 5

Monitoring System Performance

This chapter describes the features in the AT-S70 for monitoring the performance of the Converteon chassis.

This chapter contains the following sections:

- “Displaying System Status Information” on page 51
- “Using the System Activity Monitor” on page 53
- “Using the System Diagnostics” on page 56

Displaying System Status Information

The AT-S70 management software provides comprehensive status information about the operation of the chassis and its components, including detailed information about the line cards.

To view chassis status information, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 16, is displayed.

Figure 16. Module Status and Configuration Menu (1/2)

2. In the Module Status and Configuration Menu, click **More ...** to display the remainder of the modules and line cards in the chassis, as shown in Figure 17.

Module Status and Configuration				
Converteon				
Module	Status	Link(A)	Link(B)	OpMode
17: AT-CM202	On	Offline	Offline	Link Test
18: AT-CM202	On	Offline	Offline	SML
19: LED	On	--	--	
20: (Not Inserted)	--	--	--	
21: RPSA	On			
22: RPSB	On			
More ...				
Return to Main Menu ...				

Figure 17. Module Status and Configuration Menu - 2/2

The Module Status and Configuration Menu displays basic information on all the components currently installed in the chassis, including:

- Line cards or CPM card (slots 1 through 18)
- LED interface card (slot 19)
- Rear expansion slot (slot 20)
- Primary and redundant power supplies (slots 21 and 22)

The basic information displayed on the installed component is:

Module

Displays the name of the module or line card and its slot number.

Status

Indicates the status of the module or line card.

Link (A) and Link (B)

Indicates whether there are any active connections between a port and the device connected to the port. Online indicates that there is a link while Offline indicates that there is no link.

More...

Scrolls the screen to show the remaining modules.

3. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Using the System Activity Monitor

The AT-S70 management software keeps a list of the chassis SNMP events such as removal of a line card, loss of a data link, failure of a fan module, etc. This list is called the activity log and you use the activity monitor to display the log. The activity log contains only those events that have occurred since you started the management session. Ending the session purges the log.

SNMP Traps

The SNMP traps provide information for status of chassis modules such as line cards, fans, power supplies, as well as chassis temperature.

Activities that generate the SNMP traps are listed as follows:

- Module inserted
- Module removed
- Port link online
- Port link offline
- Fan failure - fan one of tray one
- Fan failure - fan two of tray one
- Fan failure - fan one of tray two
- Fan failure - fan two of tray two
- Fan recovered - fan one of tray one
- Fan recovered - fan two of tray one
- Fan recovered - fan one of tray two
- Fan recovered - fan two of tray two
- 12V power failure
- 5V power failure
- 3.3V power failure
- 12V power recovered
- 5V power recovered
- 3.3V power recovered
- Power supply module inserted
- Power supply module removed
- Chassis Over-Temperature
- Chassis Over-Temperature removed
- Fan module inserted
- Fan module removed

Starting and Stopping the Activity Log

To start or stop the activity log, perform the following procedure:

1. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 18, is displayed.

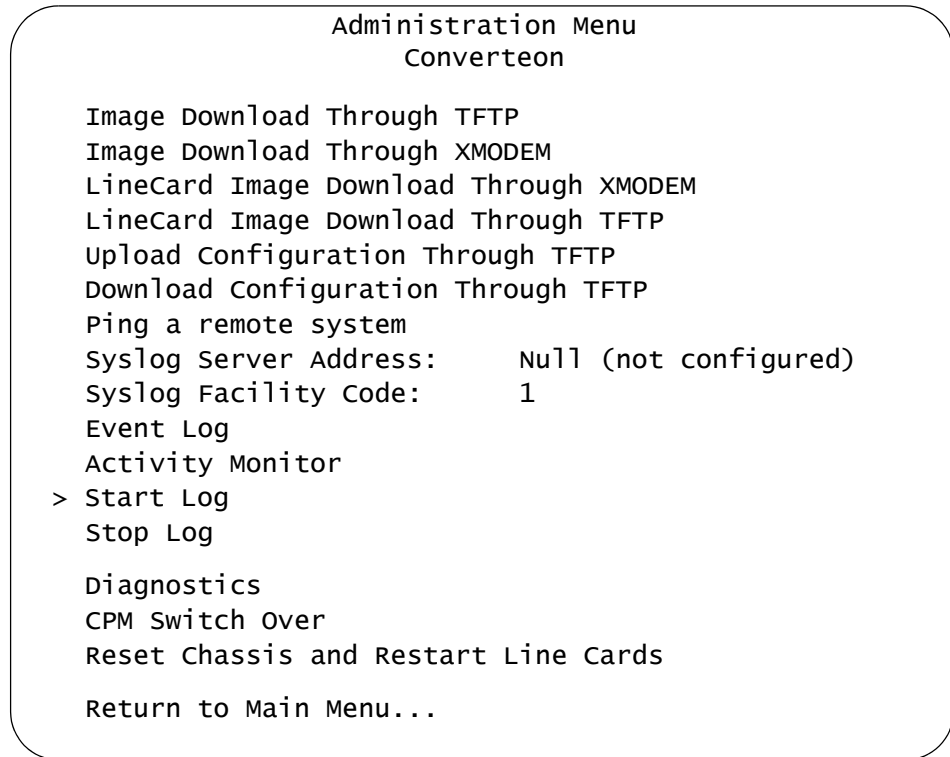


Figure 18. Administration Menu

2. From the Administration Menu, select **Start Log** to start the activity log or **Stop Log** to stop the activity log.

The default is Start Log.

Displaying the Activity Log

To view the activity log, perform the following procedure:

1. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 18 on page 54, is displayed.

2. From the Administration Menu, select **Activity Monitor**.

An example of the Activity Monitor window, as shown in Figure 19, is displayed.

```
Converteon  
Activity Monitor  
  
(hit Return to resume the previous menu)  
  
00/00/00 00:00:23 Module #5 has been removed!  
00/00/00 00:00:25 Module #5 has been Installed!  
00/00/00 00:00:30 Module #10 has been removed!  
00/00/00 00:00:33 Module #10 has been Installed!
```

Figure 19. Activity Monitor Window Example

The activity monitor continues to display system activities until you press Return to return to the previous menu and select **Stop Log**.

3. Press **<Esc>** or select the **"Return to ..."** option at the bottom of the menu, to save the settings and return to the previous menu.

Using the System Diagnostics

The AT-S70 management software provides an option to run diagnostic self-tests on the chassis and line cards. The following section describes how to run chassis diagnostics. Using this information helps you diagnose performance problems with the chassis.

The diagnostic command displays the status of the following items:

- Flash PROM
- Serial interface
- Power supply status
- Optional power supply status (if installed)
- Operational status, speed, temperature and power of the fan modules

A diagnostic test also displays the following:

- Management Software Release Cycle Version
- Management Software Image Version and Cycle Number
- Line card MAC Address
- Line card Serial Number
- Convertion chassis model
- Running and current times

To run the chassis diagnostics, perform the following procedure:

1. From the Main Menu, select **Administration**.
2. The Administration Menu, as shown in Figure 18 on page 54, is displayed.
3. From the Administration Menu, select **Diagnostics**.

The Diagnostic Menu, as shown in Figure 20, is displayed.

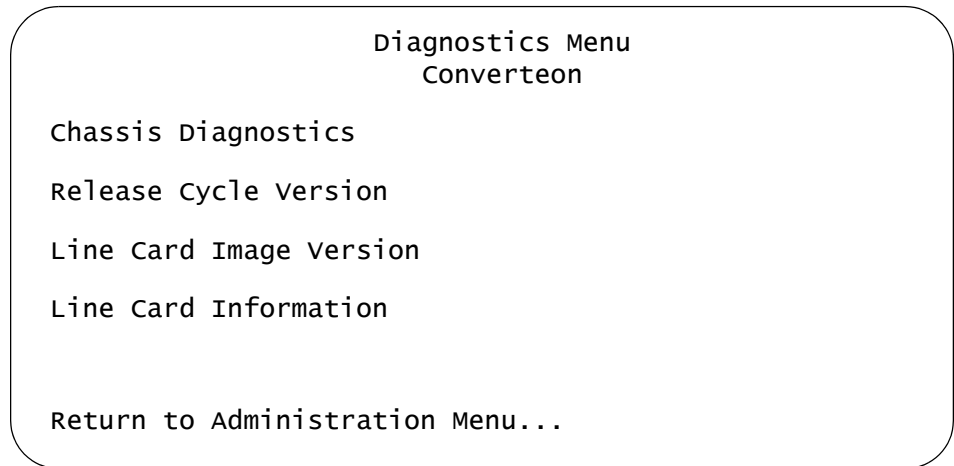


Figure 20. Diagnostics Menu

- From the Diagnostics Menu, select **Chassis Diagnostics**.

The AT-S70 management software runs the diagnostics on the chassis and displays the Chassis Diagnostics menu, as shown in Figure 21.

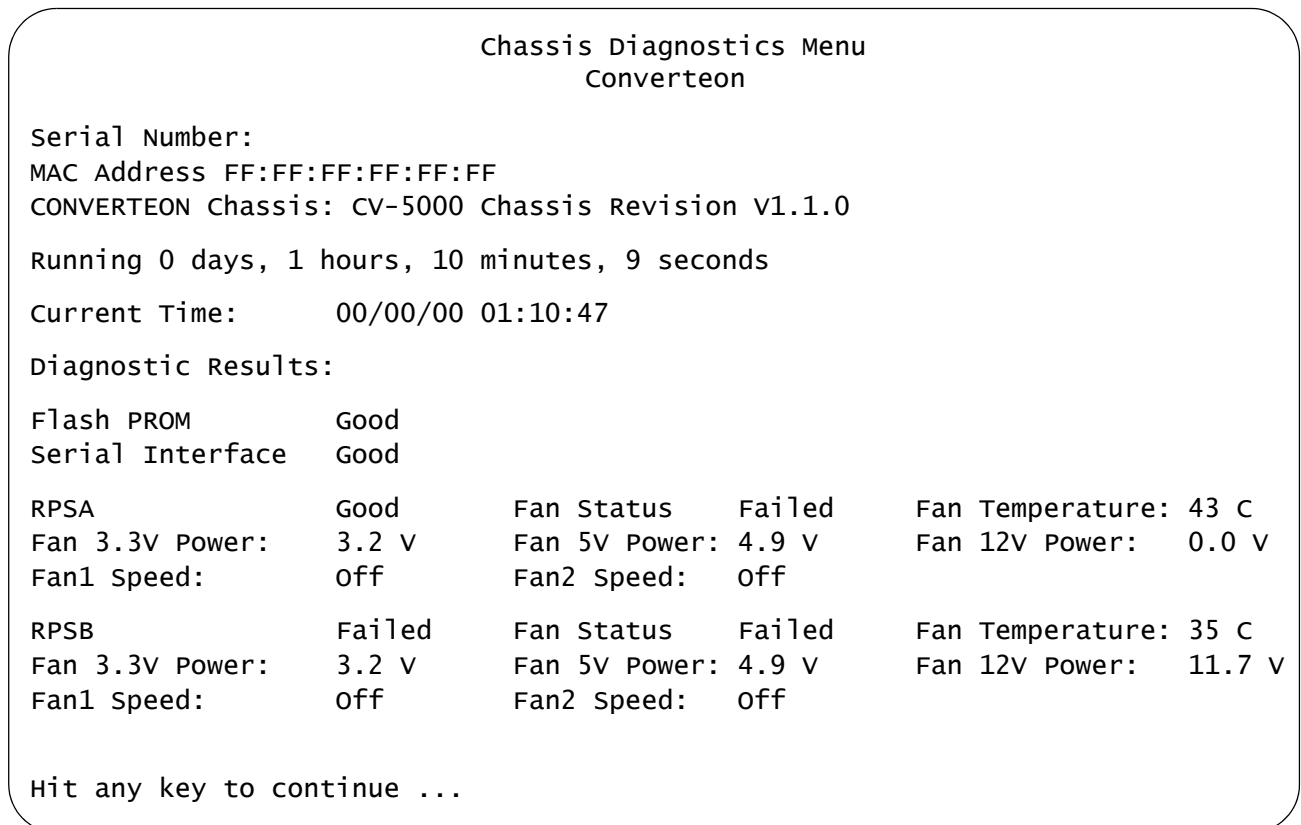


Figure 21. Chassis Diagnostics Menu

The information displayed on this menu is for viewing purposes only.

Note

The Flash PROM and Serial Interface test results are displayed as Good or Failed. If the chassis does not have a optional power supply installed, the results for "RPSB" is displayed as Failed.

The top portion of the Chassis Diagnostics menu contains the following items of system information:

Serial Number

Indicates the serial number and hardware revision level of the system.

MAC Address

Indicates the MAC address of the chassis.

CONVERTEON Chassis

Indicates the Converteon chassis model and revision (i.e. AT-CV5000 Revision 1.0.0).

Running

Indicates the number of hours, minutes, and seconds that the chassis has been running since it was last powered ON.

Current Time

Indicates the current time set on the chassis.

The lower portion of the Chassis Diagnostic menu contains diagnostic information of the following items:

Flash PROM

Indicates the status of the Flash PROM and its current voltage.

Serial Interface

Indicates the status of the RS-232 port and its current voltage.

RPSA and RPSB

Indicates the status of the power supplies whether or not the power supply is turned ON.

Fan1 and Fan2

Indicates the status of the fan modules, including the power voltage they are using, the speed they are running, an their temperature.

5. Press **<Esc>** or hit any key to return to the previous menu.

Displaying Line Card Image Version

To view the latest image version of a line card, perform the following procedure:

1. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 18 on page 54, is displayed.

2. From the Administration Menu, select **Diagnostics**.

The Diagnostic Menu, as shown in Figure 20 on page 57, is displayed.

3. From the Diagnostics Menu, select **Line Card Image Version**.

The Line Card Module Software Image Version window, as shown in Figure 22, is displayed.

Line card Module Software Image Version Converteon		
Module	Version	Cycle
1: AT-CV5M01	V1.1.0	Cycle B
2: AT-CM202	V1.1.0	Cycle B
3: AT-CM202	V1.1.0	Cycle B
4:(Not Inserted)	--	--
5: AT-CM202	V1.1.0	Cycle B
6: AT-CM202	V1.1.0	Cycle B
7: AT-CM202	V1.1.0	Cycle B
8:(Not Inserted)	--	--
9: AT-CM212A/1	V1.1.0	Cycle B
10: AT-CM212A/1	V1.1.0	Cycle B
11: AT-CM212A/1	V1.1.0	Cycle B
12:(Not Inserted)	--	--
13: AT-CM212B/1	V1.1.0	Cycle B
14: AT-CM212B/1	V1.1.0	Cycle B
15: AT-CM212B/1	V1.1.0	Cycle B
16:(Not Inserted)	--	--
17: AT-CM202	V1.1.0	Cycle B
18: AT-CM202	V1.1.0	Cycle B

Hit any key to continue ...

Figure 22. Line Card Module Software Image Version Window

The Line Card Module Software Image Version window contains the following information:

MAC Address

Indicates the MAC address of the line cards.

Serial Number

Indicates the serial number of the line cards.

4. Press <Esc> or hit any key to continue.

Displaying Line Card Information

To view la line card information, perform the following procedure:

1. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 18 on page 54, is displayed.

2. From the Administration Menu, select **Diagnostics**.

The Diagnostic Menu, as shown in Figure 20 on page 57, is displayed.

3. From the Diagnostics Menu, select **Line Card Information**.

The Line Card Module Information window, as shown in Figure 23, is displayed.

Line Card Module Information Converteon		
Module	MAC Address	Serial Number
1: AT-CV5M01	000C469A214B	7
2: AT-CM202	323032055148	SN # 32
3: AT-CM202	323032055272	SN # 43
4: (Not Inserted)	--	--
5: AT-CM202	323032055331	4#21
6: AT-CM202	323032055515	6#38
7: AT-CM202	323032055546	7#45
8: (Not Inserted)	--	--
9: AT-CM212A/1	000C469A21E6	142
10: AT-CM212A/1	000C469A21E6	142
11: AT-CM212B/1	000C469A21DF	135
12: (Not Inserted)	--	--
13: AT-CM212B/1	000C469A21DF	135
14: AT-CM212B/1	000C469A21DF	135
15: AT-CM212B/1	000C469A21DF	135
16: (Not Inserted)	--	--
17: AT-CM202	323032055611	SN # 49
18: AT-CM202	323032055702	SN # 67

Hit any key to continue ...

Figure 23. Line Card Module Information Window

The Line Card Module Information window contains the following information:

Version

Indicates the software version the line cards are using.

Cycle

Indicates the cycle release number of the software version the line cards are using.

4. Press <Esc> or hit any key to continue.

Chapter 6

Event Logs and Syslog Servers

This chapter describes how to view and clear the contents of the event logs. The event logs that allow you to view chassis information. In addition, it also discusses how to configure the syslog server address and facility code. Sections in the chapter include:

- ❑ “Event Log Overview” on page 64
- ❑ “Displaying an Event Log” on page 65
- ❑ “Clearing an Event Log” on page 67

Event Log Overview

A managed Converteon media chassis is a complex piece of computer that includes both hardware and software. Multiple software features operate simultaneously, interoperating with each other and processing large amounts of network traffic. It is often difficult to determine exactly what is happening when a chassis appears not to be operating normally, or what happened when the problem occurred.

A network manager's major task is to monitor the system functions and to deal with problems as they arise. One method for doing this is to view the event messages that are generated by the chassis and sent to the event log. These events can provide vital information about system activity on a Converteon chassis that help you identify and solve system problems. The event log includes the following information:

- The date of an event
- The time of an event
- A message of the event

There are two ways that you can view a chassis' event messages. The first method is to view an event log. The second method is to have the chassis send its events to a syslog server. The syslog server functions as a central repository that stores events from many network devices simultaneously.

In order for a Converteon chassis to send its events to a syslog server, you must define the syslog output. The syslog output includes the IP address of the syslog server along with other information such as the types of event messages you want the chassis to send to the syslog server.

Note

The event logs, even when disabled, log all AT-S70 initialization events that occur when the chassis is reset and power cycled. Any chassis events that occur after the AT-S70 initialization are entered into the logs only if you enable the event log feature. The default setting for the event log feature is enabled.

Working with the Event Log

This section contains the following procedures:

- ❑ “Displaying an Event Log” on page 65
- ❑ “Clearing an Event Log” on page 67

Displaying an Event Log

Each time that you want to view the event log, you must choose how and what you want displayed. The event log settings are not saved.

To specify the type of events you want to display in the event log, perform the following procedure:

1. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 24, is displayed.

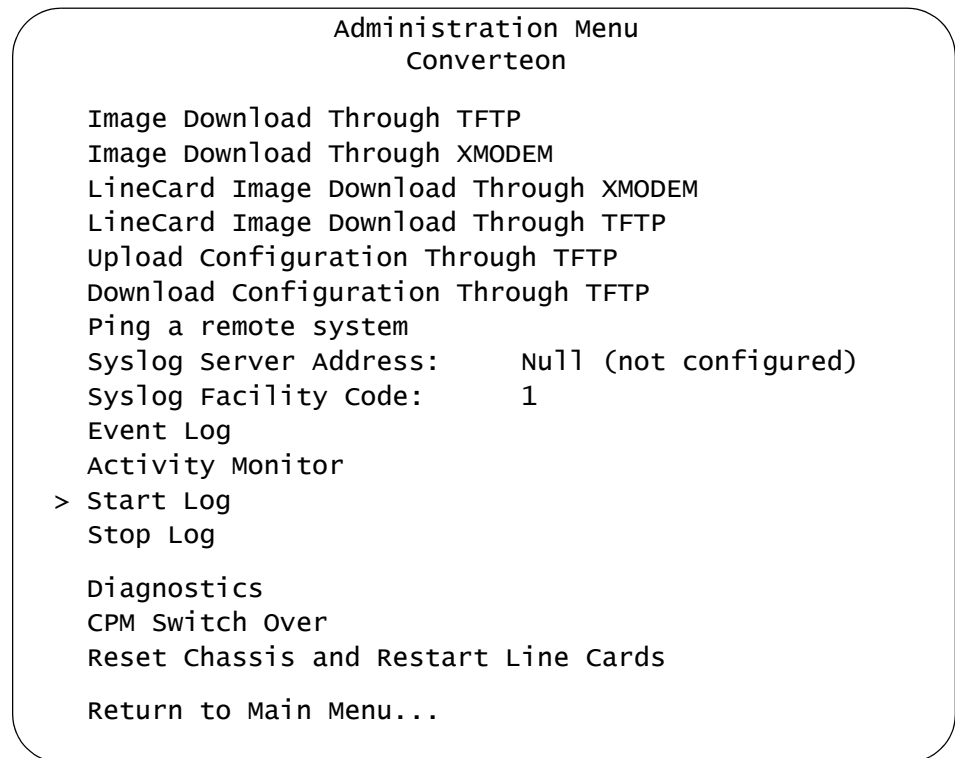


Figure 24. Administration Menu

2. From the Administration Menu, select **Event Log**.

The Event Log Menu window is displayed, as shown in Figure 25.

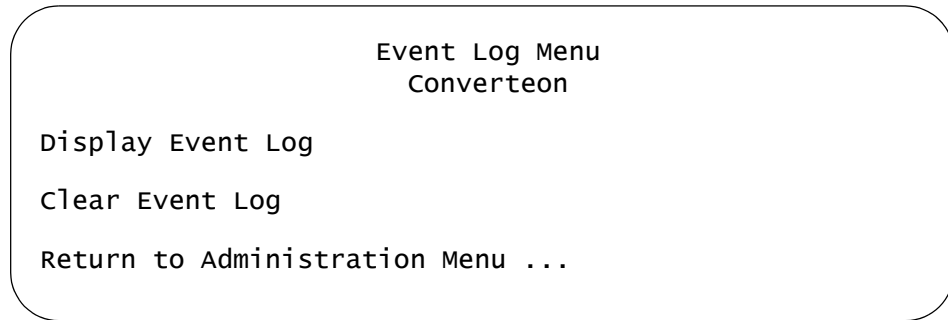


Figure 25. Event Log Menu

3. From the Event Log Menu, select **Display Event Log**.

An example of an event log, shown in Figure 26, is displayed.

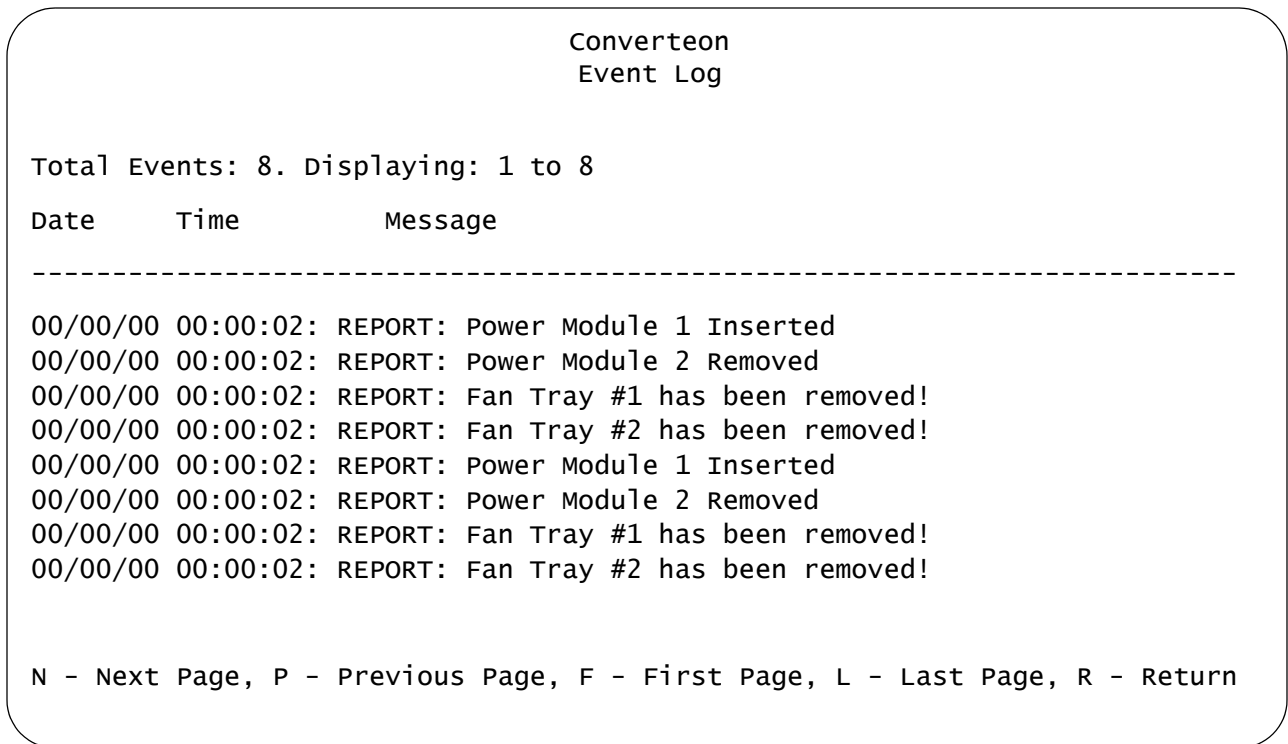


Figure 26. Example of an Event Log

The events are displayed in a table. The columns in the table are described below:

Date

The date the event occurred.

Time

The time the event occurred.

Message

The activity the event reported.

4. Type the following to scroll through the event log:
 - N** - Next page
 - P** - Previous page
 - F** - First page
 - L** - Last page
 - R** - Return to the Event Log Menu

To clear the current event log, go to the next section "Clearing an Event Log".

Clearing an Event Log

You can clear the event log to remove old events and start fresh. To clear the event log, perform the following procedure:

1. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 24 on page 65, is displayed.

1. From the Administration Menu, select **Event Log**.

The Event Log Menu window is displayed, as shown in Figure 25 on page 66.

2. From the Event Log Menu, select **Clear Event Log**.

The following prompt is displayed:

```
Please wait while the event log is cleared...
```

3. When the clearing process is done, hit any key to continue.

Working with the Syslog Server

Configuring Syslog Server Address

To specify the IP address of the syslog server, perform the following procedure:

1. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 24 on page 65, is displayed.

2. From the Administration Menu, select **Syslog Server Address** field and enter the IP address of the syslog server.
3. Press **<Return>**.

The syslog server IP address is displayed.

Setting Syslog Facility Code

This feature adds a facility code to the entries when they are sent to the syslog server. The facility level is a way for you to add a numerical code to each entry to help you group entries on the syslog server according to the module or system that produced them. This grouping helps you determine which events belong to which device when a syslog server is collecting events from several network devices. You can specify only one facility code.

To specify the facility code of the syslog server, perform the following procedure:

1. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 24 on page 65, is displayed.

2. From the Administration Menu, select **Syslog Facility Code** field and enter the facility code of the syslog server.

There are two approaches to using this feature. The first is to use the default code setting "0" which is based on the functional groupings defined in the RFC 3164 standard. The numerical codes that are applicable to the AT-S70 management software and its modules are shown in Table 2.

Table 2. Syslog Facility Applicable RFC 3164 Numerical Codes

Numerical Code	Facility
0	kernel messages
1	user-level messages
2	mail system
3	system daemons
4	security/authorization messages ¹
5	messages generated internally by syslog
6	line printer subsystem
7	network news subsystem
8	UUCP subsystem
9	clock daemon ²
10	security/authorization messages ¹

Table 2. Syslog Facility Applicable RFC 3164 Numerical Codes

11	FTP daemon
12	NTP subsystem
13	log audit ¹
14	log alert ¹
15	clock daemon ²
16	local use 0 (LOCAL0)
17	local use 1 (LOCAL1)
18	local use 2 (LOCAL2)
19	local use 3 (LOCAL3)
20	local use 4 (LOCAL4)
21	local use 5 (LOCAL5)
22	local use 6 (LOCAL6)
23	local use 7 (LOCAL7)

- 1 Various operating systems have been found to utilize Facilities 4, 10, 13 and 14 for security/authorization, audit, and alert messages which seem to be similar.
2. Various operating systems have been found to utilize both Facilities 9 and 15 for clock (cron/at) messages.

For example, selecting LOCAL1 as the facility level assigns the numerical code of 17 to all events sent by the chassis to the syslog server.

3. Press **<Return>**.

The selected syslog facility code is displayed.

Chapter 7

Working with Line Cards and Other Modules

This chapter contains the following procedures:

- “Displaying Basic Line Card Information” on page 72
- “Displaying Line Card Status Information” on page 74
- “Changing Line Card Settings” on page 76
- “Displaying AT-CV5M01 CPM Card Status Information” on page 83
- “Displaying LED Interface Card Status Information” on page 85

Displaying Basic Line Card Information

To display the status of the modules and line cards in the Converteon chassis, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 27, is displayed.

Module Status and Configuration Converteon				
Module	Status	Link(A)	Link(B)	OpMode
1: AT-CV5M01	On	Offline		
2: AT-CM202	On	Offline	Offline	Link Test
3: AT-CM202	On	Offline	Offline	Link Test
4: (Not Inserted)	--	--	--	--
5: AT-CM202	On	Offline	Offline	Link Test
6: AT-CM202	On	Offline	Offline	Link Test
7: AT-CM202	On	Offline	Offline	Link Test
8: (Not Inserted)	--	--	--	--
9: AT-CM212A/1	On	Offline	Offline	Link Test
10: AT-CM212A/1	On	Offline	Offline	Link Test
11: AT-CM212A/1	On	Offline	Offline	Link Test
12: (Not Inserted)	--	--	--	--
13: AT-CM212B/1	On	Offline	Offline	SML
14: AT-CM212B/1	On	Offline	Offline	SML
15: AT-CM212B/1	On	Offline	Offline	SML
16: (Not Inserted)	--	--	--	--
More ...				
Return to Main Menu ...				

Figure 27. Module Status and Configuration Menu

The fields are defined below:

Module

Displays the name of the module or line card and its slot number.

Status

Indicates the current status of the line card, whether there is no line card inserted (--) or the correct line card is inserted in the slot and the power is ON.

Link (A) and Link (B)

Indicates whether there are any active connections between a port and the device connected to the port. Online indicates that there is a link while Offline indicates that there is no link.

OpMode

Indicates the operating mode status configured on the line cards.

Possible values are:

Smart Missing Link Mode (SML)

Missing Link Mode (ML)

OAM BYPASS Mode

OAM Visible Mode

Link Test Mode

More...

Scrolls the screen to show the remaining modules.

2. Press **<Esc>** or select the **"Return to ..."** option at the bottom of the menu, to save the settings and return to the previous menu.

Displaying Line Card Status Information

The AT-S70 management software provides detailed information about the line cards including items such as link, port speed, duplex mode, and activity.

To display detailed line card status information, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 27 on page 72, is displayed.

2. Select the line card whose information you want to display.
3. Press **<Return>**.

An example of the Module Configuration Menu for the AT-MC202 line card, as shown in Figure 28, is displayed.

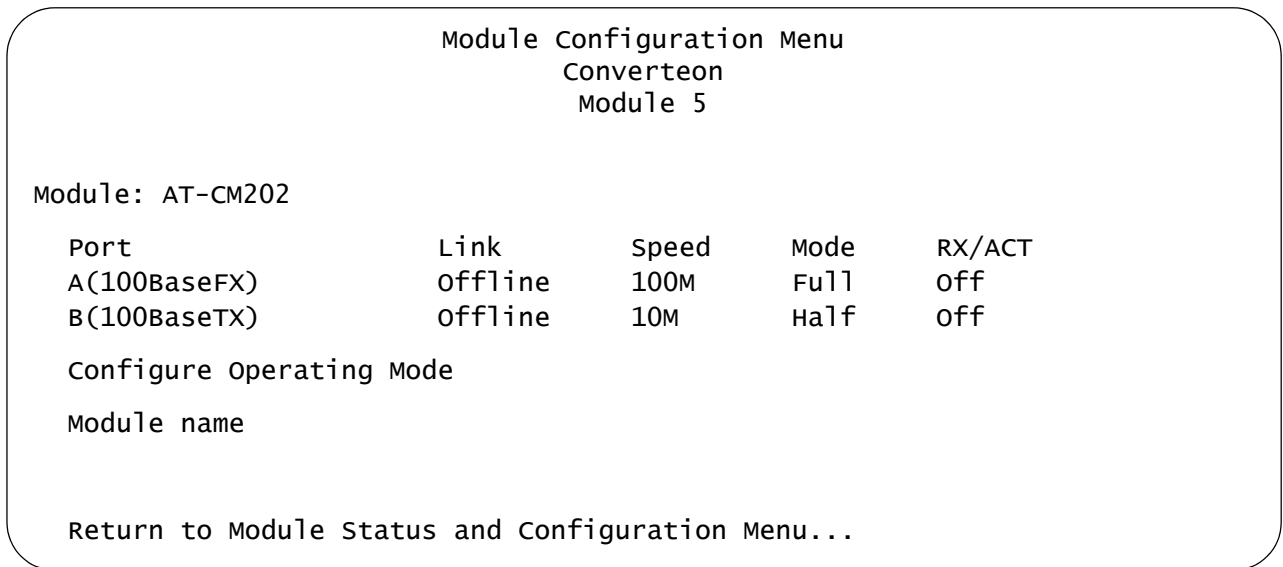


Figure 28. Module Configuration Menu (Line Card)

The Module Configuration Menu items and options are described below:

Module

Displays the type of line card you selected.

Port

Identifies the port of the module selected.

Link

Displays the status of the link state on the ports.

- Online* - Indicates that there is a valid link.
- Offline* - Indicates that there is no link.

Speed

Displays the operating speed of the ports.

Possible values are:

- Fiber port (Port A)* - 10M or 100M
- Copper port (Port B)* - Auto, 10M, or 100M

Mode

Displays the duplex mode of the ports. Possible values are:

- Auto* - The port is auto-negotiating with the connected device to automatically configure to the highest common setting.
- Full* - The module can send and receive data simultaneously.
- Half* - The module can send or receive data, but not both at the same time.

RX/ACT

Displays the status of the RX/ACT state on this port. Possible values are:

- On* - The status report of the RX/ACT state on the port is turned ON.
- Off* - The status report of the RX/ACT state on the port is not active.

Module Name

Displays the name that given to the line card selected. Left blank if it has not been given a name.

4. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Changing Line Card Settings

You can change the following settings to fit your network needs:

- “Changing Line Card Name and Location” on page 76
- “Enabling and Disabling a Line Card” on page 76
- “Changing Line Card Port Duplex Mode” on page 80
- “Configuring the Line Card Ingress/Egress Rate Limit” on page 81

Changing Line Card Name and Location

To change the name and location of the line card, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 27 on page 72, is displayed.

2. Select the line card whose information you want to change.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 28 on page 74, is displayed.

4. In the **Module Name**, enter a name for the line card.
You may want to choose a name that reflects the group connected to that line card, such as Engineering. The name can contain up to 40 alphanumeric characters, spaces, and special characters.
5. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Enabling and Disabling a Line Card

When you enable a line card, you make it available to send and receive network traffic.

To verify if a line card is enabled or disabled, or to change that setting, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 27 on page 72, is displayed.

2. Select the line card whose information you want to change.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 28 on page 74, is displayed.

4. Select Port A (fiber - top) or Port B (copper - bottom) of the line card.
5. Press **<Return>**.

The Port Management Menu, as shown in Figure 29, is displayed.

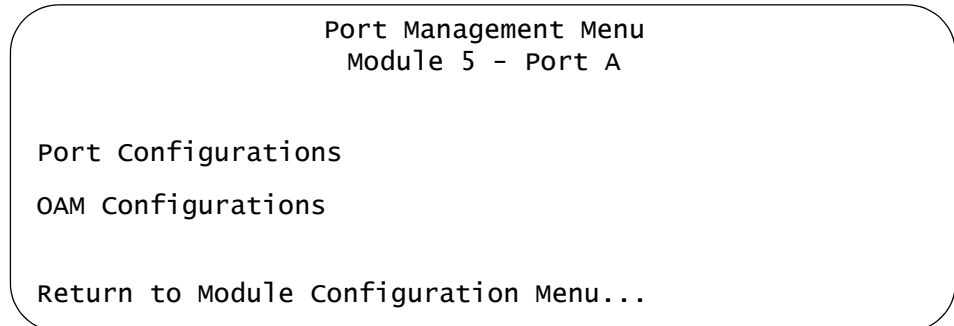


Figure 29. Port Management Menu

6. From the Port Management Menu, select **Port Configurations**.

The Port Configuration Menu, as shown in Figure 30, is displayed.

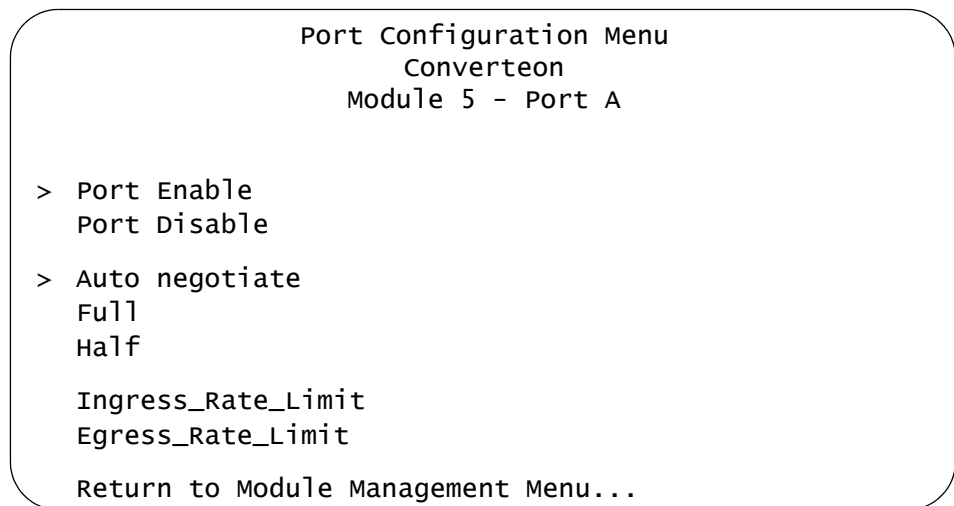


Figure 30. Port Configuration Menu

7. From the Port Configuration Menu, select **Port Enable** to enable the port or **Port Disable** to disable the port. The default is enabled.

Once the port is disabled, it no longer receives or sends packets. You might want to disable a port if a problem occurs with the end-node or with the cable connected to the port. Once the problem is fixed, you can enable the port again to resume normal operation. You can also disable an unused port to secure it from unauthorized connections.

8. Press **<Esc>** or select the **"Return to ..."** option at the bottom of the menu, to save the settings and return to the previous menu.

Changing Line Card Operating Mode

To change the operating mode of a line card, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 27 on page 72, is displayed.

2. Select the line card whose information you want to change.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 28 on page 74, is displayed.

4. Select **Configure Operating Mode**.
5. Press **<Return>**.

The Operating Mode Config Menu, as shown in Figure 29, is displayed.

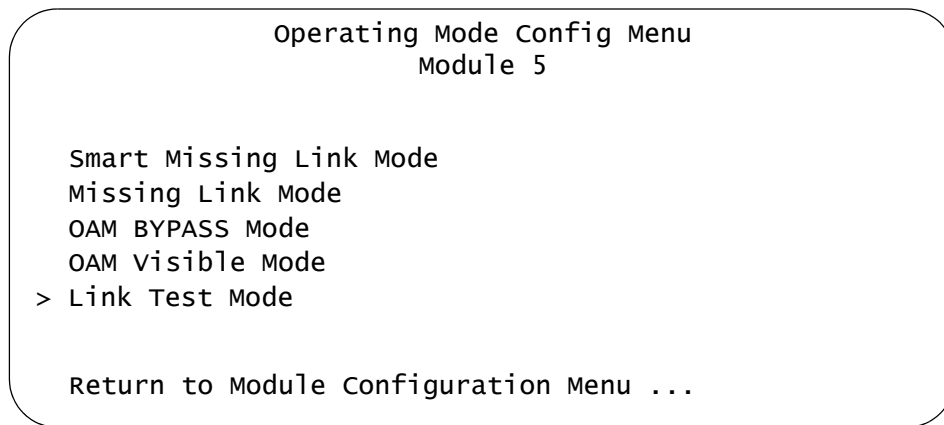


Figure 31. Port Management Menu

6. From the Operating Mode Config Menu, select one of the following operating modes:

Smart Missing Link Mode

This mode performs exactly the same function as MissingLink™ with one additional feature. When a link is lost on a port, the LK LED of the port that still has a valid connection to its end-node starts to blink. This allows you to quickly determine which port still has a valid connection (LK LED blinking) and which port has lost its connection (LK LED off).

Missing Link Mode

This mode enables the ports on the media converter to pass the "Link" status of their connections to each other. When the media converter detects a problem on one of the ports, such as the loss of connection

to an end-node, the media converter shuts down the connection to the other port, thus notifying the end-node that the connection has been lost.

OAM BYPASS Mode

In this mode, the line card receives OAMPDU packets, but forwards them onto the other port. This allows Converteon to be used in a network where the Converteon chassis is not part of the IEEE802.3ah end points. (i.e. in this mode, the OAM function of the media blade is disabled). To configure as OAM bypass mode, the module will pass all OAMPDUs whose vendor OUI is not Allied Telesyn.

OAM Visible Mode

In this mode, the line card does respond to OAMPDU packets. In an unmanaged chassis, the line card will be in passive mode. In a managed chassis, the line card can either be in passive or active mode depending on how it is software configured. For detailed information, refer to Table 3, "OAM Active and Passive Mode Behaviors" on page 89. To configure as OAM visible mode, the module will respond to all OAMPDUs.

Link Test Mode

This is the default setting. The mode is to test the connections between the line card ports and the end-nodes that are connected to the ports. If a network problem occurs, you can perform a link test to determine which port is experiencing a problem, and so be able to focus your troubleshooting efforts on the cable and end-node where the problem resides.

Changing Line Card Port Duplex Mode

To change the duplex mode of a port on the line card, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 27 on page 72, is displayed.

2. Select the line card whose information you want to change.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 28 on page 74, is displayed.

4. Select the port that you want to configure.
5. Press **<Return>**.

The Port Management Menu, as shown in Figure 30 on page 77, is displayed.

6. From the Port Management Menu, select **Port Configurations**.

The Port Configuration Menu, as shown in Figure 30 on page 77, is displayed.

7. Select the one of the following duplex modes:

Auto negotiate

This is the default setting. This selection is to configure the speed of the port that is set automatically by the chassis after it determines the speed of the end-node connected to the port. Auto-Negotiation is designed to ensure that the port on the chassis and the end-node are operating at the same speed and that they are communicating at the highest possible common speed of the devices.

Half

This selection is to configure that the port can send or receive data, but not both at the same time. Use this setting if you know that the device connected to the port supports half-duplex mode.

Full

This selection is to configure that the port can both send and receive data simultaneously. You can select this setting for a port if you know that the end-node connected to the port supports full-duplex.

8. Press **<Esc>** or select the **“Return to ...”** option at the bottom of the menu, to save the settings and return to the previous menu.

Configuring the Line Card Ingress/Egress Rate Limit

There are certain rules that a chassis follows as it receives and forwards an Ethernet frame. There are rules for frames as they enter a port (called *ingress rules*) and rules for when a frame is transmitted out of a port (called *egress rules*). A chassis will not accept and forward a frame unless the frame passes the ingress and egress rules.

To configure the ingress/egress rate limit on the line card, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 27 on page 72, is displayed.

2. Select the line card whose information you want to change.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 28 on page 74, is displayed.

4. Select the port that you want to configure.
5. Press **<Return>**.

The Port Management Menu, as shown in Figure 30 on page 77, is displayed.

6. From the Port Management Menu, select **Port Configurations**.

The Port Configuration Menu, as shown in Figure 30 on page 77, is displayed.

7. From the Port Configuration Menu, select **Ingress_Rate_Limit** or **Egress_Rate_Limit**.

The Port Ingress Rate Menu, as shown in Figure 32, or the Port Egress Rate Menu, as shown in Figure 29, is displayed.

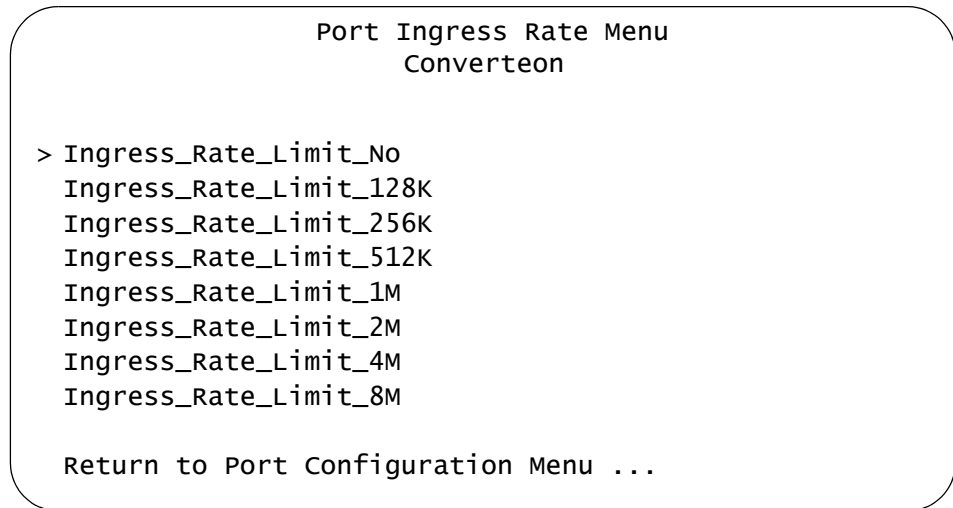


Figure 32. Port Ingress Rate Menu

Ingress_Rate_Limit

This parameter allows the user to configure the ingress rate limit on the selected port. The default value is *Ingress_Rate_Limit_No*.

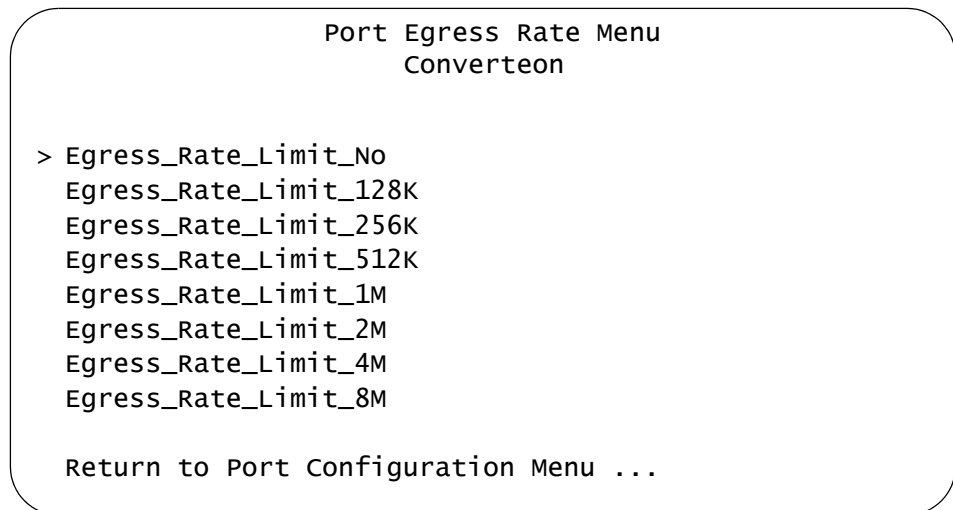


Figure 33. Port Egress Rate Menu

Egress_Rate_Limit

This parameter allows the user to configure the egress rate limit on the selected port. The default values is *Egress_Rate_Limit_No*.

8. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Displaying AT-CV5M01 CPM Card Status Information

The following procedure allows you to view and change the parameter settings on the AT-CV5M01 CPM card.

To display the status of a CPM card, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 27 on page 72, is displayed.

2. Select the CPM card you want to view the status.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 34, is displayed.

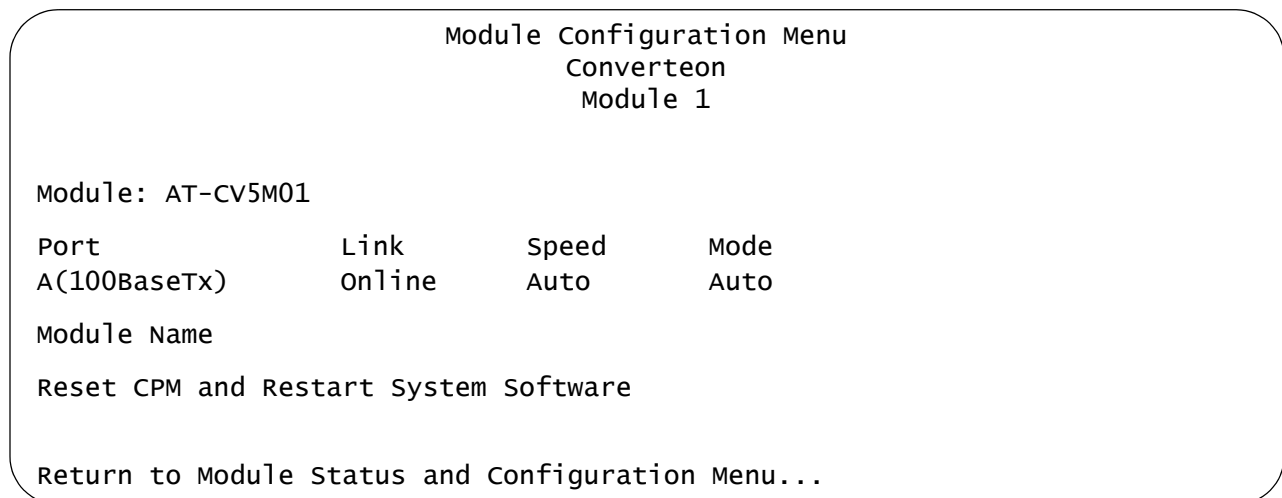


Figure 34. Module Configuration Menu (CPM Card)

The Module Configuration Menu items and options are described below:

Module

Displays the type of line card you selected.

Port

Identifies the port of the module selected.

Link

Displays the status of the link state on the ports.

Online - Indicates that there is a valid link.

Offline - Indicates that there is no link.

Speed

Displays the operating speed of the ports. Possible values are Auto, 10M, 100M, or 1000M.

Mode

Displays the duplex mode of the ports. Possible values are:

Auto - The port is auto-negotiating with the connected device to automatically configure to the highest common setting.

Full - The module can send and receive data simultaneously.

Half - The module can send or receive data, but not both at the same time.

Module Name

Displays the name that given to the AT-CV5M01 CPM card selected. Left blank if it has not been given a name.

Reset CPM and Restart System Software

Resets the settings of the selected CPM card and restarts the system.

4. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Displaying LED Interface Card Status Information

The following procedure allows you to view the LED status displayed on the LED interface card residing in Slot 19.

To display the LED status, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 27 on page 72, is displayed.

2. Select the LED interface card located in Slot 9 to view the status.
3. Press **<Return>**.

The LED Status, as shown in Figure 35, is displayed.

	LED Status Converteen
Power Supply 1	ON
Power Supply 2	OFF
Fan Tray 1	ON
Fan Tray 2	ON
CPU Ready	ON
CPU Fault	ON
Master	ON
Return to Module Status and Configuration Menu...	

Figure 35. LED Status

4. Press **<Esc>** or select the **"Return to ..."** option at the bottom of the menu, to save the settings and return to the previous menu.

Chapter 8

Operations, Administration, and Maintenance (OAM)

This chapter describes the Operations, Administration, and Maintenance (OAM) feature, which provides mechanism useful for monitoring link operation such as remote fault indication and remote loopback control. In general, OAM provides network operators the ability to monitor the condition of the network and determine the location of the failing links or fault conditions.

This chapter contains the following procedures:

- ❑ “Overview” on page 87
- ❑ “Configuring OAM Operations” on page 91
- ❑ “Displaying OAM Information and Statistics” on page 96
- ❑ “OAM Loopback Test” on page 105
- ❑ “Sending OAM Variable Request” on page 109

Overview

The Operation, Administration and Maintenance (OAM) is a group of functions that provides tools and utilities used to manage a network. The OAM feature is 802.3ah-compliant and is used to provide network indication, system configuration, performance monitoring, security management, diagnostic functions and configuration. Each function in the OAM feature is described below:

Operations: Coordinates actions between Administration and Maintenance functions.

Administration: Coordinates administrative functions such as designing a system or network, processing order, assigning addresses, tracking usage and accounting.

Maintenance: Coordinates maintenance functions such as diagnosing and troubleshooting system features that do not work as planned.

The advantage of this OAM feature is that you can monitor and troubleshoot the network without having a technician on site.

With the SNMPv1 and SNMPv2 protocols, you can create community groups and define SNMP manager IP addresses. SNMP has been known as a flexible tool used for managing the Ethernet links and networks. However, it does not offer some of the management functionalities required by some networks, especially when the underlying network is in a non-operational status. In this case, the 802.3ah OAM feature is a better solution because it provides the management capabilities at every layer of the network.

Note

Note that the 802.3ah OAM capabilities are not intended to replace SNMP as a management utilities, but are there to enhance it.

The following functions are supported on some of the Converteon line cards.

OAM Discovery

OAM discovery function is used to exchange the information about OAM entities capabilities, configuration and identity between the Converteon line cards. The discovery process allows a local station to detect OAM support on a remote station. Once the OAM support is detected on a remote station, both ends of the link exchange OAM entities capabilities, configuration, and identity information (such as mode, PDU size, loopback support, etc.). If both stations are satisfied with the settings, OAM discovery is enabled on the link. However, if one of the stations experiences a link loss or fails to receive OAM Protocol Data Units (OAMPDUs) for five seconds, the OAM discovery process will restart.

One important aspect of the IEEE 802.3ah OAM spec is that an OAM entity may be in either Active or Passive mode.

- ❑ **Active Mode** – Active-mode stations forward OAM communications and can send queries and commands to a remote station.
- ❑ **Passive Mode** – Passive-mode stations wait for the peer station to forward OAM communications and then respond to commands and queries. Generally, passive-mode do not initiate communications.

By default, the Converteon line card should come up in Passive mode for OAM discovery (as per the IEEE 802.3ah). In order to initiate OAM discovery, the line card needs to be configured in the Active mode by the AT-CV5M01 CPM card. Therefore, if a line card is in a chassis with no CPM card, it will come up in Passive mode.

The difference between the modes is that an OAM active-mode station has more control on its peer than an OAM passive-mode station. For example, an active-mode station can put a passive-mode station into loopback mode, but not vice versa.

Table 3 lists the OAM Active and OAM Passive mode behaviors.

Table 3. OAM Active and Passive Mode Behaviors

Capability	Active	Passive
Initiates OAM Discovery process	Yes	No
Reacts to OAM Discovery process initiation	Yes	Yes
Required to send Information OAMPDUs	Yes	Yes
Permitted to send Event Notification OAMPDUs	Yes	Yes
Permitted to send Variable Request OAMPDUs	Yes	No
Permitted to send Variable Response OAMPDUs	Yes*	Yes
Permitted to send Loopback Control OAMPDUs	Yes	No
Reacts to Loopback Control OAMPDUs	Yes*	Yes
Permitted to send Organization Specific OAMPDUs	Yes	Yes

* Requires the peer station to be in Active mode.

OAMPDU Types

Two Ethernet ports use OAMPDU to exchange the OAM protocol. The OAMPDUs use a specific multicast destination address and EtherType. Most of the OAMPDU types are used to define a set of standard type-length-value (TLV) encoding of attributes within the type. The OAMPDU types are described below:

- ❑ **Information OAMPDUs** – Information OAMPDUs are used for discovery; they are variable-length OAMPDUs. There are three TLVs for Information PDUs: Local Information, Remote Information, and Organizational Specific. Local and Remote Information is used in the discovery process. The Organizational Specific Information TLV is used for vendor extensions.
- ❑ **Event OAMPDUs** – Event OAMPDUs are used for link monitoring, they are variable-length OAMPDUs. The data field in this event OAMPDU contains a data field of one or more link event TLVs.
- ❑ **Loopback Control OAMPDUs** – Loopback Control OAMPDUs are used to provide the loopback command.
- ❑ **Variable Request/Response OAMPDUs** – The Variable Request/Response OAMPDUs accessible through OAM must be in the Ethernet branch of the management information based (MIB) tree. For more information, refer to “MIB Variable Retrieval and Extensions” on page 90.

- ❑ **Organizational Specific OAMPDUs** – Organizations Specific OAMPDUs are used to define events that are of variable-length. They are variable-length OAMPDUs and are distinguished by the Organization Unique Identifier (OUI).
- ❑ **Unsupported OAMPDUs** – Unknown/unsupported OAMPDUs are used to send the PDUs to the OAM Client. This is different from typical Ethernet (802.3x) behavior, which filtered unsupported opcodes.

OAM Remote Loopback

OAM Remote loopback is used to test the link performance. This remote loopback is most useful as a diagnostic tool, where it can be used to identify problem segments in large network. It performs the testing of segments and links by sending test frames through the connections. When in OAM remote loopback mode, the metrics such as delay, throughput, bit error rate (BER), and jitter can be calculated to determine the overall quality of a connection.

MIB Variable Retrieval and Extensions

The IEEE 802.3ah Ethernet OAM specs define a generic mechanism for one OAM entity to query another entity for the value of any MIB variable. MIB variables include all performance and error statistics maintained on an Ethernet link. This capability provides a generic monitoring capability for one station to monitor any parameter on another station for performance or error detection.

The MIB Variable Extensions can be used to implement extra events such as including additional information during discovery or even adding a completely proprietary OAM protocol to the standard operation.

Configuring OAM Operations

To configure the OAM operations, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 36, is displayed.

Module Status and Configuration				
Converteon				
Module	Status	Link(A)	Link(B)	OpMode
1: AT-CV5M01	On	Offline		
2: AT-CM202	On	Offline	Offline	Link Test
3: AT-CM202	On	Offline	Offline	Link Test
4: (Not Inserted)	--	--	--	--
5: AT-CM202	On	Offline	Offline	Link Test
6: AT-CM202	On	Offline	Offline	Link Test
7: AT-CM202	On	Offline	Offline	Link Test
8: (Not Inserted)	--	--	--	--
9: AT-CM212A/1	On	Offline	Offline	Link Test
10: AT-CM212A/1	On	Offline	Offline	Link Test
11: AT-CM212A/1	On	Offline	Offline	Link Test
12: (Not Inserted)	--	--	--	--
13: AT-CM212B/1	On	Offline	Offline	SML
14: AT-CM212B/1	On	Offline	Offline	SML
15: AT-CM212B/1	On	Offline	Offline	SML
16: (Not Inserted)	--	--	--	--
More ...				
Return to Main Menu ...				

Figure 36. Module Status and Configuration Menu (1/2)

2. Select a line card on which you want to configure.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 37, is displayed.

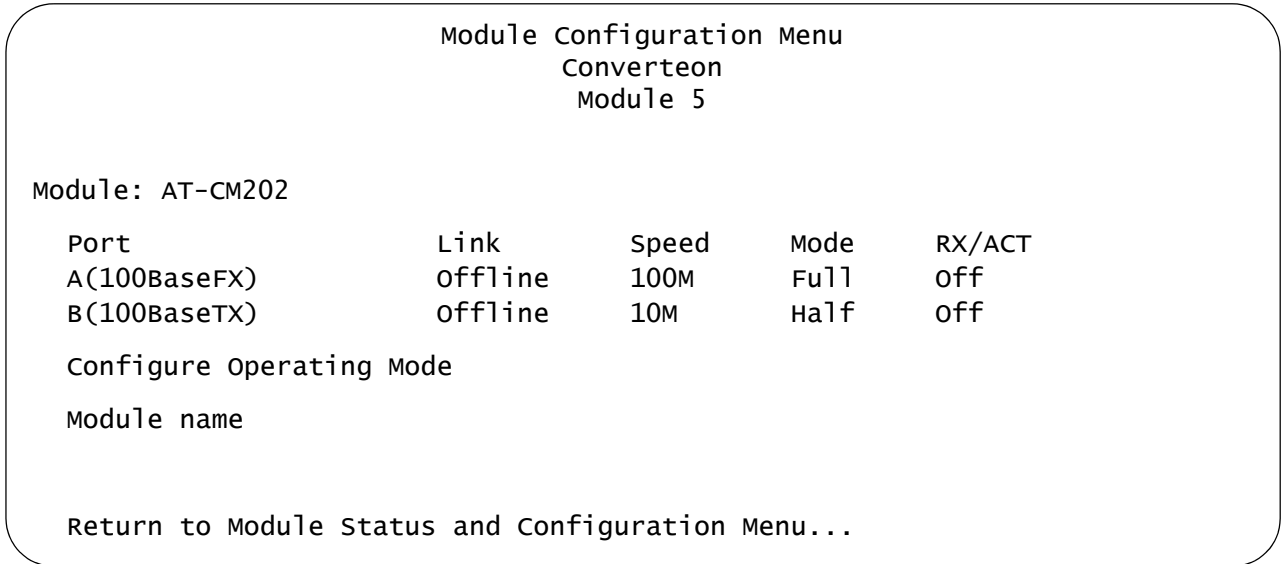


Figure 37. Module Configuration Menu (Line Card)

4. Select the port that you want to configure the OAM operations on.
5. Press **<Return>**.

The Port Management Menu, as shown in Figure 38, is displayed.

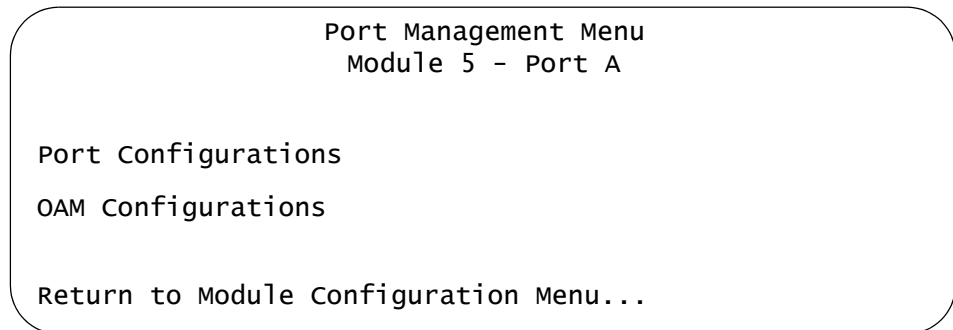


Figure 38. Port Management Menu

6. From the Port Management Menu, select **OAM Configurations**.

The OAM Configuration Menu, as shown in Figure 39, is displayed.

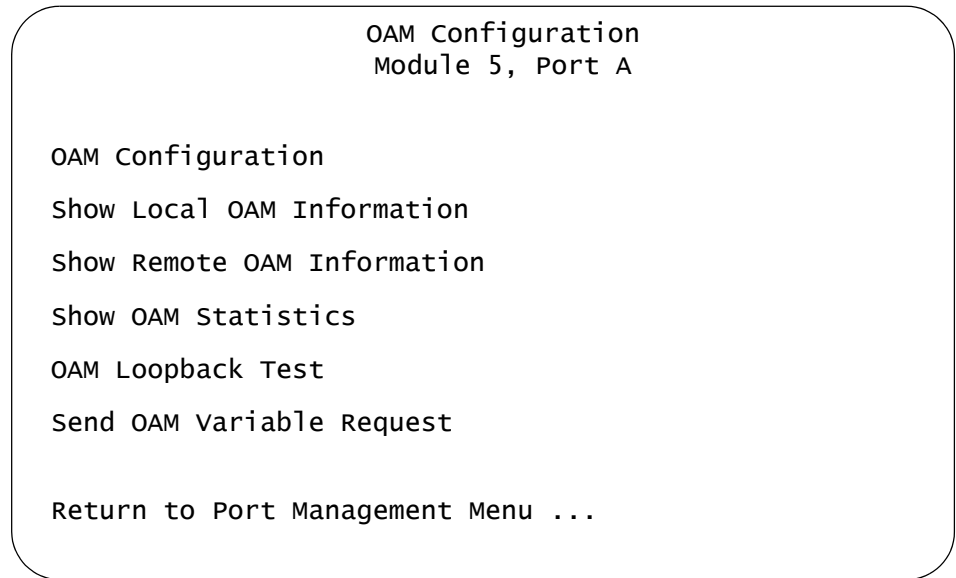


Figure 39. OAM Configuration Menu

- From the OAM Configuration Menu, select the **OAM Configuration** sub-menu.

The OAM Configuration Sub-Menu, as shown in Figure 40, is displayed.

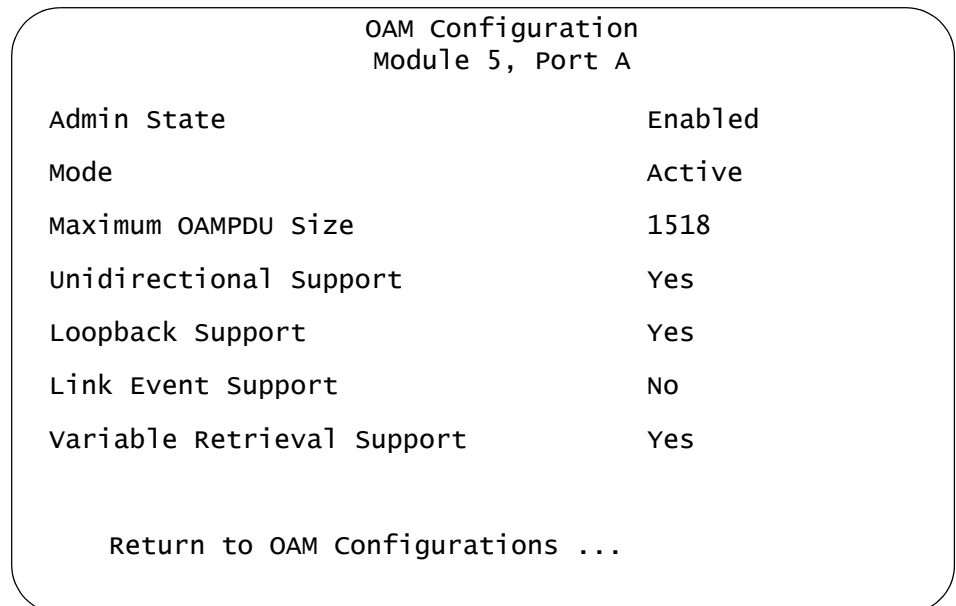


Figure 40. OAM Configuration Sub-Menu

The OAM Configuration Menu items and options are described below:

Admin State

Indicates the current status of the OAM administration. Possible values are:

- Enabled* – The OAM administration status is enabled. (default)
- Disabled* – The OAM administration status is disabled.

Mode

Indicates that the OAM sublayer entity is either in Active or Passive mode. Possible values are:

- Passive* – The OAM sublayer entity is configured in Passive mode. (default)
- Active* – The OAM sublayer entity is configured in Active mode.

Note

By default, the card should come up in Passive mode for OAM discovery (as per the IEEE 802.3ah). In order to initiate OAM discovery, the card should change from Passive mode to Active mode by the CPM card within a chassis. Therefore, if a line card is in a chassis with no CPM card, it should come up in Passive mode.

Maximum OAMPDU Size

Indicates an eleven bit value corresponding to the Maximum OAMPDU Size value within the OAMPDU Configuration field in the most recently transmitted OAMPDU. Possible values range from 64 to 1522. The default value is 1518.

Unidirectional Support

Indicates whether or not the selected port is capable of sending OAMPDUs when the receive path is non-operational.

- Yes* – Capable of sending OAMPDUs when the receive path is non-operational. (default)
- No* – Not capable of sending OAMPDUs when the receive path is non-operational.

Loopback Support

Indicates whether or not the selected port supports OAM loopback.

- Yes* – Supports OAM loopback mode. (default)
- No* – Does not support OAM loopback mode.

Link Event Support

Indicates whether or not the selected port supports interpreting Link Events.

- Yes* – Supports interpreting Link Events.
- No* – Does not support interpreting Link Events. (No)

Variable Retrieval Support

Indicates whether or not the chassis supports sending Variable Response OAMPDUs.

- Yes* – Supports sending Variable Response OAMPDUs. (default)
 - No* – Does not support sending Variable Response OAMPDUs.
8. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Displaying OAM Information and Statistics

This section contains the procedures on how to display the OAM information and statistics on the local module.

Displaying Local OAM Information

To display the status on the local OAM, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 2 on page 91, is displayed.

2. Select a line card on which you want to configure.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 4 on page 92, is displayed.

4. Select the port that you want to show information of the OAM operations on.
5. Press **<Return>**.

The Port Management Menu, as shown in Figure 6 on page 92, is displayed.

6. From the Port Management Menu, select **OAM Configurations**.

The OAM Configuration Menu, as shown in Figure 7 on page 93, is displayed.

7. From the OAM Configuration Menu, select the **Show Local OAM Information** Menu.

The Show Local OAM Information Menu, as shown in Figure , is displayed.

Show Local OAM Information Module 5, Port A	
Line Card Operation Mode	OAM Visible Mode
Operation Status	Operational
Mux State	Forward
Parser State	Forward
Local Discovering	Yes
Local Stable	No
Remote Discovering	No
Remote Stable	No
Critical Event	No
Dying Gasp	No
Link Fault	No
OAM Version	0x01
Config Revision	0x0000
Vendor Information	0x00160001
Vendor OUI	00-30-84
Loopback State	None
In Loopback Test	No
Return to OAM Configurations ...	

For more information on the OAMPDU types, refer to “OAMPDU Types” on page 89.

The Show Local OAM Information Menu items and options are described below:

Line Card Operation Mode

Indicates whether the selected port is configuring as OAM visible or bypass mode.

- ❑ *OAM Bypass Mode* – In this mode, the line card receives OAMPDU packets, but forwards them onto the other port. This allows Converteon to be used in a network where the Converteon chassis is not part of the IEEE802.3ah end points. (i.e. in this mode, the OAM function of the line card is disabled). To configure as OAM bypass mode, the module will pass all OAMPDUs whose vendor OUI is not Allied Telesyn.
- ❑ *OAM Visible Mode* – In this mode, the line card does respond to OAMPDU packets. In an unmanaged chassis, the line card will be in passive mode. In a managed chassis, the line card can either be in passive or active mode depending on how it is software configured. For detailed information, refer to “OAM Active and Passive Mode Behaviors” on page 89. To configure as OAM visible mode, the module will respond to all OAMPDUs.(default)

Operation Status

Indicates the OAM operational status. Possible values are:

- ❑ *Disabled* – The OAM operation has been disabled.
- ❑ *Passive Wait* – A station configured in Passive mode waits until receiving information OAMPDUS with Local Information TLVs before sending any Information OAMPDU with Local Information TLVs. By waiting until first receiving an Information OAMPDU with the Local Information.
- ❑ *Active Send Local* – A station configured in Active mode sends Information OAMPDUs that only contain the Local Information TLV. While in this state, the local station waits for Information OAMPDUs received from the remote station.
- ❑ *Send Local and Remote* – The flow of frames is generated within the local and remote stations and across the link during loopback.
- ❑ *OAM Peering Locally Rejected* – The configuration of the peer OAM entity has been rejected by the remote station.
- ❑ *OAM Peering Remotely Rejected* – The configuration of the peer OAM entity has been rejected by the local station.
- ❑ *Operational* – The OAM operation is in operational mode. (default)

Mux State

Governs the flow of frames from the MAC Client through the multiplexer function. Possible values are:

- Forward* – Multiplexer passes MAC Client frames to subordinate sublayer. (default)
- Discard* – Multiplexer discards MAC Client frames.

Parser State

Indicates the state of the parser function in the OAM peer as reflected in the latest OAMPDU. This value is changed based on loopback actions by either the local or remote station. Possible values are:

- Forward* – Parser passes received non-OAMPDUs to superior sublayer. (default)
- Loopback* – Parser passes received non-OAMPDUs to Multiplexer during remote loopback test.
- Discard* – Parser discards received non-OAMPDUs.

Local Discovering

Indicates the local station can accept or reject the configuration of the peer OAM entity.

- Yes* – Local station accepts the configuration of the peer OAM entity. (default)
- No* – Local station rejects the configuration of the peer OAM entity.

Local Stable

Indicates local OAM Client acknowledgement of and satisfaction with remote OAM state information.

- Yes* – Indicates that the selected port has seen and is satisfied with remote state information.
- No* – Indicates that the selected port either has not seen or is not satisfied with remote state information. (default)

Remote Discovering

Indicates the remote station can accept or reject the configuration of the peer OAM entity.

- Yes* – Remote station accepts the configuration of the peer OAM entity.
- No* – Remote station rejects the configuration of the peer OAM entity. (default)

Remote Stable

Indicates remote OAM Client acknowledgment of and satisfaction with local OAM state information. Possible values are:

- Yes* – Indicates that the selected port has seen and is satisfied with local state information.
- No* – Indicates that the selected port either has not seen or is not satisfied with local state information. (default)

Critical Event

Indicates a severe error condition that does not result in a complete reset or reboot by the peer entity.

- Yes* – A severe error condition has occurred.
- No* – No severe error condition has occurred. (default)

Dying Gasp

Indicates an unrecoverable failure condition has occurred when an equipment is about to be reset, reboot, or otherwise having a power failure.

- Yes* – An unrecoverable local failure condition has occurred.
- No* – No unrecoverable local failure condition has occurred. (default)

Link Fault

Indicates the PHY has determined a fault has occurred in the receive direction of the local port.

- Yes* – A link fault has occurred.
- No* – No link fault has occurred. (default)

OAM Version

Indicates the version supported by the DTE. This field contains the value "0x01" to claim compliance with Version 1 of this protocol.

Config Revision

Indicates the current revision of the Information TLV. The value of this field starts at zero and be incremented each time something in the Information TLV changes. Upon reception of an Information TLV from a peer, an OAM Client may use this field to decide if it needs to be processed (an Information TLV that is identical to the previous Information TLV doesn't need to be parsed as nothing in it has changed).

Vendor Information

Indicates the 32-bit identifier that may be used to differentiate a vendor's product models/versions.

Vendor OUI

Indicates the vendor's 24-bit Organizationally Unique Identifier (OUI).

Loopback State

Indicates the current loopback status of the link. This status is determined by a combination of the local parser and the multiplexer states, as well as by the actions of the local OAM Client.

- None* – No loopback initiated. (default)
- Initiating Loopback* – The remote loopback has been initiated. The local MAC Client stops sending data frames to the remote station and the local OAM Client sets its action parameter to DISCARD. The local OAM Client sends a Loopback Control OAMPDU with a non-zero loopback time.
- Remote Loopback* – This remote loopback allows the users to test the link of the remote equipment. From the remote equipment, every data frame received is transmitted back on that same port except for the OAMPDUs and pause frames. The loopback command is acknowledged by responding with an information OAMPDU with the loopback state indicated in the state field. OAMPDUs continue to be exchanged during loopback mode, only data frames are looped back.
- Terminating Loopback* – When the local station wishes to end the OAM loopback test, the local MAC Client stops sending frames. The local OAM Client then sends a Loopback Control OAMPDU with a zero loopback timer.
- Local Loopback* – This local loopback allows the users to test the link through an internal loop in the local equipment without physically connecting the transmit port to the receive port. In local loopback, data frames are transmitted as normal through the transmit side of the chassis. Data frames received are replaced with the data frames being transmitted.

In Loopback Test

Indicates that the selected port is currently running loopback test.

- Yes* – Loopback test is currently running on the selected port.
 - No* – Loopback test is not running on the selected port. (default)
8. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Displaying Remote OAM Information

To display the status on the remote OAM, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 2 on page 91, is displayed.

2. Select a line card on which you want to configure.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 4 on page 92, is displayed.

4. Select the port that you want to configure the OAM operations on.
5. Press **<Return>**.

The Port Management Menu, as shown in Figure 6 on page 92, is displayed.

6. From the Port Management Menu, select **OAM Configurations**.

The OAM Configuration Menu, as shown in Figure 7 on page 93, is displayed.

7. From the OAM Configuration Menu, select the **Show Remote OAM Information** Menu.

The Show Remote OAM Information Menu, as shown in Figure , is displayed.

Show Remote OAM Information			
Module = 5, Port = 1			
MAC Address	00:0c:46:9a:21:c9	Mux State	Forward
Parser State	Forward	Local Discovering	Yes
Local Stable	No	Remote Discovering	No
Remote Stable	No	Critical Event	No
Dying Gasp	No	Link Fault	No
OAM Version	0x01	Config Revision	0x0003
Vendor Info	0x00160001	Vendor OUI	00-30-84
Mode	Active	Max OAMPDU Size	1518
Loopback Support	Yes	Event Support	No
Variable Support	Yes	Unidirect Support	Yes
Return to OAM Configurations ...			

Displaying OAM Statistics

To display the OAM statistics, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 2 on page 91, is displayed.

2. Select a line card on which you want to configure.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 4 on page 92, is displayed.

4. Select the port that you want to configure the OAM operations on.
5. Press **<Return>**.

The Port Management Menu, as shown in Figure 6 on page 92, is displayed.

6. From the Port Management Menu, select **OAM Configurations**.

The OAM Configuration Menu, as shown in Figure 7 on page 93, is displayed.

7. From the OAM Configuration Menu, select the **Show OAM Statistics** Menu.

The Show OAM Statistics Menu, as shown in Figure , is displayed.

```
                Show OAM Statistics
                Module = 5, Port = 1

Tx OAMPDUS                70917
Rx OAMPDUS                70918
Tx Information OAMPDUS    70917
Rx Information OAMPDUS    70918
Tx Event OAMPDUS         0
Rx Unique Event OAMPDUS  0
Rx Duplicate Event OAMPDUS 0
Tx Loopback Control OAMPDUS 0
Rx Loopback Control OAMPDUS 0
Tx Variable Request OAMPDUS 0
Rx Variable Request OAMPDUS 0
Tx Variable Response OAMPDUS 0
Rx Variable Response OAMPDUS 0
Tx Organizational Specific OAMPDUS 0
Rx Organizational Specific OAMPDUS 0
Rx Unsupported OAMPDUS    0

                Return to OAM Configurations ...
```

For more information on the OAMPDUs listed in the Show OAM Statistics Menu, refer to “OAMPDU Types” on page 89.

8. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

OAM Loopback Test

This section contains the procedures on how to manage the OAM loopback test.

Enabling or Disabling Remote Loopback Test

To enable or disable the OAM remote loopback test, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 2 on page 91, is displayed.

2. Select a line card on which you want to configure.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 4 on page 92, is displayed.

4. Select the port that you want to configure the OAM operations on.
5. Press **<Return>**.

The Port Management Menu, as shown in Figure 6 on page 92, is displayed.

6. From the Port Management Menu, select **OAM Configurations**.

The OAM Configuration Menu, as shown in Figure 7 on page 93, is displayed.

7. From the OAM Configuration Menu, select the **OAM Loopback Test** Menu.

8. The OAM Loopback Test Menu, as shown in Figure 41, is displayed.

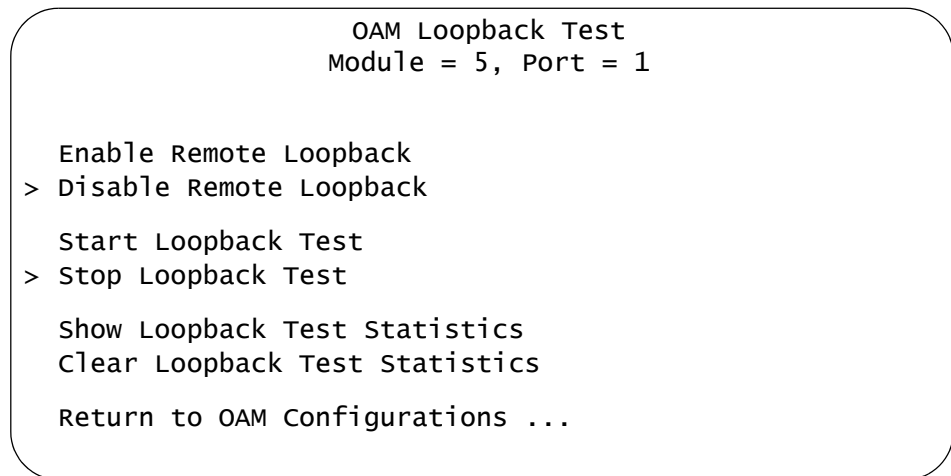


Figure 41. OAM Loopback Test Menu

9. From the OAM Loopback Test Menu, select **Enable Remote Loopback** to enable the remote loopback, or select **Disable Remote Loopback** to disable the remote loopback test. The default is disabled.

When remote loopback is enabled, the local MAC Client stops sending data frames to the remote station and the local OAM Client sets its action parameter to DISCARD.

10. Press **<Esc>** or select the “**Return to ...**” option at the bottom of the menu, to save the settings and return to the previous menu.

Starting or Stopping Loopback Test

To start or to terminate the OAM loopback test, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 2 on page 91, is displayed.

2. Select a line card on which you want to configure.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 4 on page 92, is displayed.

4. Select the port that you want to configure the OAM operations on.
5. Press **<Return>**.

The Port Management Menu, as shown in Figure 6 on page 92, is displayed.

6. From the Port Management Menu, select **OAM Configurations**.

The OAM Configuration Menu, as shown in Figure 7 on page 93, is displayed.

7. From the OAM Configuration Menu, select the **OAM Loopback Test Menu**.
8. The OAM Loopback Test Menu, as shown in Figure 41 on page 106, is displayed.
9. From the OAM Loopback Test Menu, select **Start Loopback Test** to initiate loopback test, or select **Stop Loopback Test** to terminate remote loopback with an OAM peer. The default is terminated.
10. Press **<Esc>** or select the "**Return to ...**" option at the bottom of the menu, to save the settings and return to the previous menu.

Displaying or Clearing Loopback Test Statistics

To display or to clear the OAM loopback test statistics, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 2 on page 91, is displayed.

2. Select a line card on which you want to configure.
3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 4 on page 92, is displayed.

4. Select the port that you want to configure the OAM operations on.
5. Press **<Return>**.

The Port Management Menu, as shown in Figure 6 on page 92, is displayed.

6. From the Port Management Menu, select **OAM Configurations**.

The OAM Configuration Menu, as shown in Figure 7 on page 93, is displayed.

7. From the OAM Configuration Menu, select the **OAM Loopback Test Menu**.

8. The OAM Loopback Test Menu, as shown in Figure 41 on page 106, is displayed.
9. From the OAM Loopback Test Menu, select **Show Loopback Test Statistics** to display the current loopback test statistics, or select **Clear Loopback Test Statistics** to clear all current loopback test statistics.

If Show Loopback Test Statistics is selected, the Show Loopback Test Menu, as shown in t, is displayed showing the current loopback test statistics.

Show Loopback Test Statistics	
Module = 5, Port = 1	
Number of Seconds	0
Number of Tx Frames	0
Number of Rx Frames	0
Number of Rx Errored Frames	0
Number of Tx Bytes	0
Number of Rx Bytes	0
Number of Rx Errored Bytes	0
Number of Tx Bits	0
Number of Rx Bits	0
Number of Rx Errored Bits	0

10. Press **<Esc>** or select the **“Return to ...”** option at the bottom of the menu, to save the settings and return to the previous menu.

Sending OAM Variable Request

To send OAM variable request, perform the following procedure:

1. From the Main Menu, select **Module Status and Configuration**.

The Module Status and Configuration Menu, as shown in Figure 2 on page 91, is displayed.

2. Select a line card on which you want to configure.

3. Press **<Return>**.

The Module Configuration Menu, as shown in Figure 4 on page 92, is displayed.

4. Select the port that you want to configure the OAM operations on.

5. Press **<Return>**.

The Port Management Menu, as shown in Figure 6 on page 92, is displayed.

6. From the Port Management Menu, select **OAM Configurations**.

The OAM Configuration Menu, as shown in Figure 7, is displayed.

7. From the OAM Configuration Menu, select the **Send OAM Variable Request** Menu.

The window shown in Figure 10, is displayed.

```

Converteon
Enter branch number [0 - 255] -
  
```

8. Enter the specific package or object being returned. The default is 1.

The window shown in Figure 10, is displayed.

```

Converteon
Enter leaf number [0 - 255] ->
  
```

9. Enter a number of the specific package or object being returned. The default is 1.

10. Press **<Esc>** or hit any key to continue.

Chapter 9

File Downloads and Uploads

This chapter describes how to download AT-S70 software image and configuration updates and contains the following sections:

- ❑ “File Uploads and Downloads Overview” on page 111
- ❑ “File Download Guidelines” on page 112
- ❑ “Downloading Software Image Files” on page 116
- ❑ “Downloading Line Card Image Files” on page 121
- ❑ “Downloading and Uploading Configuration File” on page 125
- ❑ “Uploading Configuration Files” on page 127

Note the following before you begin the procedure:

- ❑ You can download a new AT-S70 image file onto the chassis from either a local or Telnet management session.
- ❑ You can use Xmodem or TFTP to download the image file from a local management session.
- ❑ You must use TFTP to download the image file from a Telnet management session.
- ❑ To use TFTP, there must be a node on your network that contains the TFTP server software, and the new AT-S70 image file must be stored on that node.
- ❑ If you are using TFTP, you should start the TFTP server before you begin the download procedure.
- ❑ Installing a new AT-S70 software image onto the chassis does not change the current configuration; for example, its IP address, subnet mask, and name (if already assigned).

Note

The chassis stops forwarding Ethernet traffic after it has downloaded the image file and begun to initialize the software. Some network traffic may be lost.

The following procedures assume that you have already obtained the new software from Allied Telesyn and stored it on the management workstation from which you will be performing the procedure, or on the TFTP server.

File Uploads and Downloads Overview

The firmware on the Converteon chassis consists of the following three parts:

- ❑ AT-S70 management software
This is the operating software for the chassis.
- ❑ AT-S70 bootloader
This code initially controls the chassis whenever you power ON or reset the chassis.
- ❑ System configuration
This contains the settings for the different system parameters.

Note

In the AT-S70, the management software and bootloader are combined into one image file.

You can use the AT-S70 management software to download a new version of the management software and bootloader onto a chassis so that it always has the latest software.

Note

A configuration file for a Converteon chassis cannot be edited with a text editor.

The methods for uploading and downloading files from a chassis are described below:

- ❑ Local Management Session
This method uses a local management session to upload and download a file onto a chassis. This method supports Xmodem and TFTP. You can use this method on any type of Converteon chassis.
- ❑ Remote Management Session
Another method is from a remote management session of a chassis. This can be a chassis you accessed directly through a Telnet management session. This method uses TFTP.

Note

Occasionally, Allied Telesyn will update or revise the AT-S70 software. For more information on how to obtain the latest version of the software updates, refer to “Obtaining Management Software Updates” on page 13.

File Download Guidelines

This sections covers the general guidelines that apply to downloading files from both local and remote management sessions. Refer to the sections below for guidelines apply to each management session. The general file downloading are:

- ❑ If you are downloading a new AT-S70 software image, the current configuration settings of the chassis (for instance, IP address and port security settings) are not changed.
- ❑ If you are downloading a new configuration file, the current configuration settings of a chassis are overwritten by the configuration settings contained in the file. This includes the IP address, subnet mask, and DHCP status.
- ❑ A configuration file should only be downloaded onto a chassis of the same model from which the configuration file originated (for example, AT-CV5000 to AT-CV5000). It is not recommended that you download a configuration file onto a chassis with a different model (for example, AT-CV5000 and AT-CV1200). Undesired system behavior may result.



Caution

Downloading a new AT-S70 image file or configuration file will cause a chassis to reset. Some network traffic may be lost. However, uploading a configuration file will NOT interrupt traffic.

Downloading Files from a Local Management Session Guidelines

This section contains the guidelines for downloading a new AT-S70 software image file or configuration file onto a chassis from a local management session.

Note

To download a file through a Telnet management session, refer to “Downloading Files from a Remote Management Session Guidelines” on page 113.

- ❑ All chassis models in the Converteon Series use the same management software image.
- ❑ You can use Xmodem or TFTP.

Downloading Files from a Remote Management Session Guidelines

This section contains the procedure for downloading a new AT-S70 software image file or configuration file onto a chassis from a remote management session. The remote unit can be a chassis where you started a Telnet management session.

Here are guidelines that apply to downloading files from a local management session:

- ❑ You must use TFTP to remotely download a file.
- ❑ There must be a node on your network that contains the TFTP server software. The AT-S70 image file or configuration file to be downloaded must be stored on the computer or a terminal connected to the console port on the AT-CV5M01 CPM card.
- ❑ You must start the TFTP server before you begin the download procedure.
- ❑ The chassis where you are downloading the file must have an IP address and subnet mask.

Downloading Files using Hilgraeve HyperTerminal

To perform the file transfer using the Hilgraeve HyperTerminal.

1. From the HyperTerminal main window, select the **Transfer** menu.
2. Select **Send File** from the pull-down menu, as shown in Figure 42.

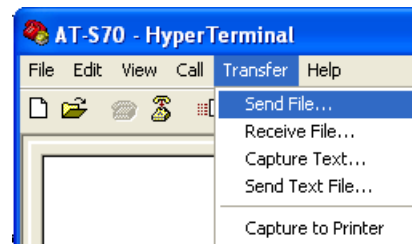


Figure 42. HyperTerminal Window

The Send File window, as shown in Figure 37, is displayed.

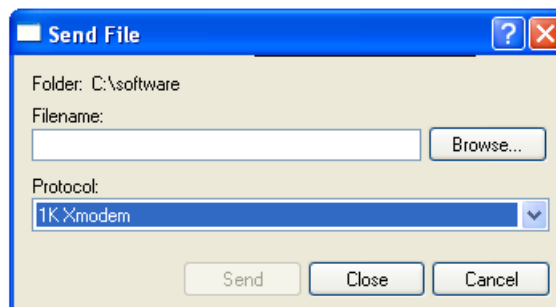


Figure 43. Send File Window

3. Click the Browse button to select the file to be downloaded onto the chassis.

Note

There are two different image files used with the Converteon products, the image file used for the chassis is “**ATS70.img**” and the image file used for the line cards is “**ATS73.img**”.

4. In the Protocol field, select the transfer protocol as either Xmodem or 1K Xmodem for a faster download.
9. Click **Send**.

The software immediately begins downloading onto the chassis. The Xmodem File Send window, as shown in Figure 44, displays the current status of the software download. The download process takes several minutes to complete.

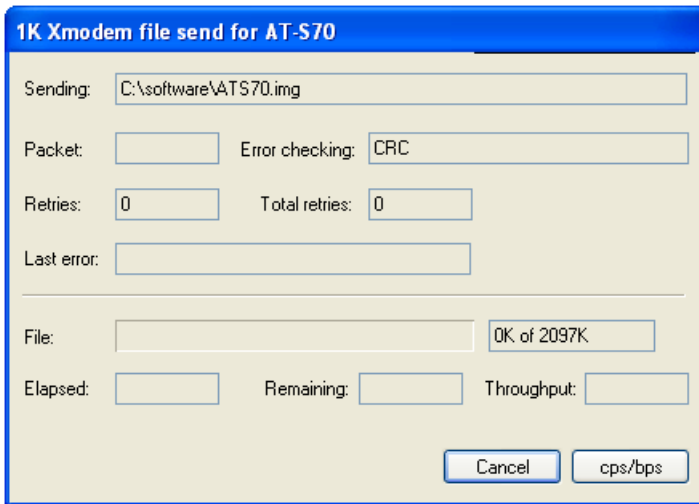


Figure 44. Xmodem File Send Window

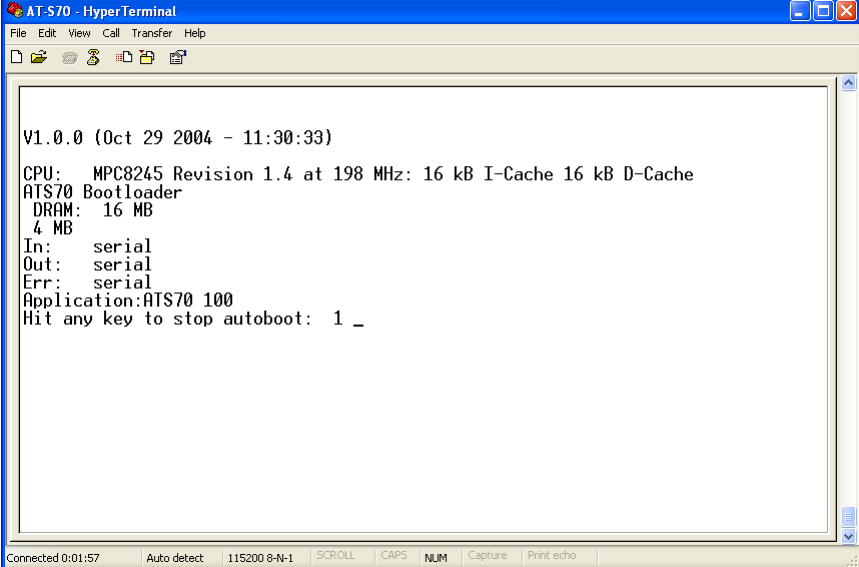
The download begins. If you are downloading a configuration file, the chassis automatically resets once the download is complete. Some network traffic may be lost during the system reset.



Caution

When downloading a chassis image file, the chassis must initialize it by decompressing it and writing it to FLASH. This requires several minutes to complete. Do not reset or power off the unit while it is decompressing the file.

Once the download is complete, it returns you to the HyperTerminal window with the status message as shown in Figure 45.



The screenshot shows a HyperTerminal window titled "AT-S70 - HyperTerminal". The window contains the following text:

```
V1.0.0 (Oct 29 2004 - 11:30:33)
CPU: MPC8245 Revision 1.4 at 198 MHz: 16 kB I-Cache 16 kB D-Cache
ATS70 Bootloader
DRAM: 16 MB
4 MB
In: serial
Out: serial
Err: serial
Application:ATS70 100
Hit any key to stop autoboot: 1 _
```

The status bar at the bottom of the window shows "Connected 0:01:57", "Auto detect", "115200 8-N-1", "SCROLL", "CAPS", "NUM", "Capture", and "Print echo".

Figure 45. Download Complete Message

5. Press **<Return>** twice to reset the chassis. Some network traffic may be during the system reset.

The download process is complete once the chassis has completed its reset. The new AT-S70 image file or configuration file is now active on the chassis.

6. To continue managing the chassis, you must re-establish your management session.

Downloading Software Image Files

The software image file is provided in a self-extracting compressed file which also contains several other files. The software image file has an .IMG extension. This is the one to be used in the upgrade procedures.

Note

There are two different image files used with the Converteon products, the image file used for the chassis is “**ATS70.img**” and the image file used for the line cards is “**ATS73.img**”.



Caution

Downloading a new AT-S70 image file or configuration file will cause a chassis to reset. Some network traffic may be lost.

Downloading Software Image File Through TFTP

To download a new AT-S70 software image onto the chassis using TFTP, perform the following procedure:

1. Establish a local management session on the chassis where you intend to download the new management software.
2. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 46, is displayed.

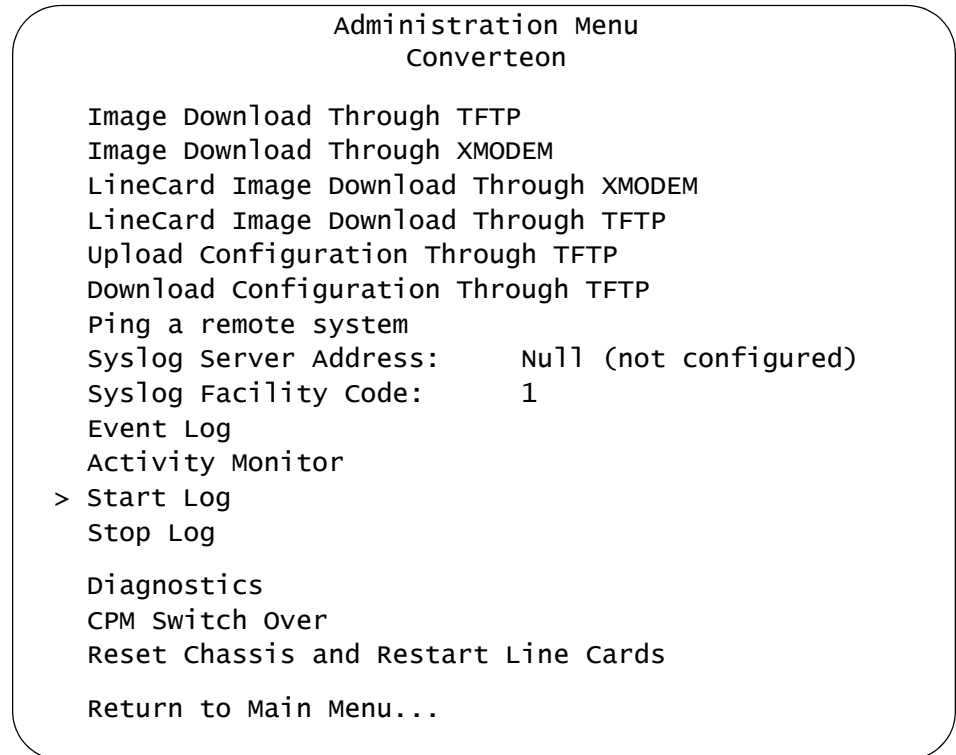


Figure 46. Administration Menu

3. From the Administration Menu, select **Image Download Through TFTP**.

The following screen is displayed, as shown in Figure 47.

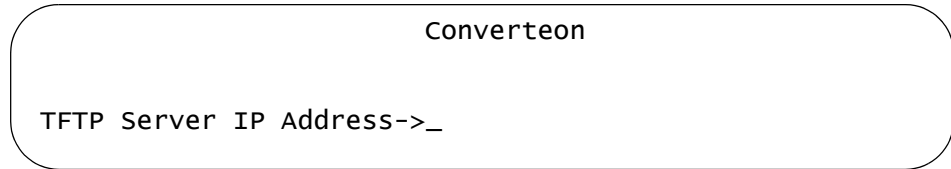


Figure 47. TFTP - Software Image Downloading Window

4. Enter the IP address of the TFTP server.
5. Press **<Return>**.

The following screen is displayed, as shown in Figure 48.

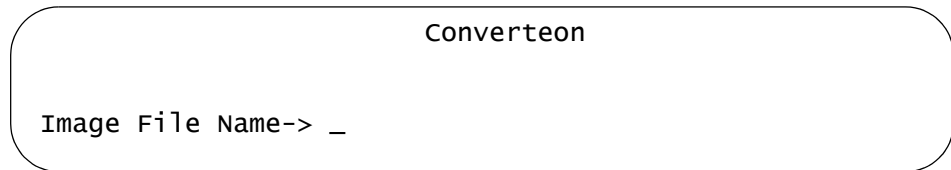


Figure 48. TFTP - Enter Software Image File Name Window

6. Enter the filename of the image file that is to be stored as on the TFTP server.
7. Press **<Return>**.

Once the filename has been specified, the following screen, as shown in Figure 49, is displayed.

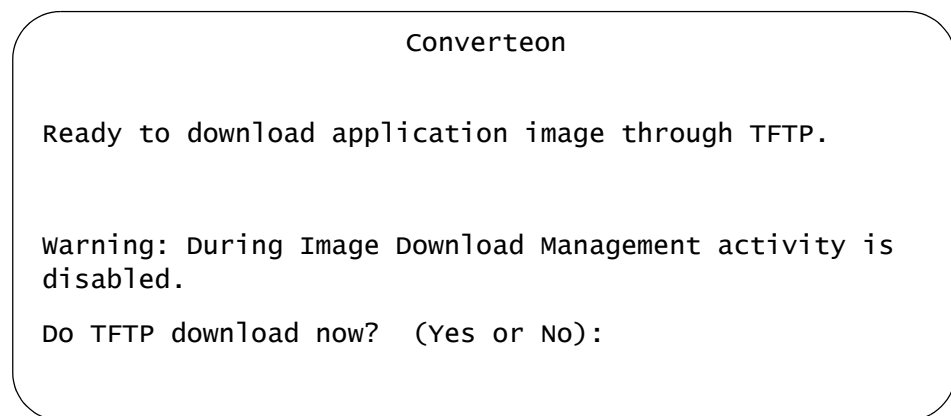


Figure 49. TFTP - Software Image Download Confirmation Window

8. Type **Y** for to start the download.

The following screen is displayed, as shown in Figure 50.

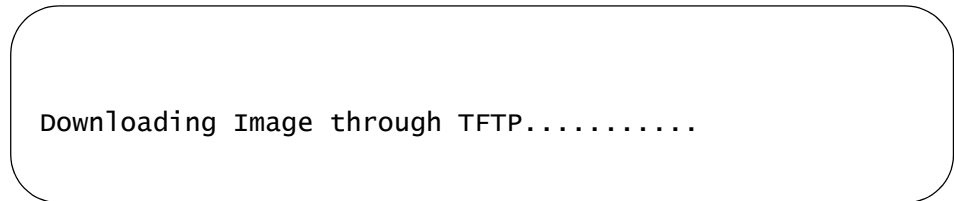


Figure 50. TFTP - Software Image Downloading Window

9. Begin the image file transfer.

After the system has downloaded the new image, it reboots the system and begins to initialize the software. The system does not forward any network traffic during the initialization process.

Note

Wait until the software is initialized before you attempt to reestablish your management session.

**Downloading
Software Image
File Through
Xmodem**

To download a new AT-S70 software image onto a chassis from a local management session using Xmodem, perform the following procedure:

1. Establish a local management session on the chassis where you intend to download the new management software.
2. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 46 on page 117, is displayed.

3. From the Administration Menu, select **Image Download Through XMODEM**.

The following screen is displayed, as shown in Figure 51.

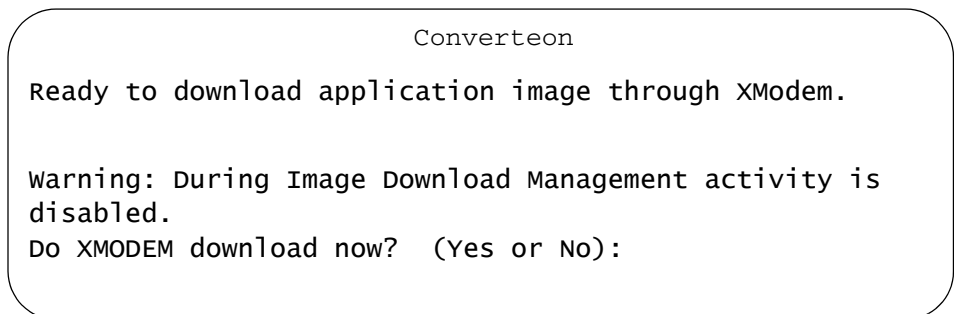


Figure 51. XModem - Software Image Download Window

4. Enter **Y** to start the download process or **N** to cancel.

If you enter **Y**, the following screen is displayed, as shown in Figure 52.

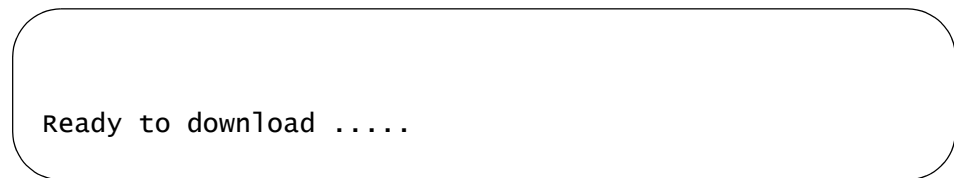


Figure 52. XModem - Software Image Downloading Window

5. Begin the image file transfer of the new management software image.

Note

The transfer protocol must be Xmodem or 1K Xmodem.

6. Proceed to the procedure in “Downloading Files using Hilgraeve HyperTerminal” on page 113.

Downloading Line Card Image Files

Downloading Line Card Image File Through Xmodem

To download a new line card image file onto a chassis from a local management session using Xmodem, perform the following procedure:

1. Start a local management session.
2. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 46 on page 117, is displayed.

3. From the Administration Menu, select **Linecard Image Download Through XMODEM**.

The following screen is displayed, as shown in Figure 53.

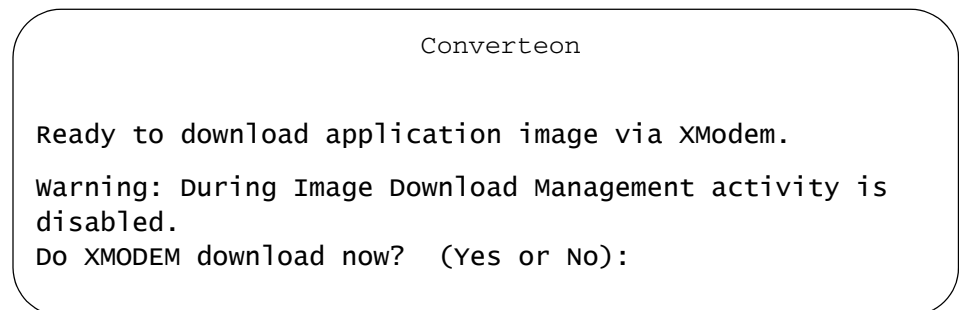


Figure 53. XModem - Line Card Image Download Window

4. Enter **Y** to start the download process or **N** to cancel.
5. If you enter **Y**, the following screen is displayed, as shown in Figure 52.

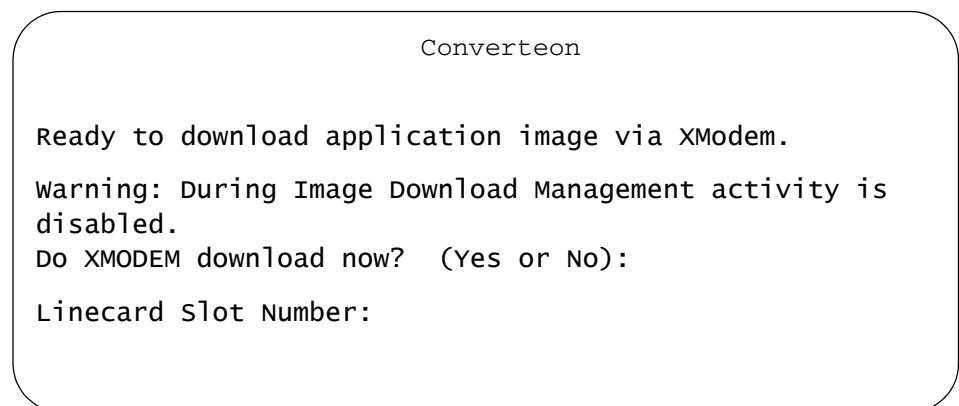


Figure 54. XModem - Line Card Image Slot Number Window

6. Enter the slot number that you wish to download the image file to.
7. Press **<Return>**.

A message is displayed, as shown in Figure 55.



Figure 55. XModem - Line Card Image Downloading Window

8. Begin the image file transfer of the new management software image.

Note

The transfer protocol must be Xmodem or 1K Xmodem.

9. Proceed to the procedure in the “Downloading Files using Hilgraeve HyperTerminal” section below.

Downloading Line Card Image File Through TFTP

To download a new line card image file onto a chassis from a local management session using Xmodem, perform the following procedure:

1. Start a local management session.
2. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 46 on page 117, is displayed.

3. From the Administration Menu, select **Linecard Image Download Through TFTP**.

The following screen is displayed, as shown in Figure 56.

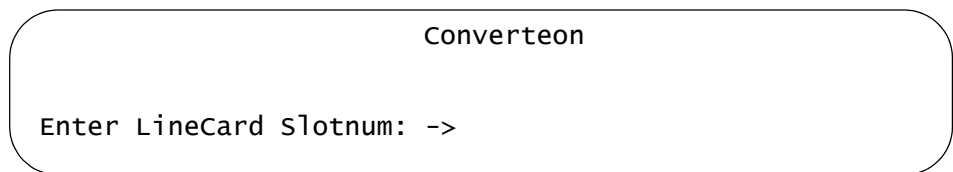


Figure 56. TFTP - Line Card Image Download Window

4. Enter the slot number of the line card you wish to download the image file to.
5. Press **<Return>**.

The following screen is displayed, as shown in Figure 57.

Converteon

TFTP Server IP Address->

Figure 57. TFTP - Enter Line Card Image File Name Window

6. Enter the IP address of the TFTP server.
7. Press **<Return>**.

The following screen is displayed, as shown in Figure 58.

Converteon

Image File Name->

Figure 58. TFTP - Enter Line Card Image File Name Window

8. Enter the filename of the line card image file that is to be stored as on the TFTP server.
9. Press **<Return>**.

Once the filename has been specified, the following screen, as shown in Figure 49, is displayed.

Converteon

Ready to download application image through TFTP.

Warning: During Image Download Management activity is disabled.

Do TFTP download now? (Yes or No):

Figure 59. TFTP - Line Card Image Download Confirmation Window

10. Type **Y** for to start the download.

The following screen is displayed, as shown in Figure 60.

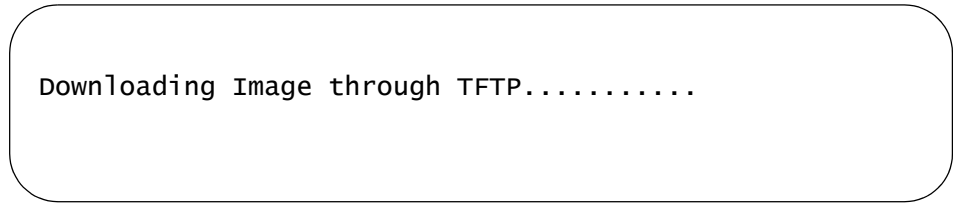


Figure 60. TFTP - Line Card Image Downloading Window

11. Begin the image file transfer.

After the system has downloaded the new image, it reboots the system and begins to initialize the software. The system does not forward any network traffic during the initialization process.

Note

Wait until the software is initialized before you attempt to reestablish your management session.

Downloading and Uploading Configuration File

When an AT-CV5M01 CPM is replaced, all the parameter settings saved on the CPM card are gone. Therefore, to keep the current parameter settings, make sure to upload the configuration file onto your computer or laptop before replacing the AT-CV5M01 CPM card. Once a new AT-CV5M01 CPM card is installed, you can then download the configuration file back onto the new CPM card.

Downloading Configuration File

To download a new AT-S70 software configuration file onto a chassis from a local management session using TFTP, perform the following procedure:



Caution

Downloading a new AT-S70 image file or configuration file will cause a chassis to reset. Some network traffic may be lost.

1. Establish a local management session on the chassis where you intend to download the new management software.
2. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 46 on page 117, is displayed.

3. From the Administration Menu, select **Download Configuration Through TFTP**.

The following screen is displayed, as shown in Figure 61.

Figure 61. TFTP - Configuration File Download Window

4. Enter the IP address of the TFTP server.
5. Press **<Return>**.

The following screen is displayed, as shown in Figure 62.

Figure 62. TFTP - Enter Configuration File Name Window

6. Enter the filename of the configuration file that is to be stored as on the TFTP server.
7. Press **<Return>**.

Once the filename has been specified, the following screen, as shown in Figure 63, is displayed.

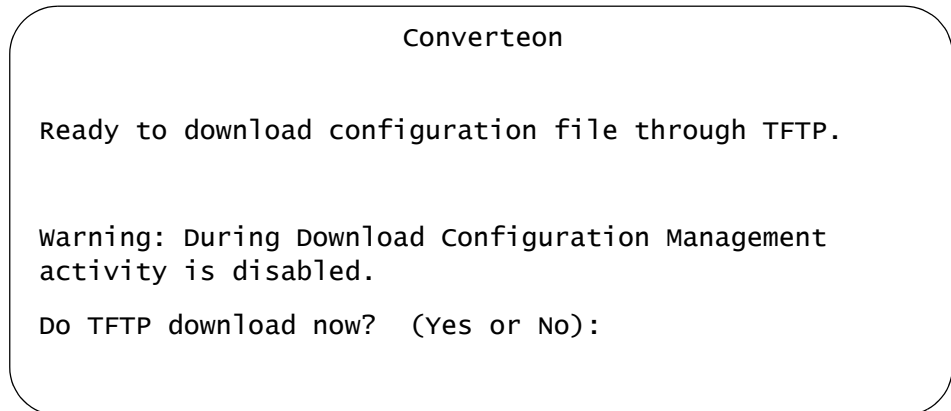


Figure 63. TFTP - Configuration File Download Confirmation Window

8. Type **Y** for to start the download.

The following screen is displayed, as shown in Figure 64.

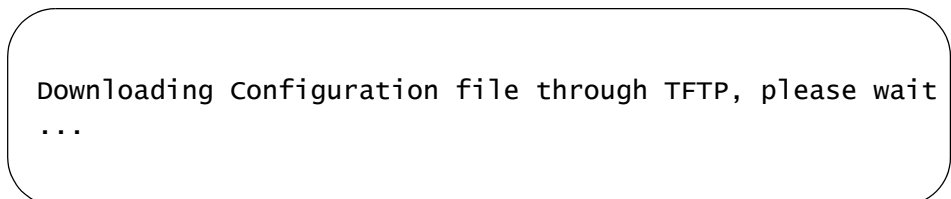


Figure 64. TFTP - Configuration File Downloading Window

9. Begin the configuration file transfer.

After the system has downloaded the new configuration file, it reboots the system and begins to initialize the software. The system does not forward any network traffic during the initialization process.

Note

Wait until the software is initialized before you attempt to reestablish your management session.

Uploading Configuration Files

To upload a new AT-S70 software configuration file onto a chassis from a local management session using TFTP, perform the following procedure:

Note

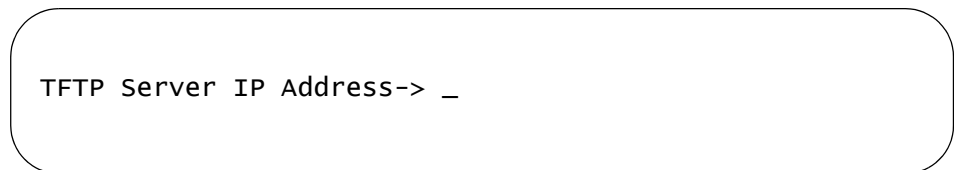
Uploading a configuration file will NOT interrupt traffic.

1. Establish a local management session on the chassis where you intend to download the new management software.
2. From the Main Menu, select **Administration**.

The Administration Menu, as shown in Figure 46 on page 117, is displayed.

3. From the Administration Menu, select **Upload Configuration Through TFTP**.

The following screen is displayed, as shown in Figure 65.

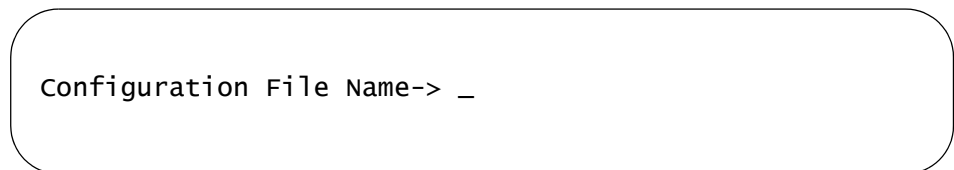


TFTP Server IP Address-> _

Figure 65. TFTP - Upload Configuration File Window

4. Enter the IP address of the TFTP server.
5. Press **<Return>**.

The following screen is displayed, as shown in Figure 66.



Configuration File Name-> _

Figure 66. TFTP - Enter Configuration File Name Window

6. Enter the filename of the configuration file that is to be stored as on the TFTP server.
7. Press **<Return>**.

Once the filename has been specified, the following screen, as shown in Figure 67, is displayed.

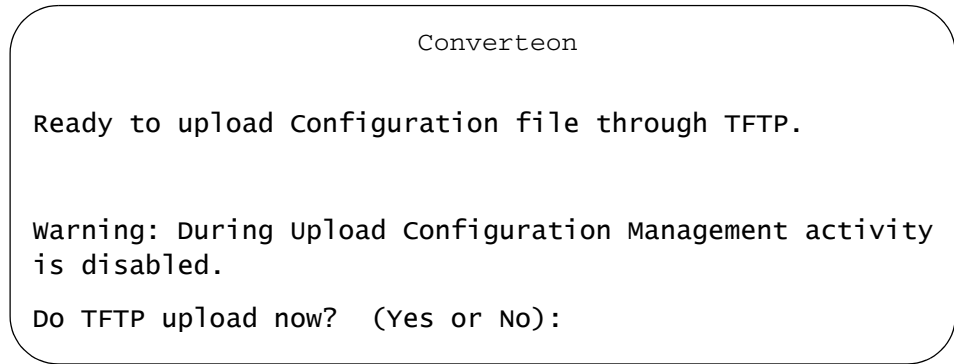


Figure 67. TFTP - Configuration File Upload Confirmation Window

8. Type **Y** for to start the download.

The following screen is displayed, as shown in Figure 68.

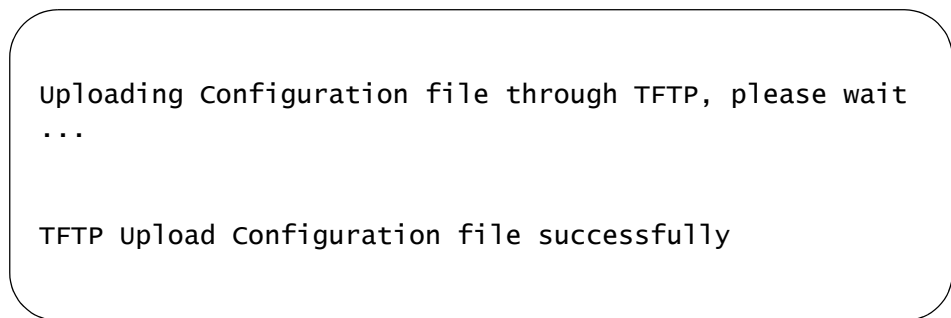


Figure 68. TFTP - Configuration File Uploading Window

9. Begin the image file transfer.

After the system has downloaded the new image, it reboots the system and begins to initialize the software. The system does not forward any network traffic during the initialization process.

Note

Wait until the software is initialized before you attempt to reestablish your management session.

Appendix A

AT-S70 Default Settings

The following lists the AT-S70 factory default settings.

Settings	Default
IP Address	10.0.0.1
Subnet Mask	255.255.252.0
Gateway Address	0.0.0.0
System Name	None
System Contact	None
Community Strings	
Get Community String	public
Set Community String	private
Trap Community String	public
Omega	
Manager Password	friend
Operator Password	operator
Time Out Value	10 minutes
Local Access	Enabled
Remote Access (Telnet)	Enabled
RS232 Port	
Data Rate	115200
Terminal mode	VT-100-compatible / ANSI
Data Bits	8
Stop Bits	1
Parity	None
Flow control	None

Settings	Default
Threshold	
Maximum Temperature Threshold	60

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