



# ATM SWITCH FABRIC MODULE QUICK START GUIDE

For the CoreBuilder™ 9000 Enterprise ATM Switch

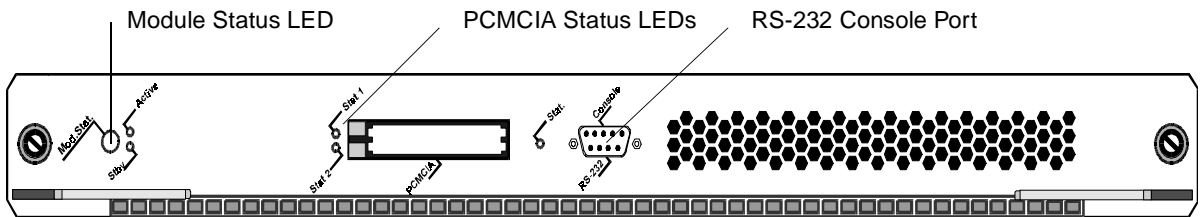
This guide explains how to install a CoreBuilder™ 9000 ATM Switch Fabric Module into a CoreBuilder 9000 chassis, how to power on the system, and how to perform an initial configuration.

## ATM Switch Fabric Module Description

The ATM Switch Fabric Module has a switching capacity of 15 Gbps. The high-performance, line-rate non-blocking ATM Switch Fabric Module features highly integrated ASICs that account for its scalable, leading-edge performance and functionality. The module incorporates on-board ATM control hardware for scaling the performance of Switched Virtual Channel Connections (SVCs).

Figure 1 shows the faceplate of the ATM Switch Fabric Module. Note that, in the figure, the Module is shown on its side; you install it vertically into the CoreBuilder 9000 chassis with the module status LEDs on top.

**Figure 1** ATM Switch Fabric Module Faceplate



The Module Status LED indicates the ATM Switch Fabric Module's status. The dual PCMCIA slot has two indicator LEDs and the Console port has one indicator LED. The PCMCIA slot can hold a 10Base-T Ethernet LAN PC card to support a management Ethernet connection should one be required.

## Audience Description

This guide is intended for the system administrator, network equipment technician, or network manager who is responsible for installing and managing interface modules designed for operation with network hardware, such as, the CoreBuilder 9000 Enterprise ATM Switch. It assumes a working knowledge of network operations and familiarity with communications protocols that are used in networks.

This guide is intended for *trained technical personnel* only. Do not attempt to remove or replace a CoreBuilder 9000 ATM Switch Fabric Module if you have not had the proper training from 3Com. For training information, call 1-800-NET-3COM.

## Safety Precautions

When you handle components in a CoreBuilder 9000 system, be sure that you follow all safety precautions. To avoid electric shocks, burns, or equipment damage, read and follow these warnings:



**WARNING:** Hazardous energy exists within the CoreBuilder system. Use extreme caution when you install, remove or replace the ATM Switch Fabric Module.



**WARNING:** Allow only trained service personnel to install, remove or replace a module.



**WARNING:** Before you open the chassis, always unplug the power cord.



**WARNING:** When the system is on, never insert metal objects such as a screwdriver or a finger with jewelry into open module slots.



**WARNING:** When the system is on, do not touch any connections within the chassis with your hands or fingers. Do not insert metal objects into the backplane.

## ESD Safety Information

Electrostatic Discharge (ESD) can damage components on the system module. ESD, which occurs when the processor is improperly handled, can cause complete or intermittent failures.



**CAUTION:** To prevent ESD-related damage:

- Always wear a ESD wrist strap, ensuring that the strap is firmly secured to your wrist.
- Keep the ATM Switch Fabric Module in its antistatic shielded bag until you are ready to install it.
- When working with CoreBuilder 9000 components, always place the component on the antistatic bag that it was shipped in.

## Handling Precautions

When you handle the ATM Switch Fabric Module, follow these precautions:

- Always handle the Module by the faceplate only.
- Do not touch the components, pins, leads, or solder connections.
- When you insert the Module into the board guides, do not twist or otherwise force the module into the chassis.
- Before you push the board Module into the chassis, make sure that the module ejectors are open.
- When you slide the Module into place, match the upper and lower module guides.

## Précautions de sécurité

Lorsque vous manipulez les éléments du système CoreBuilder 9000, veillez à bien respecter les précautions de sécurité. Pour éviter les décharges électriques, les brûlures, l'incendie ainsi que pour ne pas endommager l'équipement, veuillez lire et respecter les précautions suivantes:



**AVERTISSEMENT:** Le système CoreBuilder 9000 contient une énergie qui peut être dangereuse. Soyez très minutieux lorsque vous installez, ôtez ou remplacez un Module Interface ATM.



**AVERTISSEMENT:** Seul un personnel habilité à le faire peut installer, ôter ou remplacer un Module Interface ATM.



**AVERTISSEMENT:** Lorsque le système CoreBuilder 9000 est sous tension, ne jamais insérer des objets tels que tournevis ni même des doigts portant des bijoux dans les emplacements d'un module ouvert. Lorsque le système est sous tension, ne touchez aucune connexion du châssis avec les mains ou les doigts. Ne pas insérer d'objets métalliques dans la face arrière.



**AVERTISSEMENT:** Ne pas brancher, allumer ou essayer de faire fonctionner un module d'évidence défectueux.



**AVERTISSEMENT:** Pour vous protéger les yeux lors de l'installation du Module d'Interface ATM, respectez les précautions suivantes:

Bien que les LEDs et lasers des communications de données utilisés dans ce produit soient conformes aux normes d'exposition oculaires éventuelle, 3Com vous recommande, comme pour toute lumière vive, de ne pas regarder directement la source de lumière.

### Information sur la prévention de décharges électrostatiques

Les décharges électrostatiques peuvent endommager des éléments du module. Ces décharges, qui surviennent lors d'une manipulation inadéquate du module, peuvent entraîner une défaillance temporaire ou permanente.



**ATTENTION:** Pour éviter des dommages électrostatiques:

- Assurez-vous d'être bien branché à la terre. Utilisez un sous-pied et un tapis relié à la terre ou portez un bracelet mis à la terre et veillez à ce que le contact dermique soit bon. Conservez le module dans un sac antistatique jusqu'à son installation.

### Précautions de manipulation

Respectez les précautions suivantes lorsque vous manipulez le Module Interface ATM:

- Tenez le module par son panneau avant uniquement. Ne pas toucher les éléments, broches, branchements ou soudures. Avant d'insérer le module dans le châssis, assurez-vous que les poignées d'insertion/d'éjection sont ouvertes.
- Lorsque vous faites glisser le module dans le châssis, faites coïncider les rails inférieurs et supérieurs. Ne jamais forcer lorsque vous insérez le module dans les rails.

## Sicherheitsvorkehrungen

Halten Sie beim Umgang mit Modulen des CoreBuilder-9000-Systems unbedingt alle Sicherheitsvorkehrungen ein. Lesen und befolgen Sie folgende Warnungen, um elektrische Schläge, Verbrennungen, Brände oder Materialschäden zu vermeiden:



*Im CoreBuilder-System existieren hohe elektrische Spannungen. Sie sollten deshalb das ATM-Schnittstellen-Modul nur mit äußerster Vorsicht installieren, entfernen oder tauschen.*



*Das ATM-Schnittstellen-Modul darf nur von ausgebildetem Service-Personal installiert, entfernt oder getauscht werden.*



*Führen Sie bei eingeschaltetem CoreBuilder-9000-System niemals Metallgegenstände wie Schraubenzieher oder Schmuck an Fingern in offene Modulschlitze ein. Berühren Sie bei eingeschaltetem System keine Verbindungsstellen in Gerät mit Händen oder Fingern. Setzen Sie keine Metallgegenstände in die Rückwand ein.*



*Versuchen Sie nicht, ein offensichtlich beschädigtes Modul zu installieren oder in Betrieb zu nehmen.*



*Halten Sie sich beim Installieren des ATM-Schnittstellen-Moduls zur Gewährleistung des optischen Sicherheit an folgende Vorkehrung: Obwohl die für die Datenkommunikation verwendeten LEDs und Laser-Dioden die Sicherheitsvorkehrungen für zufälligen Augenkontakt erfüllen, entsprechend wie bei anderen hellen Lichtquellen, empfiehlt 3Com nicht direkt in die Lichtquellen zu blicken.*

## Sicherheitsinformationen für elektrostatische Entladungen

Elektrostatische Entladungen (ESD) können einzelne Baugruppen oder das gesamte Modul beschädigen. ESD können vorkommen, wenn das Modul nicht richtig gehandhabt wird und können eine dauerhafte oder zeitweilige Fehlfunktion bewirken.



**VORSICHT:** Zur Verhütung von Schäden durch ESD:

- *Vergewissern Sie sich, daß Sie richtig geerdet sind. Benutzen Sie ein Fußband und eine geerdete Matte oder tragen Sie ein geerdetes Handgelenkband mit gutem Hautkontakt.*
- *Lassen Sie das Modul bis zur Installation in der Anti-Statik-Tasche.*

## Vorkehrungen beim Umgang mit dem Modul

Beachten Sie folgende Vorkehrungen beim Umgang mit dem ATM-Schnittstellen-Modul:

- Fassen Sie das Modul immer nur an der Frontplatte an.
- Berühren Sie nicht die Baugruppen, Stifte, Leitungen oder Lötverbindungen.
- Vergewissern Sie sich vor dem Einschieben des Modules, daß die beiden Bügel zum Einschieben bzw. Entfernen offen stehen.
- Achten Sie beim Einschieben des Moduls darauf, daß es sich in der oberen und unteren Führungsschiene befindet.
- Achten Sie beim Einschieben des Moduls darauf, daß Sie es nicht verkannten. Schieben Sie das Module nicht mit Gewalt in das Gerät.

### Unpacking Procedures

Use the following procedure when you unpack the ATM Switch Fabric Module:

- 1 Verify that the ATM Switch Fabric Module is the correct model by comparing the model number listed on the side of the shipping carton with the model number that you ordered. (The model number can also be found on the board itself.)
- 2 Remove the Module, in its antistatic bag, from the shipping carton.
- 3 Ensure that the box containing your CoreBuilder 9000 ATM Switch Fabric Module also contains:
  - 10 Mbps Ethernet PC-MCIA card with PC-MCIA to female RJ-45 connector.



*All shipping cartons are reusable. After removing the contents, replace the packing materials and store the shipping carton for future use.*

- 4 Remove the ATM Switch Fabric Module from the antistatic bag and inspect it for damage.

If the module appears to be damaged, replace it in the antistatic bag, return it to the shipping carton, and contact your 3Com Representative.

## Installing the ATM Switch Fabric Module into the Chassis

This section describes how to install the ATM Switch Fabric Module into the CoreBuilder 9000 chassis.

### Installation Equipment

To install the ATM Switch Fabric Module you need:

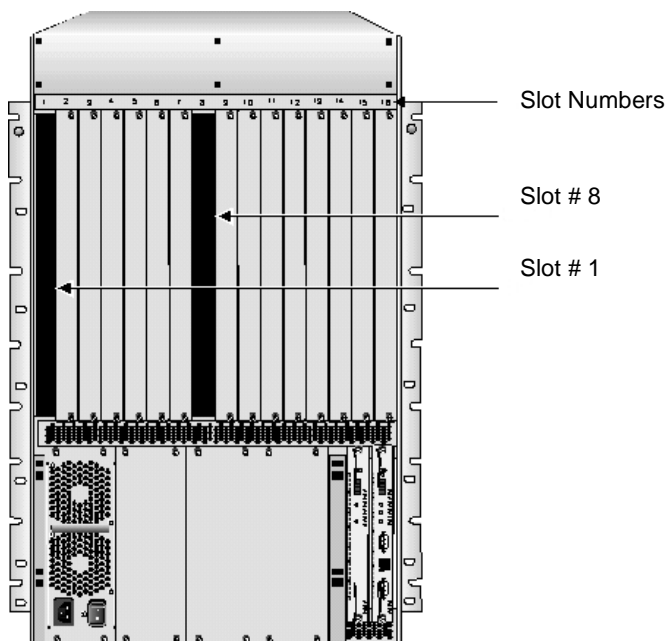
- The ATM Switch Fabric Module with its antistatic bag
- A #2 flathead screwdriver
- Two captive screws (attached to the ATM Switch Fabric Module)

### Preparing the Chassis

Slots 8 and 9 in the CoreBuilder 9000 chassis are available for installing the ATM Switch Fabric Module. Slot numbers are located on the top of the chassis for easy identification (Figure 2).

The CoreBuilder 9000 chassis is shipped with slot 8 open; slot 9 is covered with a protective plate. The primary ATM Switch Fabric Module is installed in slot 8. A secondary Switch Fabric Module is installed in slot 9 when two switch modules are being used for redundancy purposes.

**Figure 2** The CoreBuilder Chassis with Slots 1 and 8 Open



### Removing the Protective Plates from the Chassis

If you want to install a redundant ATM Switch Fabric Module in slot 9, you must remove the protective plate from slot 9 as follows:

- 1 With a #2 flat-head screwdriver, loosen the captive screws.
- 2 Slide the plate out of the chassis and remove it with the screws in place.
- 3 Put the plate aside for future use.



*If you are not using a particular slot at this time, it is recommended to leave its protective plate on.*

### Installation Procedure

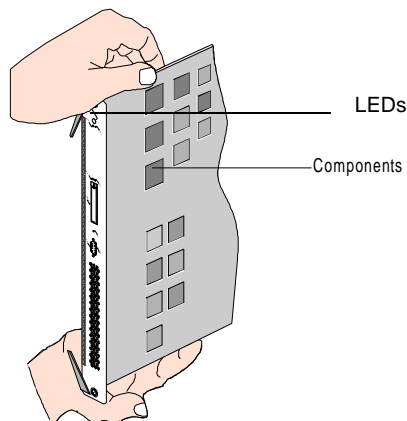
To install the ATM Switch Fabric Module into the chassis:



*Before you start the installation process, see "Safety Precautions" on page 2."*

- 1 Pick up the ATM Switch Fabric Module and hold it in a vertical position, with the faceplate facing you and the LEDs at the top, and the components facing to the right (Figure 3).

**Figure 3** Holding the ATM Switch Fabric Module Vertically



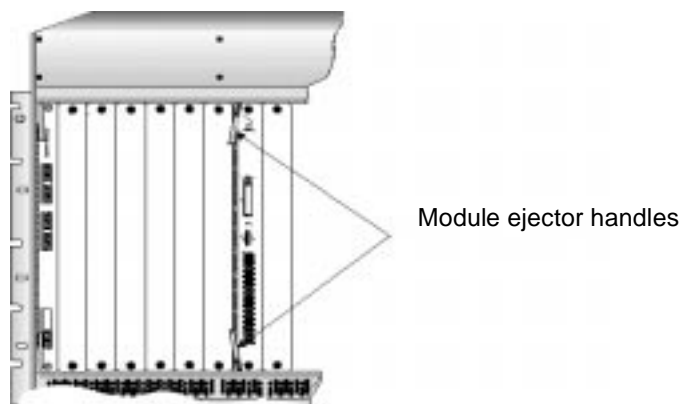
**CAUTION:** *Be careful not to twist or bend the module as you insert it.*

- 2 Align the Module with the proper slot guides as described, and slide the Module partially into the slot. Make sure that the top and bottom edges are in the same slot.



- 3 Open the module ejector handles completely (Figure 4).

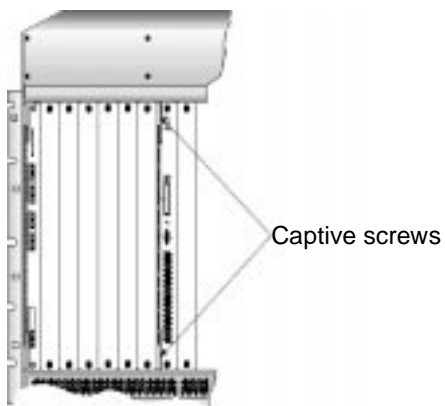
**Figure 4** Module Ejector Handles in the Open Position



**WARNING:** Hazardous energy levels exist inside of the chassis. Do not place hands or objects into the chassis or touch components on an inserted module.

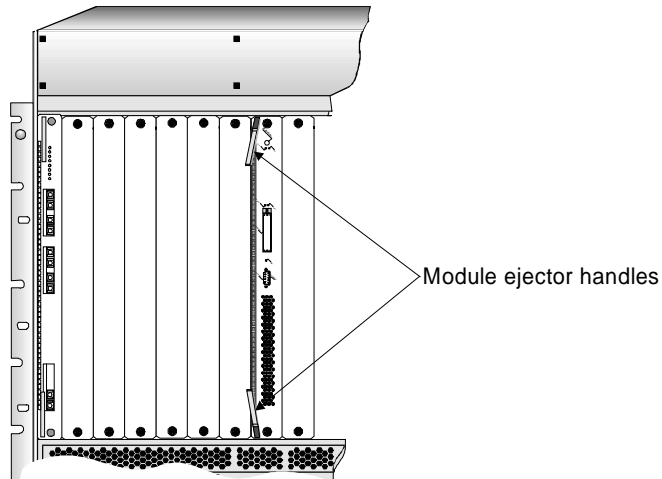
- 4 Push on the captive screws to further insert the Module, until it is completely into the slot and the module ejector handles begin to close (Figure 5).

**Figure 5** Pushing the ATM Switch Fabric Module into the Backplane



- 5 To engage the Module and chassis backplane connectors, push both module ejector handles simultaneously inwards toward the faceplate, locking the module (Figure 6). You feel a slight resistance as the connectors engage.

**Figure 6** Locking the Module Ejector Handles



**CAUTION:** If the resistance is too great, the ATM Switch Fabric Module and backplane connectors may not be aligned. Forcing the ATM Switch Fabric Module inward can damage the module or backplane connectors. If necessary, remove and reinsert the ATM Switch Fabric Module, ensuring that the connectors are properly aligned. Do not tighten the captive screws to seat the module.

- 6 Using the #2 flat-head screwdriver tighten the two screws located on the top and bottom of the ATM Switch Fabric Module.



**CAUTION:** To ensure adequate cooling air flow in the chassis, make sure that blank faceplates cover all empty slots.

## Removing an ATM Switch Fabric Module

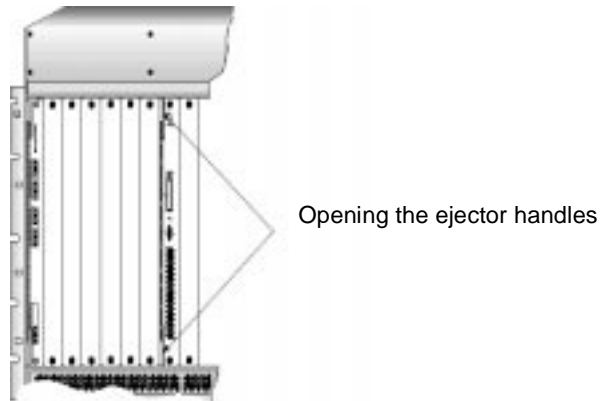
This section describes how to remove an ATM Switch Fabric Module.

To remove an ATM Switch Fabric Module:

- 1 Record the cabling scheme.
- 2 Disconnect all cables from the ATM Switch Fabric Module.

- 3 Loosen the two captive screws that secure the ATM Switch Fabric Module to the chassis.
- 4 Move the module ejector handles to the outward position (Figure 7).
- 5 Gently slide the ATM Switch Fabric Module out of the chassis.

**Figure 7** Removing the ATM Switch Fabric Module from the Chassis



### Installing the PCMCIA LAN PC Card

The ATM Switch Fabric Module has two slots for PCMCIA cards.



*Only slot 1 is available in Release 1.5.0.*

One 10Base-T Ethernet LAN PC card is packaged with the ATM Switch Fabric Module. You install the PCMCIA Card into slot 1 (the right-hand slot) in the ATM Switch Fabric Module following the instructions written on the label affixed to the card.



*The PCMCIA Card is optional; the system functions without the card.*

### Installation Equipment

To install the ATM Switch Fabric Module you need:

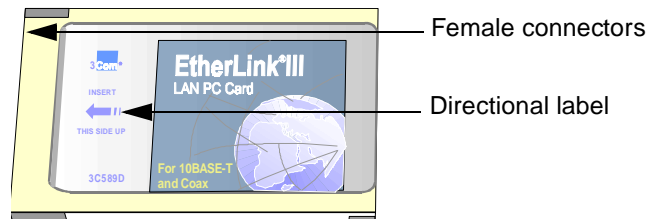
- The ATM Switch Fabric Module
- A PCMCIA LAN PC card (included with the ATM Switch Fabric Module)

### Installation Procedure

To install the PCMCIA LAN PC card into the ATM Switch Fabric Module:

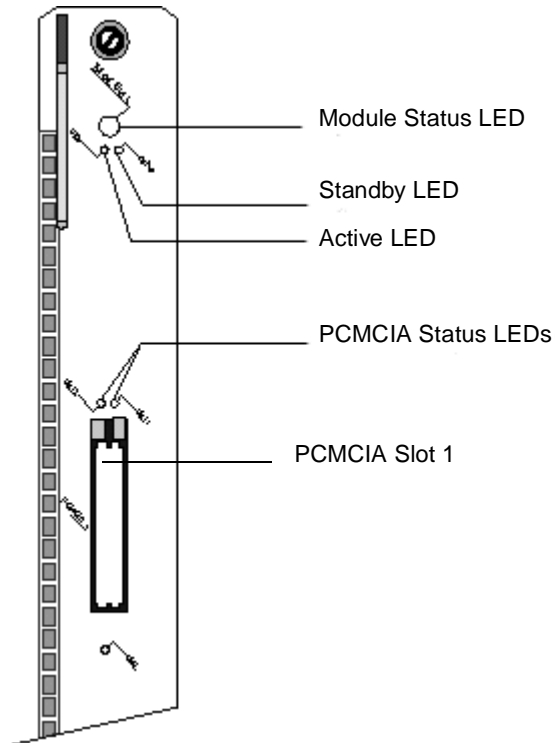
- 1 Hold the card with the female connector facing away from you (Figure 8)
- 2 Insert the card into slot 1 (Figure 9).

**Figure 8** Installing a PCMCIA Card



**CAUTION:** Do not force the card into the slot. If the card will not go in easily, contact your 3Com Representative.

**Figure 9** PCMCIA Slot 1



### Connecting the LMA to the Console Port

To locally manage the ATM Switch Fabric Module using the Local Management Application (LMA), connect a RS-232 cable with a DB-9 Female Pin to the console port on the faceplate of the Module (Figure 1).

### System States

This section describes the different system states of the ATM Switch Fabric Module and how they are indicated on the LED panel. The system states are:

- Power-on
- Normal Operation
- Failure

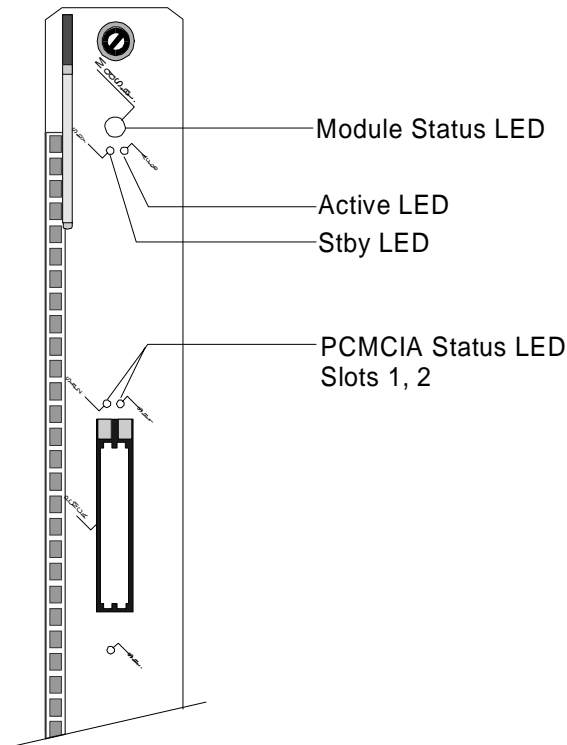
### **Power-On**

The power-on phase of the ATM Switch Fabric Module consists of the following steps:

- Diagnostics
- Hardware and software initialization
- Execution of operational software
- Turning on appropriate LEDs

The behavior of the ATM Switch Fabric Module LEDs during power on is described in the following sections.

**Module Status LED** The Module Status LED indicates the system state of the ATM Switch Fabric Module. Referring to Figure 10, this LED is located on the top of the ATM Switch Fabric Module (shown on the left of the figure).

**Figure 10** ATM Switch Fabric Module LEDs

During the power on phase, the Module Status LED blinks green. When the power on phase has completed successfully, normal operation begins and the Module Status LED stops blinking and remains a steady green. If one of the power on diagnostic tests fails, the Module Status LED turns to steady yellow. The entire power on phase takes about 30 seconds. Table 1 shows the Module Status LED indications.

**Table 1** Module Status LED Indications

LED Indication	Blinking?	System Event
Off		Incomplete insertion of the ATM Switch Fabric Module, or no power to unit.
Green	Yes	Power up sequence in process.

**Table 1** Module Status LED Indications

LED Indication	Blinking?	System Event
Green	No	Power up sequence completed with no errors and operational software executing normally.
Yellow	No	Failure

**Active and Standby LEDs** The Active and Standby LEDs (see Figure 10) indicate the ATM Switch Fabric Module operative status. In normal operation, the switch module in slot 8 has only the activeLED lit. The redundant switch in slot 9 has only the secondary LED lit. These LEDs are turned on during power on.

**Console Status LED** The Console Status LED (Figure 10) is green when the console function has been enabled and the ATM Switch Fabric Module can be managed through the console port, otherwise it is yellow. This LED is turned on during power on.



**PCMCIA Status LEDs** *The PCMCIA slot 2 is permanently disabled; its LED does not light when a PCMCIA LAN PC Card is inserted into the slot.*

The PCMCIA card, is installed into slot 1. When the card is installed into the slot, the slot 1 LED is lit. If there is no card in the slot, the LED does not light.

During normal operation, the PCMCIA Status LED indicates the state of the LAN PC card Ethernet interface installed in its slot. The LAN PC card has three states which are summarized in Table 2.

**Table 2** LAN PC card states

PCMCIA State	LED Color	Blinking?
LAN PC card is in slot #1 and is initialized.	Green	No
A frame is being received.	Green	Yes
LAN PC card failure.	Yellow	No

In case of failure of the LAN PC card, see the *Enterprise ATM Switch Module User Guide* Appendix C, Troubleshooting.



### Normal Operation

After successful completion of the power on phase, the ATM Switch Fabric Module begins to function in the normal state. Under normal operation, the Module Status LED is steady green. If a failure in the ATM Switch Fabric Module occurs, the Module Status LED turns a steady yellow.

### Failure State

A failure state in the ATM Switch Fabric Module is indicated in two ways:

- The Module Status LED turns yellow
- The Module Status LED blinks green for more than 30 seconds.

In case of failure in the ATM Switch Fabric Module, see *Enterprise ATM Switch Module User Guide* Appendix C, Troubleshooting

### Software Download/Upgrade Facility

The software upgrade facility allows you to download the software you need to get the CoreBuilder 9000 ATM Enterprise Switch functioning normally. This software can be upgraded as needed. Consult your 3Com representative for information about upgrading the software.

There are three CoreBuilder 9000 software units which can be downloaded:

- ATM Switch Fabric Software
- ATM Interface Module Software
- Monitor Software.

Consult the *Release Notes* to see which software units need to be downloaded for the current upgrade.

The download can be performed using one of the following methods:

- Download by RS-232 serial port using a local PC terminal
- Download by TFTP



**CAUTION:** Make sure that the CoreBuilder 9000 Enterprise ATM Switch is properly grounded before starting to work.

### Hardware/Software Requirements

The following items are required for loading the software:

- PC 486 or higher, running MS-Windows 3.1 or higher with MS-Terminal emulator software such as PCPlus™
- RS-232 port and cable
- 3Com's CoreBuilder 9000 current software release

### Connecting to the Control Port

Set your PC terminal emulation to the following parameters:

- 8 data bit
- 1 stop bit
- no parity
- no XON/XOFF
- 9600 Baud
- Binary transfer set to Xmodem/CRC. (i.e., Setting > binary transfer > Xmodem/CRC.)

### RS-232 Upgrade Instructions

You can download the software via the RS-232 terminal while the application is running or by rebooting the switch. You can download all the software units you need in one continuous dialog.

**Preparations** The following steps need to be done before you can begin the down load procedure:

- 1 Log into the CoreBuilder 9000 Enterprise ATM Switch Local Management Access(LMA) See "Starting Up" on page 24 for complete log in instructions.
- 2 Reboot the CoreBuilder 9000 by entering the command: **1 7** at the Main Menu prompt.

- 3 Wait until the following display appears:

```
Bootstrap V1.5 Mar 18 1998
CB9000 3Com NCD
=====
```

- 4 Press the "Shift" key and do not release it.
- 5 While holding down the "Shift" key, press the "U" key 3 to 4 times.

### **ATM Switch Fabric Module Monitor Download**

To download the ATM Switch Fabric Module Monitor software, use the following procedure:

- 1 Wait until the "AFTER DOWNLOAD (go to MON)" message is displayed, then change the baud rate to 57600.
- 2 Press "Enter" twice.
- 3 After the "=>" prompt is displayed, type **dm 60** and press "Enter".
- 4 Set the modem type to "XMODEM".
- 5 Download the "Cb9mon.cel" file.
- 6 After the "=>" prompt is displayed, change the baud rate to 9600.
- 7 Reboot the CoreBuilder 9000 by switching the power off and then back on.

### **ATM Switch Fabric Module Software Download**

To preform the ATM Switch Fabric Module software download:

- 1 Log into the CoreBuilder 9000 Enterprise ATM Switch Local Management Access (LMA) See "Starting Up" on page 24 for complete log in instructions.
- 2 Set the download flag to 1 entering the command, **1 1 3** at the Main Menu prompt.
- 3 Reboot the CoreBuilder 9000 by entering the command, **1 7** at the Main Menu prompt.
- 4 Wait until the "AFTER DOWNLOAD (go to MON)" message is displayed, then change the baud rate to 57600.
- 5 Press "Enter" twice.
- 6 After the "=>" prompt is displayed, type **do** and press "Enter".

- 7 Set the modem type to "XMODEM".
- 8 Download the "Cb9swm.cel" file.
- 9 Skip to the next section if Interface Module software download is also required.
- 10 After the "=>" prompt is displayed, change the baud rate to 9600.
- 11 Reboot the CoreBuilder 9000 by switching the power off and then back on.

### ATM Interface Module Software Download

To perform the ATM Interface Module Software download use the following instructions:

- 1 Log into the CoreBuilder 9000 LMA. See "Starting Up" on page 24 for complete log in instructions.
- 2 Set the download flag to 1 entering the command, **1 1 3** at the Main Menu prompt.
- 3 Reboot the CoreBuilder 9000 by entering the command, **1 7** at the Main Menu prompt.
- 4 Wait until the "AFTER DOWNLOAD (go to MON)" message is displayed, then change the baud rate to 57600
- 5 Press Enter twice.

```

-----
-           CoreBuilder 9000           -
-                                     -
-           ATM Enterprise Switch      -
-----
Access level (read, write, admin): admin
Password: *****

```

- 6 After the "=>" prompt is displayed, type **dm 43** and press "Enter".
- 7 Set the modem type to "XMODEM".
- 8 Download the "Cb9ifc.cel" file.
- 9 After the "=>" prompt is displayed, change the baud rate to 9600.
- 10 Reboot the CoreBuilder 9000 by switching the power off and then back on.

## TFTP Upgrade Instructions

This section describes the procedure used to download software via TFTP.

### ATM Interface and Switch Fabric Modules Software Download

To download software for the CoreBuilder 9000 ATM Interface Module or for the ATM Switch Fabric Module, use the following procedure.

- 1 Log into the CoreBuilder 9000 Enterprise ATM Switch Local Management Access (LMA) See "Starting Up" on page 24 for complete log in instructions.
- 2 Perform TFTP download of SWM Application SW 1.2FB (Cb9swm.cel) by entering the command, **1 3 2** at the Main Menu prompt.
- 3 Perform TFTP download of IFC Application SW 1.22 (Cb9ifc.cel) by entering the command, **1 3 2** at the Main Menu prompt.

### ATM Switch Fabric Module Monitor Software Download

To download the Monitor Software for the ATM Switch Fabric Module, use the following procedure.

- 1 Log into the CoreBuilder 9000 Enterprise ATM Switch Local Management Access (LMA). See "Starting Up" on page 24 for complete log in instructions.
- 2 Reboot the CoreBuilder 9000 by entering the command, **1 7** at the Main Menu prompt.
- 3 Prepare the CoreBuilder 9000 for download
- 4 Wait until the following display appears:

```
Bootstrap V1.5 Mar 18 1998
CB9000 3Com NCD
=====
```

- 5 Press the "Shift" key and do not release it.
- 6 While holding down the "Shift" key, press the "U" key 3 to 4 times.
- 7 Wait until the "AFTER DOWNLOAD (go to MON)" message is displayed, then change the baud rate to 57600.
- 8 Press "Enter" twice.
- 9 After the "=>" prompt is displayed type, **dm 60** and press "Enter".

- 10 Set the modem type to "XMODEM".
- 11 Download the "Cb9mon.cel" file.
- 12 After the "=>" prompt is displayed, change the baud rate to 9600.
- 13 Reboot the CoreBuilder 9000 by switching the power off and then back on.



*If you have rebooted the CoreBuilder 9000 and still need to download another software unit, repeat the procedure from step 1 for the next software unit.*

### Verifying TFTP Download Status

After you have downloaded your software, verify the success status of the download as follows:

- 1 Log into the CoreBuilder 9000 LMA. See "Starting Up" on page 24 for complete log in instructions.
- 2 Download Status entering the command, **1 3 1** at the Main Menu prompt.

**Table 3** Download messages

Message	Meaning and Action
System is loading from ip address, file. Received n%	System loading
Completed successfully	Download completed
Unknown	No activity, nothing downloaded
Error while downloading	CRC error, download again. If the error persists, contact 3Com technical support.
No response from server	Bad connection - check cable connection - check if TFTP server is up - check TFTP server IP address
Checksum error	Download again
Image is incompatible with the device	The downloaded file properties [e.g. name] does not match the internal CB list of properties
Image file not found	Check if the file exists in the path
System Loader cannot reach the server	Check the following: - cable connection - if TFTP server is up - TFTP server IP address

(continued)

**Table 3** Download messages (continued)

Message	Meaning and Action
Flash memory partially erased	<p>After downloading Switch Fabric software: Download software again via RS-232 port.</p> <p>After downloading ATM Interface Module software: Download software again via TFTP.</p>

### Configuring the ATM Switch Fabric Module

After you have physically connected the ATM Interface Module to your site network devices and power has been applied, you must define some parameters that enable the ATM Switch Fabric Module to function within the network.

The CoreBuilder 9000 Enterprise ATM Switch local management software features an Integrated Fast Setup procedure that configures the CoreBuilder 9000 Enterprise Switch and all ATM Interface Modules that are installed in the CoreBuilder 9000 in one process.

Although there are other methods that can be used to define the parameters (discussed in the *Switch Fabric Module User Guide*), the Fast Setup is the fastest and easiest method of defined the essential parameters needed to get your network running.

3Com recommends that you run the fast setup program after you have installed the ATM Interface and Switch Fabric modules.

If you are installing the ATM Interface Module and the ATM Switch Fabric Module at the same time, you only need to perform the Integrated Fast Setup procedure once; both modules will be configured.

If you have already installed and configured the CoreBuilder 9000 Enterprise ATM Switch and you now wish to add a new ATM Interface Module, perform the Integrated Fast Setup procedure again but now you configure only the UNI/NNI parameters section for the ports of the new ATM Interface Module.

## Starting Up

In order to log in to the LMA, you need:

- The desired access level
- Your password

**LMA Access Level** The LMA has three levels of access: read access, write access, and administrate access. Each level grants different access privileges and is suited to a different type of user. Table 4 lists the privileges granted for each access level.

**Table 4** Access Levels

Access Level	Privileges
Read	Read-only privilege
Write	Right to make local changes to LMA. No right to change passwords or parameters that affect the global network.
Admin	All privileges

**Logging In** When you boot the system the following login screen appears:

```

-----
-           CoreBuilder 9000           -
-                                     -
-   Enterprise ATM Switch             -
-----
Access level (read, write, admin):admin
Password:

```



To log in to the LMA:

- 1 Enter your access level (default is admin)
- 2 Enter your password

After a successful login the Main Menu is displayed as shown:

```

CB9000 switch module - Main Menu:
(1) SYS: Platform Configuration ->
(2) LEM: LAN Emulation ->
(3) CON: Connections ->
(4) STS: Statistics ->
(5) DIA: Testing and Diagnostics ->
(6) FTR: ATM Features
(7) LOG: Logout
(8) VER: Version
(9) FST: Fast Setup
  
```

For further explanation of the LMA menus and menu structure, see the *CoreBuilder 9000 Enterprise ATM Switch User Guide*. The next section takes you through a step-by-step process of the Intergrated Fast Setup.

## Setup Procedure Sections

Table 5 lists the steps or sections of the Integrated Fast Setup.

**Table 5** integrated Fast Setup Procedure Sections

Setup Section	Description
1 IP and Management Configuration	Set IP address of the switch, address of the NMS application, default gateway address, and subnet mask  This section is relevant if a PCMCIA Ethernet Interface Card is installed.
2 Network Prefix	Set Network Prefix for the CoreBuilder 9000 Enterprise ATM Switch
3 LECS Address	Set active LECS address for the CoreBuilder 9000 Enterprise ATM Switch
4 UNI/NNI parameters	Set UNI/NNI port parameters for ports in the ATM Interface Module Card
5 Confirmation	Confirm setup operation

## Entering Data

The Integrated Fast Setup procedure runs sequentially through the relevant data for all of the sections, displaying a prompt for each data item and a default value. If you wish to change the default, type the desired value in place of the default and press Enter. If you wish to accept the default, press Enter.

## Navigation Aids

Table 6 lists the short-cut characters you can use to move between sections of the Integrated Fast Setup procedure:

**Table 6** Integrated Fast Setup Procedure Navigation Aids

Type:	To perform:
<	Go back to previous section.
>	Proceed to next section.
>S	Go to section indicated by double underlined ID letter S in section title.
\	Go back to beginning of setup.
\$	Proceed directly to end of setup.

## Integrated Fast Setup Operation

You initiate the Integrated Fast Setup from the LMA Main Menu of the CoreBuilder 9000 Enterprise ATM Switch which appears immediately after power on. Once the system is powered on, access the LMA and log into the system.

```

-----
-           CoreBuilder 9000           -
-                                     -
-   Enterprise ATM Switch               -
-----
Access level (read, write, admin):admin
Password:

```

After you successfully enter the access level and password, the Main Menu appears:

```

CB9000 switch module - Main Menu:
(1) SYS: Platform configuration ->
(2) LEM: Lan Emulation ->
(3) CON: Connections ->
(4) STS: Statistics ->
(5) DIA: Testing and Diagnostics ->
(6) FTR: ATM features
(7) LOG: Logout
(8) VER: Version
(9) FST: Fast Setup
[ '\ ' -Main,      '-' -Back in menus ]
>9

```

To begin the Integrated Fast Setup process, select the menu item:  
(9) *FST: Fast Setup* by entering **9** at the prompt.

The following message appears on the screen.

```

Fast Setup Utility
=====
The current configuration will be displayed below;
Update if needed, and then hit Enter.

To move between sections, enter the following characters at end of line:
< > - Back and forth in sections      \      - Back to beginning of setup
$    - To end of setup

```



*Changes made to the configuration are implemented only after the system is rebooted.*



To enter the UNI/NNI Configuration:

- 1 At the NNI max hops prompt, enter the maximum number of hops (0-120).
- 2 At the Enter port ID prompt, enter or accept the Port ID for each port (1-4), including the slot number (1-7, 10,12,14,16), the group number (1 or 2) and the port number (1-4).
- 3 At the NNI type of port prompt, enter or accept the NNI type for the port you just specified. The port can be UNI (enter U), NNI (enter N), or Gateway (enter G).
- 4 Repeat steps 2 and 3 until you have specified the NNI type for all of the ports that are in the Corebuilder 9000 Enterprise Switch chassis. When you are finished enter 0.
- 5 The LMA automatically prompts you for the NNI type of the ports that you have specified as Gateway. Specify the NNI type as User or Network

```
UNI/NNI configuration
-----
NNI max hops (0 - 120): 7

Ports' type is set to UNI unless configured otherwise
Use single step configuration (Y/N)? Y
NNI type of port <1.1.1> (U<NI>, N<NI>, G<ateway>): U
NNI type of port <1.1.2> (U<NI>, N<NI>, G<ateway>): U
NNI type of port <1.1.3> (U<NI>, N<NI>, G<ateway>): U
NNI type of port <1.1.4> (U<NI>, N<NI>, G<ateway>): U
NNI type of port <1.2.1> (U<NI>, N<NI>, G<ateway>): U
NNI type of port <1.2.2> (U<NI>, N<NI>, G<ateway>): U
NNI type of port <1.2.3> (U<NI>, N<NI>, G<ateway>): U
NNI type of port <1.2.4> (U<NI>, N<NI>, G<ateway>): U
```

## 6 Repeat until you have specified all of the Gateway ports.

The following prompt appears:

```
*** The following is a profile of ports you have defined as
Gateway: Profile of port <1.1.1>(U<ser>,N<etwork>):
```

### IP and Management Configuration Section

In this section you are prompted for the IP and Management Configuration parameters: IP address, NMS address, default gateway, and subnet mask. Enter values as appropriate. These parameters support an NMS (Network Management Station) station which is connected to the ATM Switch Fabric Module through the PCMCIA Ethernet port.

### The Confirmation Section

This section prompts you to save all changed parameters and asks if you want to reboot.

```
Accept changes
-----

*** Note: Change of some parameters will take effect now!!

Save changes (Y/N)? Y
Saving Network Prefix for next reboot...
Saving NNI parameters (effective from now on)...

The new configuration has been saved.

Reboot the system (Y/N)? n

The changes will take effect only after next reboot.
```

To save the changes, enter Y, otherwise enter N.

To reboot, enter Y, otherwise enter N. The Main menu appears.

The Integrated Fast Setup of the ATM Switch Fabric Module and the ATM Interface Module is now complete.

**Finding More Information**

For more detailed information about the ATM Switch Fabric Module, see the *CoreBuilder 9000 Enterprise ATM Switch User Guide*.

For more detailed information about the ATM Interface Module, see the *ATM Interface Module User Guide*.

For more detailed information about the CoreBuilder 9000 Enterprise Switch, see the *CoreBuilder 9000 Enterprise ATM Switch Getting Started Guide*.

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The duration of the warranty for the CoreBuilder 9000™ ATM Switch Fabric Module is 1 year.

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3Com warrants its hardware products to be free from defects in workmanship and materials, under normal use and service, for the following lengths of time from the date of purchase from 3Com or its authorized reseller:

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Spare parts and spares kits	90 days

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