

# Alpha XL PowerGrade

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## Installation Guide

Order Number: EK-ALXLA-AU. C01

**December 1996**

**Digital Equipment Corporation  
Maynard, Massachusetts**

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**December 1996**

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**Information - Class B**

This device complies with Part 15 of the FCC rules. Operation is subject to the following conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Any changes or modifications to this equipment may void the user's authority to operate this equipment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

The keyboard and video ports should be connected only with shielded datacables with an external ferrite bead over the cable. When either of these ports is connected with cables without such a ferrite bead, the additional ferrite beads shall be clamped over these cables next to the cable connector.



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# Preface

## Purpose of the Guide

The Alpha XL PowerGrade Installation Guide provides the information necessary to perform the following upgrades:

<b>Upgrade From:</b>	<b>To:</b>	<b>Refer To Chapter:</b>
Alpha XL 233 or 266 Celebris XL 5100, 5120, 5133, 6150, 6180, or 6200	Alpha XL 366	1 and 2
Alpha XL 300	Alpha XL 366	1 and 2
Alpha XL 233, 266, or 300 Celebris XL 5100, 5120, 5133, 6150, 6180, or 6200	Alpha XL 433	1 and 2
Alpha XL 366	Alpha XL 433	1 and 3

Specifically, this guide describes the following general steps in the upgrade (refer to the table of contents for a detailed listing of material covered in this guide):

1. Preparing for the Alpha XL PowerGrade installation.
2. Removing the existing CPU module.
3. Removing the existing motherboard.
4. Preparing the enclosure.
5. Installing the new motherboard.
6. Replacing the motherboard.
7. Adding the Ethernet media access unit (MAU).

## Preface

8. Installing the new CPU module.
9. Partitioning and formatting the disk (Celebris XL to Alpha XL only).
10. Starting a Windows NT installation (Celebris XL to Alpha XL only).
11. Configuring the system using the AlphaBIOS firmware.

### Intended Audience

The information in this document is intended for experienced service personnel who are performing a PowerGrade installation.

### PowerGrade Features

The Alpha XL PowerGrade includes either a 366- or 433-MHz CPU module. The CPU modules have the following features:

- *CPU Chip.* Digital Semiconductor 21164 with an 8-KB instruction cache, 8-KB data cache, and a 96-KB second-level cache.
- *Core Logic.* Digital Semiconductor 21172 chipset provides memory and cache control, and a bridge to the PCI bus.
- *Backup Cache.* 2 MB organized as direct-mapped and writeback.
- *Console Firmware.* 512 KB of flashROM containing AlphaBIOS firmware and PALcode.
- *NVRAM.* 8 KB of nonvolatile memory used for the storage of setup and configuration information.

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#### NOTE

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The new motherboard includes an embedded Ethernet controller. A media access unit (MAU) is also provided to bring the network connectors to the rear bulkhead of the system.

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## Special Notices

Three kinds of notices emphasize specific information in this guide:

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### CAUTION

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A **CAUTION** indicates the presence of a hazard that can cause damage to hardware or that might corrupt software.

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### NOTE

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A **NOTE** gives general information, such as compatibility with other products or pointers to other information.

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### HINT

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A **HINT** includes suggestions to make your computing tasks easier.

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## Additional Information Resources

You may wish to consult the following information resources relating to your Digital Alpha XL system:

- *Digital Alpha XL User's Guide* (order number EK-ALXLA-UG). This guide introduces the Digital Alpha XL system. The information explains how to start, use, upgrade, troubleshoot, and configure your Digital Alpha XL system.
- *Digital Alpha XL CPU Guide* (order number EK-ALXLA-CG). This guide describes the features of the available Alpha XL CPU modules. The guide also includes information about each module's configuration jumpers.
- *Digital Quick Setup Guide* (order number ER-A03WW-IM). This graphical guide leads you through the initial installation of the Alpha XL system.
- For more information, browse the Digital Web Page at <http://www.digital.com/>.

Contact your Digital representative for other available product-related information.

## Preface

### Feedback

What our readers think of this or any other Digital manual is important to us. If you have any comments, no matter how great or small, we'd appreciate hearing from you.

- Internet electronic mail to:  
*reader\_comments@eng.pko.dec.com*
- Mail to:

Digital Equipment Corporation  
Shared Engineering Services  
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129 Parker Street  
Maynard, MA 01754-2199

Please reference order number EK-ALXLA-AU. C01 in your correspondence about this manual.

# 1

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## Preparing for the Alpha XL PowerGrade

### Introduction

This chapter describes how to prepare your system for the Alpha XL PowerGrade installation. Topics covered include:

- Prerequisite hardware.
- Alpha XL 366 and 433 system memory SIMM requirements.
- Taking inventory of the Alpha XL PowerGrade kits.
- Checking the Microsoft Windows NT Hardware Compatibility List (HCL) (for Celebris XL to Alpha XL upgrades).
- Ensuring that the 300/366/433 HAL (hardware abstraction layer) is loaded (for Alpha XL 233 or 266 to Alpha XL 366 or 433 upgrades).
- Backing up your disk.
- Shutting down the Windows NT operating system.
- Recording the boot selection and other values.
- Powering off the system.
- Removing the side cover.

## Preparing for the Alpha XL PowerGrade

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### NOTE

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After completing the preparation steps for the Alpha XL PowerGrade, refer to the appropriate chapter for specific information on your particular upgrade:

- *Chapter 2* for a Celebris XL, Alpha XL 233, 266, or 300 to an Alpha XL 366 or 433 system.
  - *Chapter 3* for an Alpha XL 366 to an Alpha XL 433 system.
- 

## Prerequisite Hardware

Having the correct hardware before starting the upgrade ensures a successful Alpha XL PowerGrade installation. At a minimum, you should have the following:

- Celebris XL (5100, 5120, 5133, 6150, 6180, or 6200) or Alpha XL (233, 266, 300, or 366) system running Windows NT 3.51 or later.
- 32-MB memory (36-bit SIMMs are required for the Alpha XL 366 and 433).
- CD-ROM drive.
- 200-MB or greater SCSI hard disk.

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### CAUTION

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Do not touch any electronic component unless you are safely grounded. Wear a grounded wrist strap or touch an exposed metal part of the system unit chassis. A static discharge from your fingers can result in permanent damage to electronic components.

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### Alpha XL 366 and 433 Memory SIMM Requirements

The main memory architecture of the Alpha XL 366 and 433 differs from the Alpha XL 233 and 266. The ECC data-protection mechanism in the 366 and 433 requires 36-bit SIMMs. The 366 and 433 motherboard can hold up to two banks of memory (four SIMMs to a bank). Therefore, when upgrading from an Alpha XL 233 or 266 system to a 366- or 433-MHz CPU, make sure you have either four or eight 36-bit SIMMs. Alpha XL 300 systems already contain 36-bit SIMMs.

The following SIMM part numbers are typically used on Alpha XL 366 system packages from Digital:

- 54-23623-DA 8 MB (2 MB x 36)
- 54-23170-AA 16 MB (4 MB x 36)
- 54-21277-AA 32 MB (8 MB x 36)

Refer to Table 1-1 to help distinguish between 33-bit and 36-bit SIMMs. Notice that SIMMs with 33 bits contain fewer chips than 36-bit SIMMs of the same capacity. As SIMM designs evolve, the differences shown below may change.

**Table 1-1: SIMM Bit Width Identification**

Width	8 MB	16 MB	32 MB
33-Bit	Side 1 	Side 1 	Side 1 
	Side 2 	Side 2 	Side 2 
36-Bit	Side 1 	Side 1 	Side 1 
	Side 2 	Side 2 	Side 2 

## Preparing for the Alpha XL PowerGrade

### Taking Inventory of the Alpha XL PowerGrade Kit Contents

Table 1-2 lists the upgrade paths and kit part numbers. Refer to the appropriate section below to verify your kit contents.

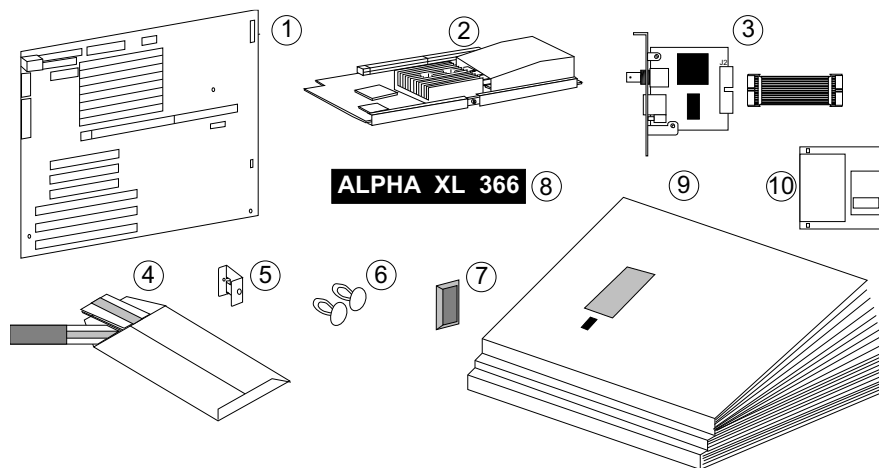
**Table 1-2: Upgrade Paths and Part Numbers**

Convert From:	Convert To:	Part Number
Alpha XL 233 and 266 Celebris XL 5100, 5120, 5133, 6150, 6180, and 6200	Alpha XL 366	SN-A230U-AA
Alpha XL 300	Alpha XL 366	SN-A230U-AB
Alpha XL 233, 266, and 300 Celebris XL 5100, 5120, 5133, 6150, 6180, and 6200	Alpha XL 433	SN-A250U-AA
Alpha XL 366	Alpha XL 433	SN-A250U-AB

#### SN-A230U-AA (Alpha XL 366 Kit)

The SN-A230U-AA kit contains the following items, shown in Figure 1-1:

- ① Motherboard
- ② 366-MHz CPU module
- ③ Media access unit (MAU) and ribbon cable
- ④ Antistatic wrist strap
- ⑤ Pivot bracket
- ⑥ Two press-in standoff insulator plugs
- ⑦ One stick-on rubber insulating pad
- ⑧ Medallion
- ⑨ Documentation
- ⑩ Windows NT system update diskette



**Figure 1-1: Alpha XL 366 Full Upgrade Kit Contents**



## Preparing for the Alpha XL PowerGrade

### SN-A230U-AB (Alpha XL 300 to Alpha XL 366 Kit)

The SN-A230U-AB kit contains everything shown in Figure 1-1, except the media access unit (MAU) and ribbon cable ③, and the pivot bracket ⑤.

### SN-A250U-AA (Alpha XL 433 Kit)

The SN-A250U-AA contains the following items, shown in Figure 1-2:

- |  |   |
|--|---|
| ① Motherboard                              | ⑥ Two press-in standoff insulator plugs |
| ② 433-MHz CPU module                       | ⑦ One stick-on rubber insulating pad    |
| ③ Media access unit (MAU) and ribbon cable | ⑧ Medallion                             |
| ④ Antistatic wrist strap                   | ⑨ Documentation                         |
| ⑤ Pivot bracket                            | ⑩ Windows NT system update diskette     |

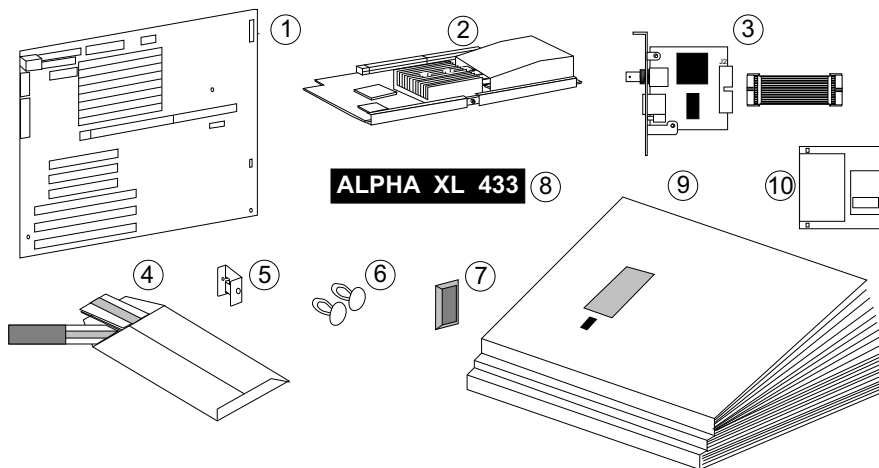


Figure 1-2: Alpha XL 433 (Full kit)

### SN-A250U-AB (Alpha XL 366 to Alpha XL 433 Kit)

The SN-A250U-AB kit contains everything shown in Figure 1-2, except the motherboard ①, media access unit (MAU) and ribbon cable ③, and the pivot bracket ⑤.

## Preparing for the Alpha XL PowerGrade

### Checking the Windows NT Hardware Compatibility List

Options added to your Celebris XL system may not be supported by the Alpha version of the Windows NT operating system. The Microsoft Windows NT Hardware Compatibility List (HCL) lists the components and peripherals that have been tested and are supported by either Digital, Microsoft, or the option's vendor.

You can obtain the latest copies of the HCL from the following locations:

- World Wide Web, at one of the following URLs,  
<http://www.microsoft.com/isapi/hwtest/hsearchn.idc> (for Windows NT V3.51)  
<http://www.microsoft.com/isapi/hwtest/hsearchn4.idc> (for Windows NT V4.0)
- CompuServe® Information Services, available in either Library 1 of the WINNT (GO WINNT) forum or Library 17 of the MSWIN32 forum (GO MSWIN32).

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#### NOTE

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If you are upgrading an Alpha XL 233, 266, 300, or 366 system, your options are compatible with the Alpha XL PowerGrade.

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### Loading the 300/366/433 HAL

When upgrading a Celebris XL system to an Alpha XL 366 or 433 system, the 300/366/433 HAL can be loaded during the Windows NT software installation.

When upgrading from an Alpha XL 233 or 266 to an Alpha XL 366 or 433, you first must ensure that the 300/366/433 HAL is loaded into the appropriate directory on your system disk *before* starting the upgrade.

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#### CAUTIONS

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1. Systems running Windows NT V3.5 must be upgraded to V3.51 or later before you can perform any of the next steps.
  2. After you have completed the steps below, you must perform the hardware portion of the upgrade before attempting to boot the Windows NT operating system. If you are unable to complete the hardware upgrade and elect to reinstall the original hardware, you can boot the system by modifying the boot selection's OSLOADER value to `\os\old351` (the directory created in Step 3 below).
-

## Preparing for the Alpha XL PowerGrade

Refer to the appropriate column in Table 1-3 to load the 300/366/433 HAL.

**Table 1-3: Loading the HAL**

Step	Windows NT V3.51	Windows NT V4.0
1.	Insert the Alpha XL 300/366/433 System Installation floppy diskette into the drive.	Insert the 4.0 CD-ROM into the CD drive.
2.	From the File Manager, with Show Hidden/System Files enabled (In View By File Type), point to the directory in the system partition that contains hal.dll. Typically, D:\os\winnt351.	From the Windows NT Explorer, point to the directory in the system partition that contains hal.dll. Typically, D:\os\winnt40. If this directory does not exist, use the Explorer to search for hal.dll.
3.	Create a new directory to hold the original files: for example, \os\old351.	Create a new folder to hold the original files: for example, \os\old40.
4.	Copy \os\winnt351\*. * to \os\old351. If your system is set up to run different versions or copies <sup>1</sup> of Windows NT, make sure the hal.dll files from those directory paths are also saved in a different directory.	Copy \os\winnt40\*. * to \os\old40. If your system is set up to run different versions or copies <sup>1</sup> of Windows NT, make sure the hal.dll files from those directory paths are also saved in a different folder.
5.	Delete \os\winnt351\hal.dll.	Delete \os\winnt40\hal.dll.
6.	Copy and rename the file A:\halxl.dll from the floppy to D:\os\winnt351\hal.dll.	Copy and rename the file from the CD-ROM: E:\alpha\halxl.dll to D:\os\winnt40\hal.dll. (Where "E" is the CD drive letter.)
7.	Set the hal.dll file properties to Read Only, Archive, Hidden, and System. (Use the File Properties pulldown.)	Open a Command Prompt window and modify the file attributes to Read Only, Archive, Hidden, and System as follows (on one line): C:>attrib +R +A +S +H \os\winnt40\hal.dll

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<sup>1</sup> Software developers and device driver writers sometimes use *checked* versions of the HAL and Windows NT (usually from the Microsoft DDK). If you use these, make sure you update the HAL.DLL that is used when running a checked system.

## Preparing for the Alpha XL PowerGrade

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### NOTE

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You can copy the HAL over the Internet as follows:

1. Open the URL <http://www.windowsnt.digital.com>.
  2. Select Service & Support.
  3. At the Firmware and Drivers bullet, pull down the selection box and choose Alpha-based Systems
  4. Click on Go!
  5. Select Digital Alpha Systems Firmware.
  6. Select Alpha XL 366.
  7. Select HAL for Windows NT V3.51, and save the file on your system.
  8. Unzip the archive. The HAL filename is `halxl351.dll`. The files `halxl351.dll` and `halxlt.dll` are identical.
- 

## Backing Up Your Disk

During the upgrade process for Celebris XL systems, the system disk is partitioned and formatted. *All data on the system disk is lost.* If you have data files or information you wish to keep, back up those files before proceeding with the upgrade.

You need not partition and format the system disk if you are upgrading an Alpha XL 233, 266, 300, or 366 system. However, it is wise to back up your disk before performing the upgrade.

## Shutting Down the Windows NT Operating System

Perform the following steps to shut down the Windows NT operating system:

1. Close any application data files you have open as well as any applications you have running. Most application programs prompt you to save the information before closing.

## Preparing for the Alpha XL PowerGrade

2. Shut down the operating system with the appropriate command from Table 1-4 below:

**Table 1-4: Operating System Shut Down**

Windows NT V3.51	Windows NT V4.0
<ol style="list-style-type: none"><li>1. From the Program Manager File Menu, choose Shutdown <i>or</i> press [Ctrl]+[Alt]+[Del].</li><li>2. Choose the OK button to confirm.</li></ol>	<ol style="list-style-type: none"><li>1. Click the Start button.</li><li>2. Click Shut Down...</li><li>3. Select Shut down the Computer?</li><li>4. Click the Yes button.</li></ol>

3. Wait for the operating system to complete the shutdown process. Microsoft Windows NT Workstation displays a window indicating it is safe to turn off or restart the system.

## Recording the Boot Selections

When the motherboard is replaced, several firmware values such as the boot selections must be reentered after the upgrade is complete. Record these values before starting the hardware portion of the upgrade. Refer to Table 1-5 to determine the appropriate section for each type of system.

**Table 1-5: Recording the Boot Selections**

If the system is:	Then:
Any Celebris XL system or an Alpha XL 366 system	Skip ahead to Powering Off the System.
Alpha XL 233 or 266 system	Perform the steps in Using ARC to Display Selections.
Alpha XL 300 system	Perform the steps in Using AlphaBIOS to Display Selections.

## Using ARC to Display Selections

To display selections using ARC, follow these steps:

1. From the ARC Boot menu, select Supplementary menu...
2. From the Supplementary menu, select Set up the system...
3. From the Setup menu, select Manage boot selection menu...

## Preparing for the Alpha XL PowerGrade

- From the Boot selection menu, select `Dump boot selections`.
- Record the boot selection information in the following table:

Parameter	First Entry	Second Entry
LOADIDENTIFIER:		
SYSTEMPARTITION:		
OSLOADER:		
OSLOADPARTITION:		
OSLOADFILENAME:		
OSLOADOPTIONS:		

- Return to the Setup menu and select `Machine specific setup...`  
Record the PCI parity setting in the following table:

Parameter	Current Value
PCI Parity Checking:	

## Using AlphaBIOS to Display Selections

To display selections using AlphaBIOS, follow these steps:

- From the AlphaBIOS Setup screen, select:

`Utilities` → `OS Selection Setup...`

Record the displayed information for each entry in the following table:

Parameter	First Entry	Second Entry
Boot Name:		
Boot File:		
OS Path:		
OS Options:		

## Preparing for the Alpha XL PowerGrade

2. Press [Escape] to return to the AlphaBIOS Setup screen.
3. Select CMOS Setup.  
Record the specified values in the following table:

Parameter	Current Value
Floppy Drive A:	
Floppy Drive B:	
Keyboard:	

4. Press [F6] to enter Advanced CMOS Setup.  
Record the specified values in the following table:

Parameter	Current Value
PCI Parity Checking:	
Power-up Memory Test:	
AlphaBIOS Password Option:	

## Powering Off the System

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### CAUTION

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Do not turn off power to your system or peripherals until the shutdown sequence has completed.

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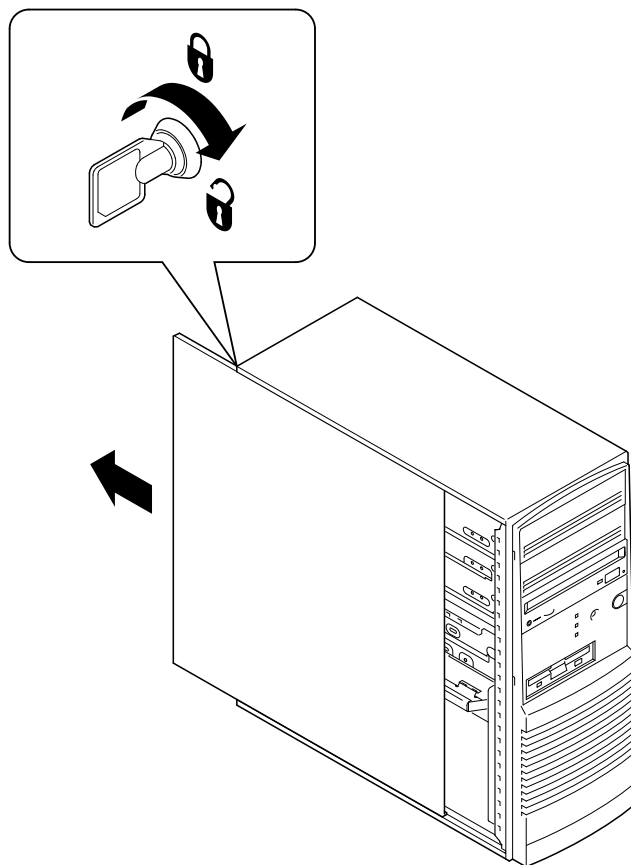
Once you have safely shut down the Windows NT operating system, turn off the system power.

## Preparing for the Alpha XL PowerGrade

### Removing the Side Cover

To remove the side panel, follow these steps:

1. Refer to Figure 1-3 and unlock the side panels by turning the chassis-lock key clockwise to a horizontal position.
2. Slide the left panel (when viewed from the front) to the rear of the system unit (Figure 1-3), and remove it.



**Figure 1-3: Unlocking and Removing System Cover**

Proceed to the appropriate chapter for your particular system's upgrade information:

- Chapter 2 for upgrading a Celebris XL or Alpha XL (233, 266, or 300) to an Alpha XL 366 or 433 system.
- Chapter 3 for upgrading an Alpha XL 366 to an Alpha XL 433 system.



# 2

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## Upgrading the Celebris XL and Alpha XL

### Introduction

This chapter describes how to upgrade from a Celebris XL or Alpha XL 233, 266, or 300 to an Alpha XL 366 or 433 system. (*Refer to Chapter 3 if you are upgrading an Alpha XL 366 to an Alpha XL 433.*) Topics include how to:

- Remove the existing CPU module.
- Remove the motherboard.
- Install the new motherboard.
- Install the media access unit (MAU) card. (Note: The MAU is already present in the Alpha XL 300 system.)
- Prepare and install the Alpha XL 366- or 433-MHz CPU module.

Prior to performing the steps in this chapter, ensure that:

1. The 300/366/433 HAL has been copied from the hardware floppy disk to the appropriate location in the system partition on your system disk as described in Chapter 1.
2. Windows NT operating system has been shut down.
3. The system has been powered off.
4. The side cover has been removed.

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#### CAUTION

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Before upgrading an Alpha XL 233 or 266, you must copy the 300/366/433 HAL into the appropriate directory on the system disk as described in Chapter 1.

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## Removing the Existing CPU Module

This section describes how to remove the CPU module.

To remove the CPU from a Celebris XL, Alpha XL 233, or Alpha XL 266 system, see the section on Celebris XL, Alpha XL 233, or 266 CPU Removal.

To remove the CPU from an Alpha XL 300 system, see the section on Alpha XL 300 CPU Removal.

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### CAUTION

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Do not touch any electronic component unless you are safely grounded. Wear a grounded wrist strap or touch an exposed metal part of the system unit chassis. A static discharge from your fingers can result in permanent damage to electronic components.

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### HINT

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To ease the CPU module removal task, lay the system flat on its unopened side.

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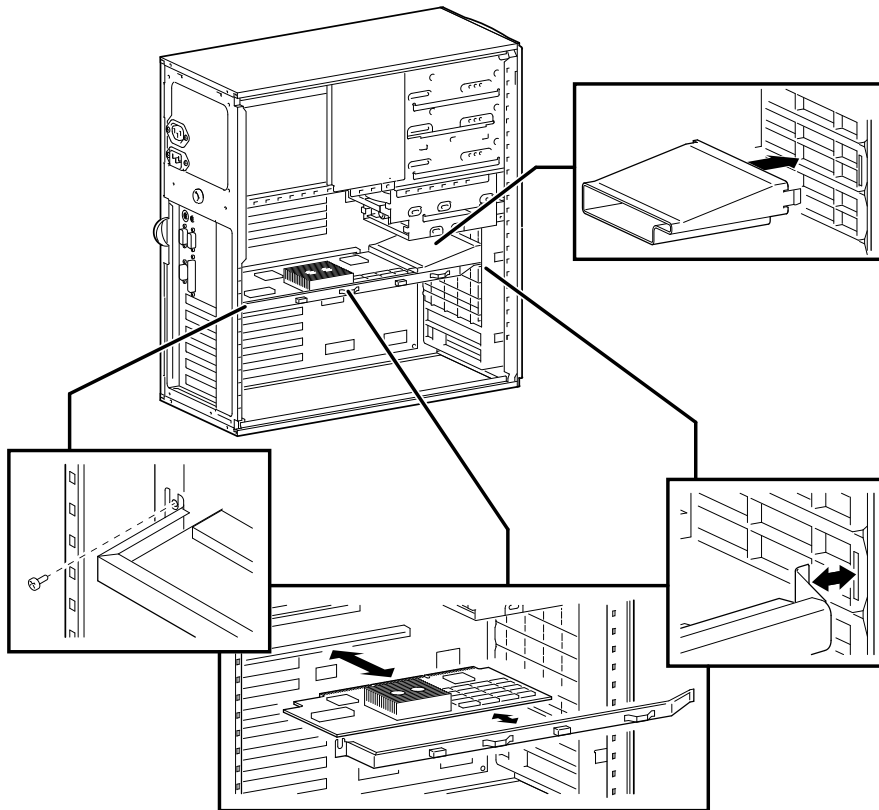
## Celebris XL, Alpha XL 233, and 266 CPU Removal

To remove the Celebris XL or Alpha XL 233 or 266 CPU module, refer to Figure 2–1 and follow the steps below (*Refer to the next section to remove an Alpha XL 300 CPU.*):

1. Remove the screw holding the CPU module-retaining bar (crossbar). Save the screw, and use it later to mount the pivot bracket.
2. Gently pull the rear of the retaining bar and swing it away from the system until the tab in the fan housing comes out.
3. Remove the CPU module and set it aside.

## Upgrading the Celebris XL and Alpha XL

4. Some systems have a fan pipe attached to the fan/speaker assembly. Press the tab and remove the fan pipe, if one is present.
5. Proceed to the section, Removing the Existing Motherboard.



**Figure 2–1: Removing the Existing CPU Module**

### Alpha XL 300 CPU Removal

To remove the Alpha XL 300 CPU, refer to Figure 2–2 and follow these steps:

1. Loosen the captive screw ① holding the CPU module ejector brackets together

---

#### **CAUTION**

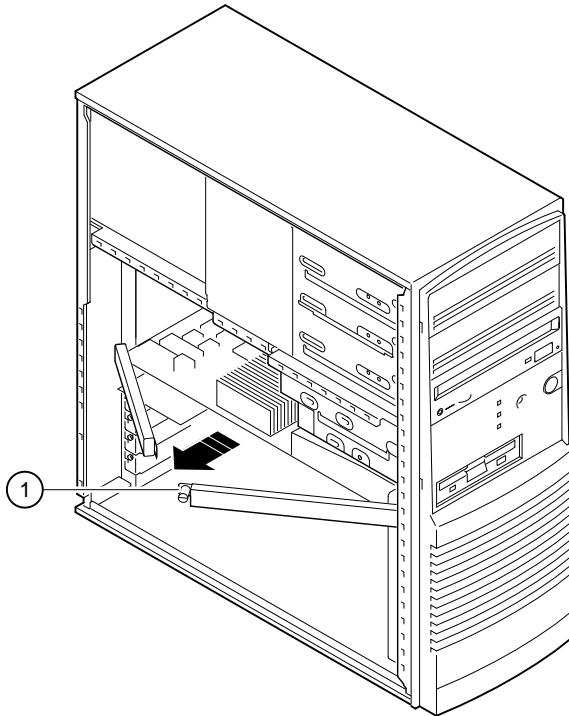
---

Opening the ejector brackets too far will cause damage to the CPU module.

---

## Upgrading the Celebris XL and Alpha XL

2. Gently pull the two ejector brackets away from the CPU module *just until* the module is out of the motherboard connector.
3. Continue sliding the CPU module out of the enclosure.
4. Close and fasten the ejector brackets with the captive screw. Set aside the CPU.
5. Proceed to the next section, Removing the Existing Motherboard.



**Figure 2–2: Removing the Alpha XL 300 System CPU**

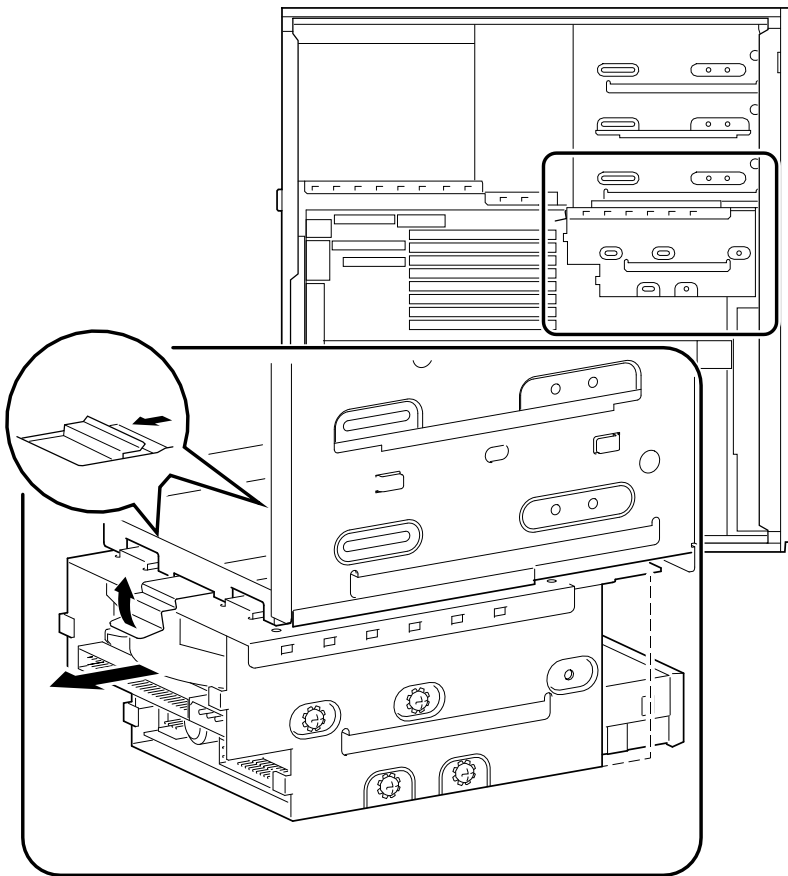
## Removing the Existing Motherboard

Follow these steps to remove the existing motherboard from your system:

1. Disconnect all the cables at the rear of the system (keyboard, mouse, COM1 and COM2, parallel, SCSI, and any cables attached to PCI and ISA options).
2. Remove the options from the PCI and ISA slots.
3. For Alpha XL 300 systems only, remove the MAU card by removing the mounting screw and disconnecting the cable from the motherboard at J20.

## Upgrading the Celebris XL and Alpha XL

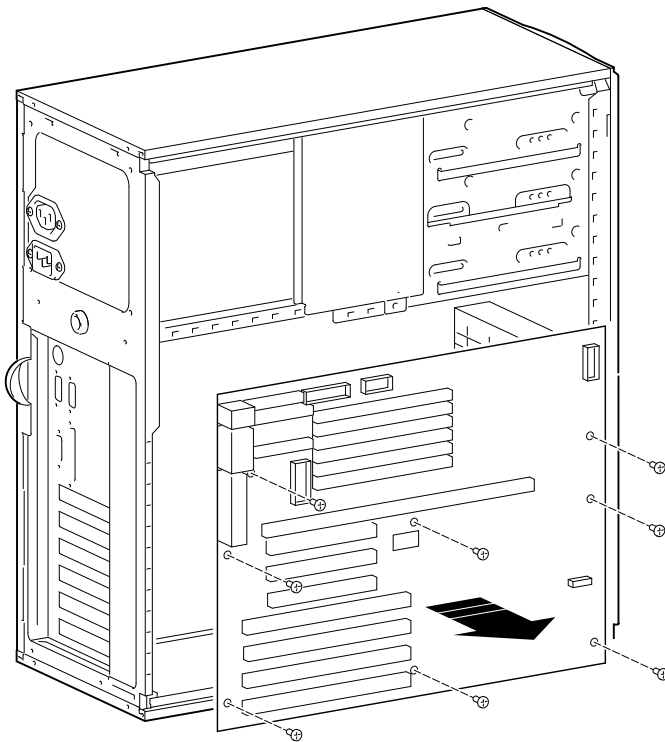
4. Refer to Figure 2–3 and remove the lower drive bay by pressing the metal tab upward and sliding the bay assembly toward the rear of the system. Carefully lay the assembly, with the cables attached, on the upper storage bay.



**Figure 2–3: Lower Drive Bay Removal**

## Upgrading the Celebris XL and Alpha XL

5. Disconnect the speaker connector from the motherboard.
6. Remove the fan/speaker assembly by pushing down on the two tabs while pulling the assembly toward the rear of the system. When the assembly comes free, carefully remove the thermistor from the plastic clip on the assembly. Disconnect the fan power cable at the in-line connector. Set the fan/speaker assembly aside.
7. Remove the remaining cables from the motherboard connectors (front panel connector, four power cables, floppy bus cable, and SCSI bus cable).
8. Refer to Figure 2-4 while removing the screws (8) holding the motherboard in place.
9. Gently loosen the motherboard from its seating.
10. Guide the motherboard out by first sliding it toward the front of the enclosure, and then raising its lower edge and sliding the module out of the enclosure.
11. Remove the memory SIMMs (up to six on all systems except the Alpha XL 300, which has up to eight).



**Figure 2-4: Removing the Motherboard**

## Preparing the Enclosure

Refer to Figure 2–5 and follow the steps below:

1. Insert the standoff insulator plugs ① into the two uppermost standoffs labeled "A" in the enclosure.
2. Untwist the twist tie cable fastener ② and remove the cable from the fastener.
3. Either rotate the twist tie cable fastener 90° or remove it entirely to prevent interference with the new motherboard. Do not reinsert the cable in the fastener.

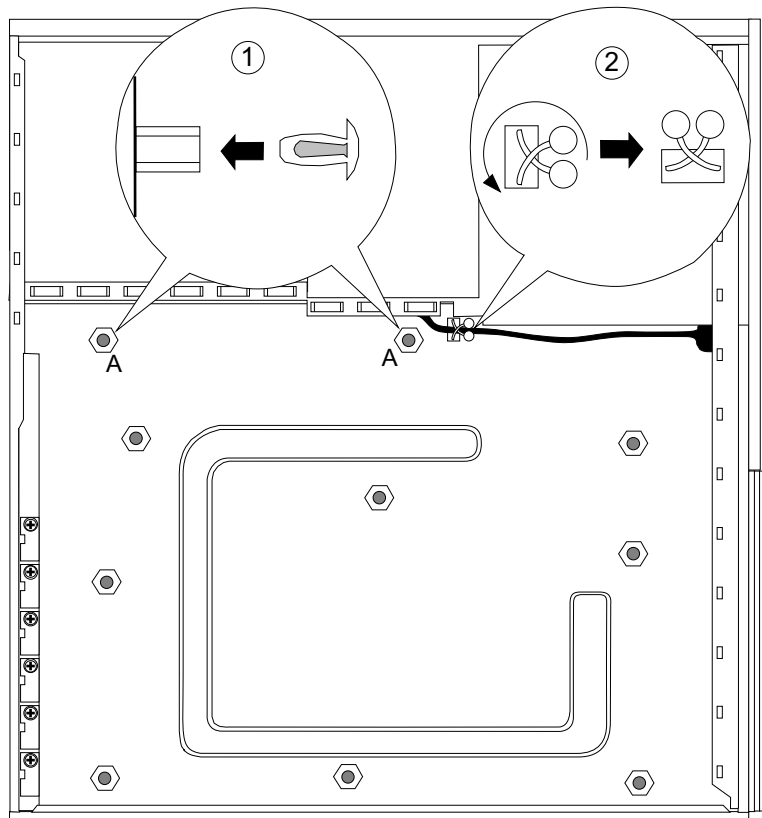


Figure 2–5: Standoff Insulator Plugs and Cable Harness

## Installing the New Motherboard

To install the new Alpha XL 366 and 433 motherboard, first check the jumpers, then and mount and connect it as described in the following sections.

### Check the Motherboard Jumpers

Verify that the motherboard jumpers are set to the desired function. Table 2-1 describes the motherboard jumpers and their factory-default settings for the new motherboard. Figure 2-6 shows the locations of the jumpers.

**Table 2-1: Motherboard Jumper Descriptions**

Jumper	Setting	Function	Description
J21	1 to 2 (D)	Autosense enabled	J21 controls the automatic SCSI bus terminator.
	2 to 3	Autosense and termination disabled	If an external SCSI cable is attached to the SCSI connector, the automatic SCSI terminator turns off. The SCSI bus must be terminated at the end of the external bus.
J22	1 to 2 (D)	Normal	CMOS clear. When 2 to 3 is set, the memory located in the realtime clock is cleared.
	2 to 3	Clear CMOS	

(D) = Default position.

---

### CAUTION

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Do not touch any electronic component unless you are safely grounded. Wear a grounded wrist strap or touch an exposed metal part of the system unit chassis. A static discharge from your fingers can result in permanent damage to electronic components.

---



Upgrading the Celebris XL and Alpha XL

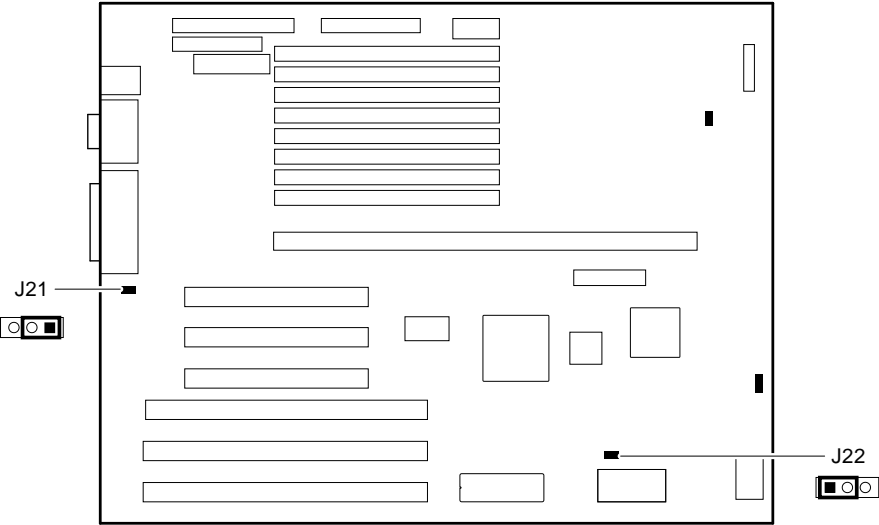


Figure 2-6: Motherboard Jumper Locations

## Upgrading the Celebris XL and Alpha XL

### Mounting the Motherboard

While referring to Figure 2–7, follow the steps below to mount the motherboard in the enclosure:

1. Slide the motherboard into the assembly, top edge first. Ensure that no cables are trapped behind the motherboard.
2. Adjust the motherboard so that the connectors fit through the rear bulkhead and the module is well seated. Some enclosures have an alignment pin to help orient the motherboard.
3. Secure the motherboard with the eight screws you saved when the original motherboard was removed.

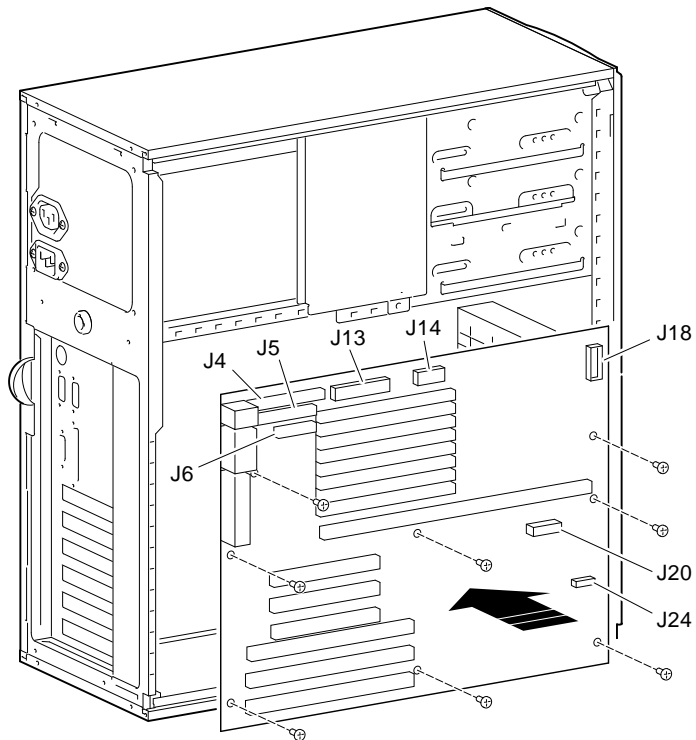
### Connecting the Motherboard

To connect the new motherboard to your system, refer to Figure 2–7 and follow these steps:

1. Connect the front-panel cable to J18.
2. Connect power-supply connector P3 to J14.
3. Connect the P1 and P2 connectors from the power supply to right and left side of J13, respectively.
4. Connect the internal SCSI bus ribbon cable to J4.
5. Connect the floppy drive bus ribbon cable to J5.
6. Connect power supply connector P10 to J6.
7. Reinstall the fan/speaker assembly.
  - a. While holding the fan/speaker assembly, connect the fan power inline connector to the power-supply cable.
  - b. Keep the thermistor clear while guiding the fan/speaker tabs into the enclosure slots near the front edge of the motherboard.
  - c. Swing the fan/speaker assembly toward the front of the system until the spring tabs snap into place.
  - d. Place the thermistor in the plastic clip on the rear of the fan/speaker assembly. Ensure that the thermistor sits in the airflow path.

## Upgrading the Celebris XL and Alpha XL

8. Connect the speaker cable to J24 on the motherboard.
9. Replace the lower drive bay by aligning the floppy drive with the opening in the front of the enclosure. Press the assembly up and forward until the metal clip snaps in place and secures the drive bay.

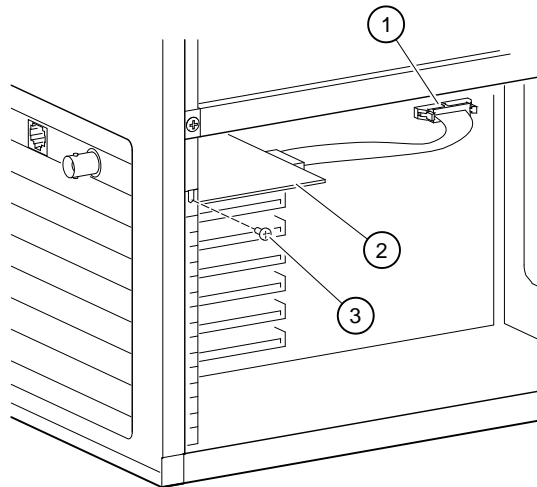


**Figure 2-7: Installing the Alpha XL 366 and 433 Motherboard**

## Installing the MAU Card

To add the MAU card to the system (or to reinstall the MAU that came with the Alpha XL 300), refer to Figure 2–8 and follow these steps:

1. Install either end of the 20-conductor ribbon cable to the motherboard J20 ①. Press the plug evenly into the connector until it locks into place.
2. Connect the other end of the cable to J2 on the Ethernet MAU card ②.
3. Install the Ethernet MAU card by attaching it to the top expansion slot on the inside of the rear bulkhead. If a blank panel is installed in the slot, remove it first. Ensure that the Twisted-Pair (RJ45) connector is aligned between the slot edges. Secure the MAU with one screw ③.



**Figure 2–8: Installing the MAU**

---

**NOTE**

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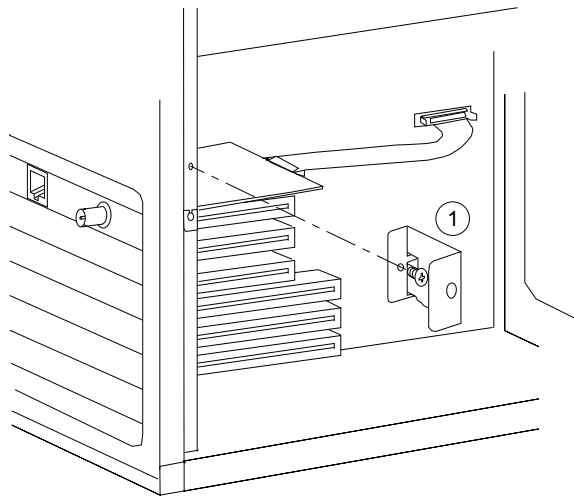
When the system is booted and Windows NT discovers a different Ethernet controller than was previously used, you may have to remove and install the driver.

---

## Installing the Pivot Bracket

The pivot bracket is part of the 366- and 433-MHz CPU module insertion/ejection system. (The pivot bracket is already installed on Alpha XL 300 systems.) To install the bracket ①, refer to Figure 2-9 and follow these steps:

1. Insert the screw (previously removed from the CPU module retaining bar) into the small hole in the pivot bracket ①. Place the tip of a Philips screwdriver through the large pivot-bracket hole and into the screw head.
2. Attach the pivot bracket with the screw to the rear frame of the enclosure. Use the same hole that held the CPU module-retaining bar. (The forked prongs on the pivot bracket should be facing the front of the system.)



**Figure 2-9: Pivot Bracket Installation**

## Installing Memory SIMMs

Insert either four or eight 36-bit SIMMs into the motherboard. Refer to Figure 2–10 and insert the SIMMs, one at a time, starting at the top connector and working toward the bottom connector.

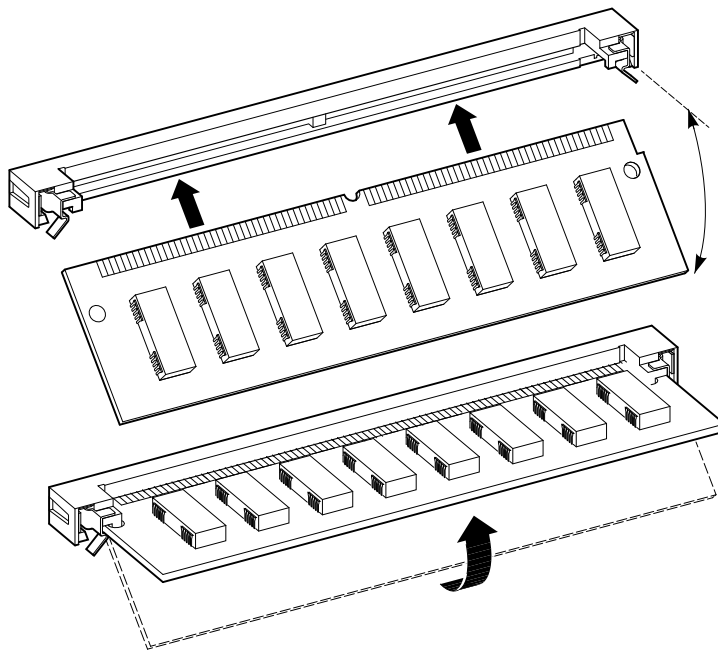
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### CAUTION

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*You must use 36-bit SIMMs. Do not use 33-bit SIMMs. The SIMMs must be installed as one bank of four or two banks of eight SIMMs.*

---



**Figure 2–10: Memory SIMM Installation**

## Replacing the PCI/ISA Options

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**NOTE**

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The Alpha XL 366/433 motherboard contains one less ISA slot than the motherboard it replaced. (The exception is the Alpha XL 300.) However, the new motherboard has an embedded Ethernet controller .

---

To install the PCI and ISA options, follow these steps:

1. Remove the appropriate option-slot metal filler plate if it is not already out.
2. Insert the option module into the appropriate option slot.
3. Fully seat the module into the option connector on the motherboard.
4. Secure the module with the screw you saved earlier when you removed the option.
5. Repeat the above steps for the remaining options.

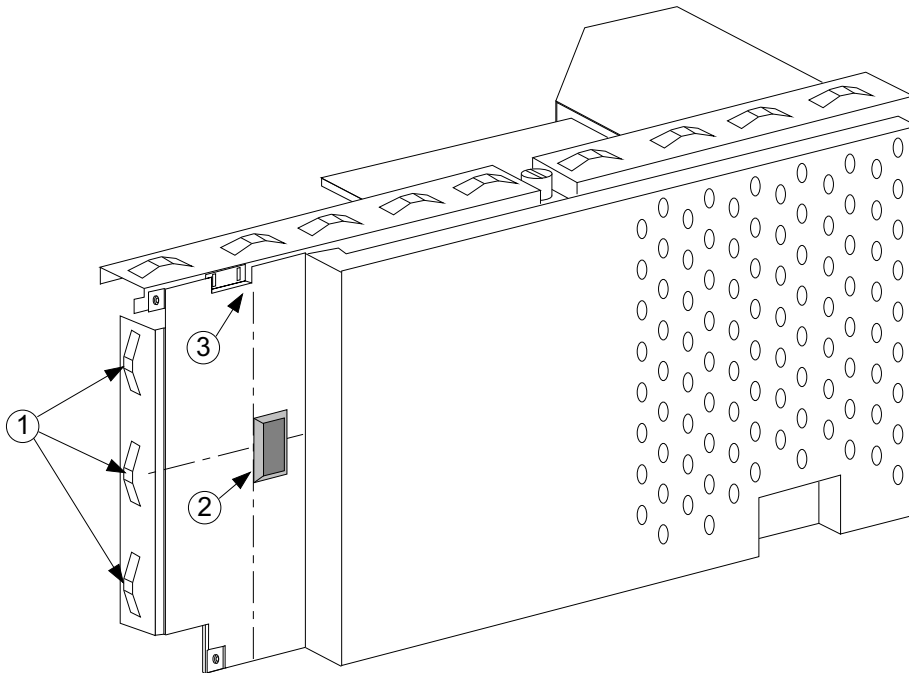
## Installing the Alpha XL 366- or 433-MHz CPU

This section describes how to prepare the CPU module, how to verify that the CPU module jumpers are in their default positions, and how to install the CPU module.

### Preparing the CPU Module

Refer to Figure 2–11 and follow the steps below:

1. Remove the three fingerstock clips ① from the left side of the CPU module assembly.
2. If no plastic insulating material is present on the CPU module shield at ②, install the stick-on rubber insulating pad as shown. Center the pad on the lengthwise axis of the module and line up the edge of the pad with the edge of the tab cutout ③.



**Figure 2–11: CPU Module Fingerstock Clips and Insulator**



## **CPU Module Jumpers and Switches**

Jumper pins allow you to set specific-system parameters. To change a jumper, follow these steps:

1. Remove the jumper block from its current location with your fingers or a pair of small needle-nosed pliers.
2. Place the jumper over the two pins designated for the desired setting.
3. Press the jumper evenly onto the pins. Be careful not to bend the pins.

Figure 2–12 shows the locations of the CPU module jumper pins.

## Upgrading the Celebris XL and Alpha XL

Table 2-2 lists the CPU module jumpers and factory-default settings. Table 2-3 lists the SW1 and SW2 settings for the 366- and 433-MHz CPUs.

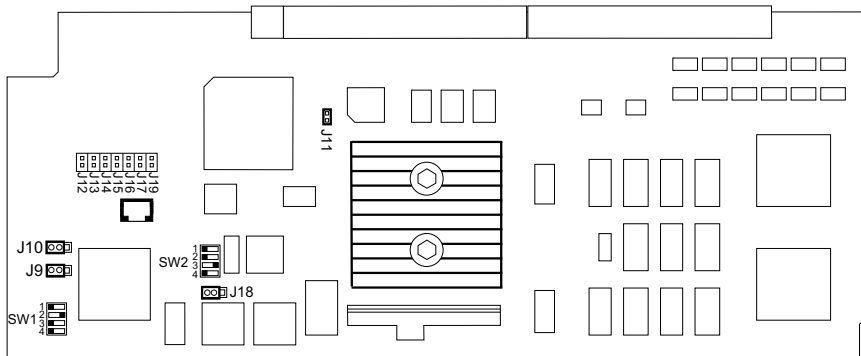
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### CAUTION

---

Do not touch any electronic component unless you are safely grounded. Wear a grounded wrist strap or touch an exposed metal part of the system unit chassis. A static discharge from your fingers can result in permanent damage to electronic components.

---



**Figure 2-12: 366- and 433-MHz CPU Module Jumpers**

## Upgrading the Celebris XL and Alpha XL

**Table 2-2: 366- and 433-MHz CPU Module Jumper Descriptions**

Jumper	Pins	Function	Description
J9	1 to 2 2 to 3 (D)	Secure Not secure (D)	Secure console.
J10	1 to 2 2 to 3 (D)	Alternate console Primary (D)	Alternate console.
J11 J12 J13 J14 J15 J16 J17 J19	In (D) Out Out Out Out Out Out Out	Power up (D) Mini-console Failsafe floppy MFG Memtest Reserved Reserved MCHK mini-console No Init mini-console	Jumpers J11–J17 and J19 are used to select one of the eight SROM programs. The selected program is executed on power up. Only one of the SROM Program Select jumpers can be in at a time.
J18	1 to 2 2 to 3 (D)	Write disabled Write enabled (D)	FlashROM write enabled.

(D) = Default position.

**Table 2-3: 366- and 433-MHz CPU Module Switch Settings**

Speed	SW1				SW2			
	1	2	3	4	1	2	3	4
366	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
433	OFF	OFF	ON	OFF	ON	OFF	OFF	ON

## Upgrading the Celebris XL and Alpha XL

### Inserting the CPU Module

To insert the Alpha XL 366- or 433-MHz CPU module, refer to Figure 2–13 and follow these steps:

---

#### CAUTION

---

Do not touch any electronic component unless you are safely grounded. Wear a grounded wrist strap or touch an exposed metal part of the system unit chassis. A static discharge from your fingers can result in permanent damage to electronic components.

---

1. Remove the new CPU module from its ESD-protected bag and check that the configuration jumpers are set properly.

---

#### CAUTION

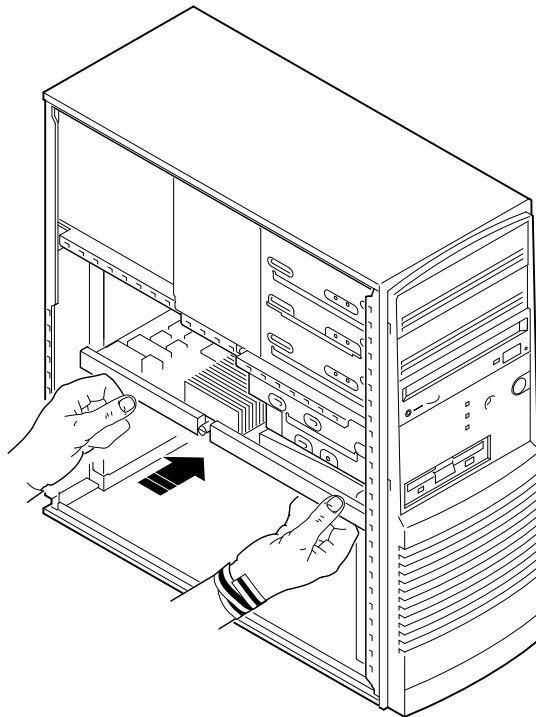
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The CPU module ejector brackets are used *only* for removing the module. At all other times, the brackets must be fastened together. If you have to remove the CPU module, exercise caution. Opening the ejector brackets too far will cause damage to the CPU module.

---

2. Guide the fan pipe at the front edge of the CPU module into the third slot down on the fan/speaker assembly, while at the same time guiding the rear of the module through the two tabs on the pivot bracket. Ensure that you keep the module even as it slides toward the connector.
3. Before seating the module, make sure the CPU module connector is aligned properly with the motherboard connector. Apply even, firm pressure on both ends of the CPU module until it seats in the motherboard.

## Upgrading the Celebris XL and Alpha XL



**Figure 2–13: Inserting the 366-MHz CPU Module**

### **Before Turning on the Power**

Perform these three final steps before powering on the system:

1. Replace the side cover and secure it with the chassis lock.
2. Connect the cables to the rear bulkhead connectors.
3. Remove the backing from the medallion (Alpha XL 366 or Alpha XL 433) and place it over the existing medallion on the front of the system.

Now the system is ready. Turn on the power.

Proceed to Chapter 6.



# 3

---

## Upgrading the Alpha XL 366

### Introduction

This chapter describes how to upgrade from an Alpha XL 366 to an Alpha XL 433 system. Topics include how to:

- Remove the Alpha XL 366-MHz CPU module.
- Install the Alpha XL 433-MHz CPU module.

Prior to performing the steps in this chapter, ensure that the:

1. Windows NT operating system has been shut down.
2. System has been powered off.
3. Side cover has been removed.

## Removing the 366-MHz CPU Module

This section describes how to remove the 366-MHz CPU module.

---

### CAUTION

---

Do not touch any electronic component unless you are safely grounded. Wear a grounded wrist strap or touch an exposed metal part of the system unit chassis. A static discharge from your fingers can result in permanent damage to electronic components.

---

---

### HINT

---

To ease the CPU module removal task, lay the system flat on its unopened side.

---

To remove the Alpha XL 366 CPU, refer to Figure 3-1 and follow these steps:

1. Loosen the captive screw ① holding the CPU module ejector brackets together.

---

### CAUTION

---

Opening the ejector brackets too far will cause damage to the CPU module.

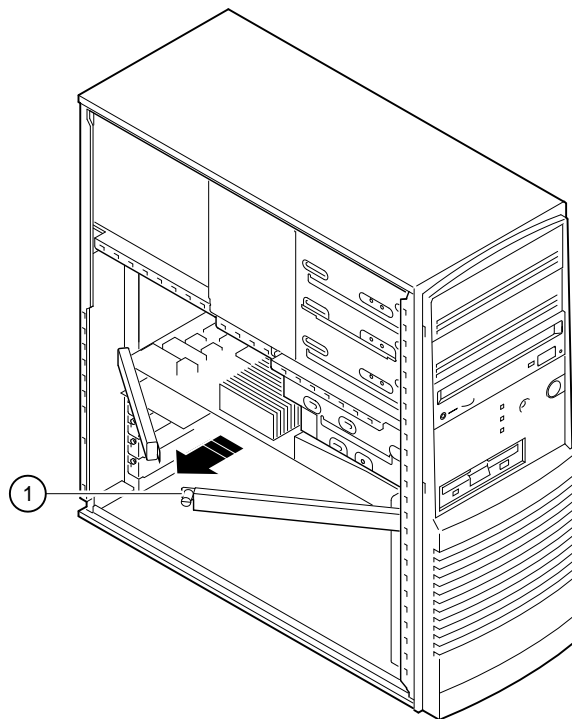
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2. Gently pull the two ejector brackets away from the CPU module *just until* the module is free of the motherboard connector.
3. Continue sliding the CPU module out of the enclosure and set it aside.



## Upgrading the Alpha XL 366

4. Close the ejector brackets and fasten them together with the screw ①.
5. Proceed to the next section.



**Figure 3–1: Removing the Alpha XL 366 System CPU**

## Installing the Alpha XL 433-CPU

This section describes how to prepare the CPU module, how to verify that the CPU module jumpers are in their default positions, and how to install the CPU module.

### Preparing the CPU Module

Refer to Figure 3–2 and follow the steps below:

1. Remove the three fingerstock clips ①, if present, from the left side of the CPU module assembly.
2. If no plastic insulating material is present on the CPU module shield at ②, install the stick-on rubber insulating pad as shown. Center the pad on the lengthwise axis of the module and line up the edge of the pad with the edge of the tab cutout ③.

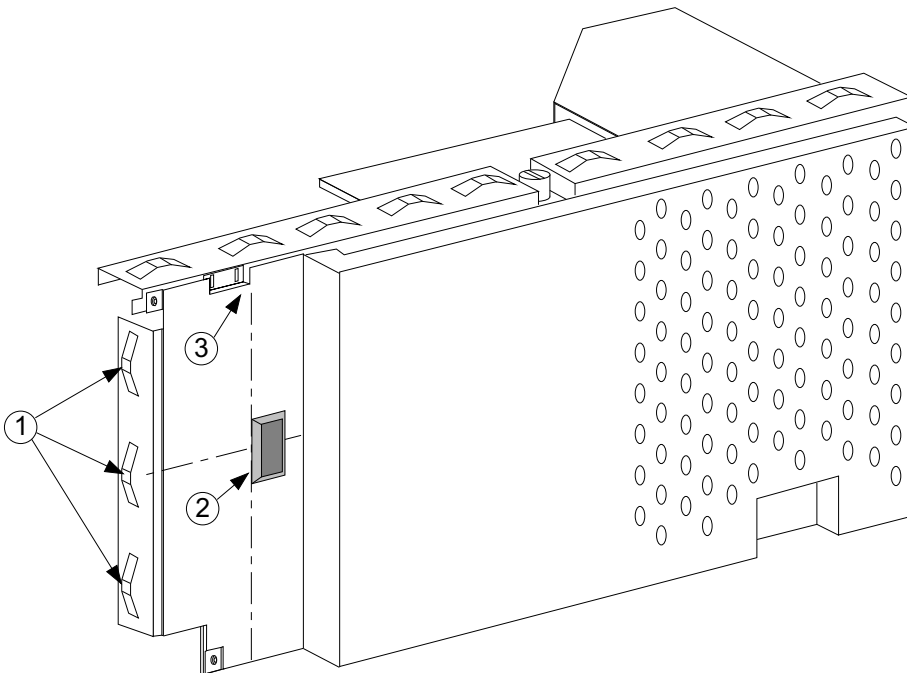


Figure 3–2: CPU Module Fingerstock Clips and Insulator

### **Alpha XL 433 CPU Module Jumpers and Switches**

Jumper pins allow you to set specific-system parameters. To change a jumper, follow these steps:

1. Remove the jumper block from its current location with your fingers or a pair of small needle-nosed pliers.
2. Place the jumper over the two pins designated for the desired setting.
3. Press the jumper evenly onto the pins. Be careful not to bend the pins.

Figure 3-3 shows the locations of the CPU module jumper pins.

## Upgrading the Alpha XL 366

Table 3-1 lists the CPU module jumpers and factory-default settings. Table 3-2 lists the SW1 and SW2 settings for the 433-MHz CPU.

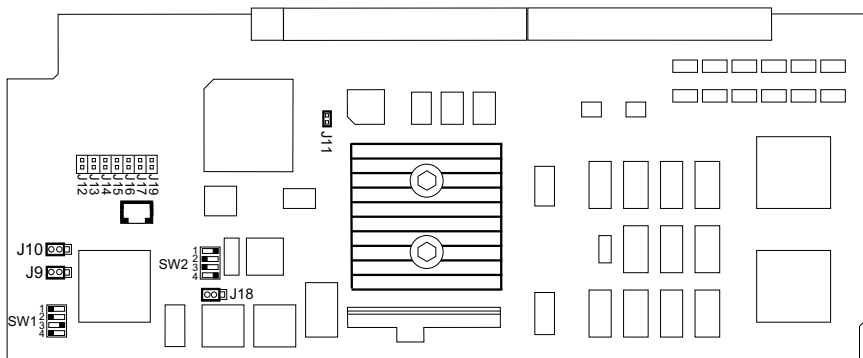
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### CAUTION

---

Do not touch any electronic component unless you are safely grounded. Wear a grounded wrist strap or touch an exposed metal part of the system unit chassis. A static discharge from your fingers can result in permanent damage to electronic components.

---



**Figure 3-3: 433-MHz CPU Module Jumpers**

## Upgrading the Alpha XL 366

**Table 3-1: 433-MHz CPU Module Jumper Descriptions**

Jumper	Pins	Function	Description
J9	1 to 2 2 to 3 (D)	Secure Not secure (D)	Secure console.
J10	1 to 2 2 to 3 (D)	Alternate console Primary (D)	Alternate console.
J11 J12 J13 J14 J15 J16 J17 J19	In (D) Out Out Out Out Out Out Out	Power up (D) Mini-console Failsafe floppy MFG Memtest Reserved Reserved MCHK mini-console No Init mini-console	Jumpers J11–J17 and J19 are used to select one of the eight SROM programs. The selected program is executed on power up. Only one of the SROM Program Select jumpers can be in at a time.
J18	1 to 2 2 to 3 (D)	Write disabled Write enabled (D)	FlashROM write enabled.

(D) = Default position.

**Table 3-2: 433-MHz CPU Module Switch Settings**

Speed	SW1				SW2			
	1	2	3	4	1	2	3	4
433	OFF	OFF	ON	OFF	ON	OFF	OFF	ON

## Inserting the 433-MHz CPU Module

To insert the Alpha XL 433-MHz CPU module, refer to Figure 3–4 and follow these steps:

---

**CAUTION**

---

Do not touch any electronic component unless you are safely grounded. Wear a grounded wrist strap or touch an exposed metal part of the system unit chassis. A static discharge from your fingers can result in permanent damage to electronic components.

---

1. Remove the 433-MHz CPU module from its ESD-protected bag and check that the configuration jumpers are set properly.

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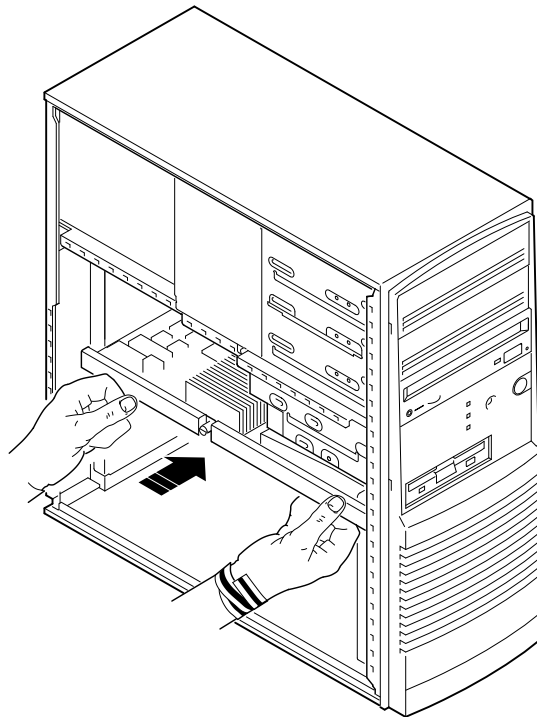
**CAUTION**

---

The CPU module ejector brackets are used *only* for removing the module. At all other times, the brackets must be fastened together. If you have to remove the CPU module, exercise caution. Opening the ejector brackets too far will cause damage to the CPU module.

---

2. Guide the fan pipe at the front edge of the CPU module into the third slot down on the fan/speaker assembly, while at the same time guiding the rear of the module through the two tabs on the pivot bracket. Ensure that you keep the module even as it slides toward the connector.
3. Before seating the module, make sure the CPU module connector is aligned properly with the motherboard connector. Apply even, firm pressure on both ends of the CPU module until it seats in the motherboard.



**Figure 3–4: Inserting the 433-MHz CPU Module**

## **Before Turning on the Power**

Perform these three final steps before powering on the system:

1. Replace the side cover and secure it with the chassis lock.
2. Connect the cables to the rear bulkhead connectors.
3. Remove the backing from the new Alpha XL 433 medallion and place it over the existing medallion on the front of the system.

Now the system is ready. Turn on the power.

Proceed to Chapter 6.





# 4

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## Preparing the Disk

### Introduction

This chapter is intended to help you prepare a former Celebris XL system disk for use on an Alpha XL 366 or 433 system. The Alpha XL 366 system uses AlphaBIOS firmware.

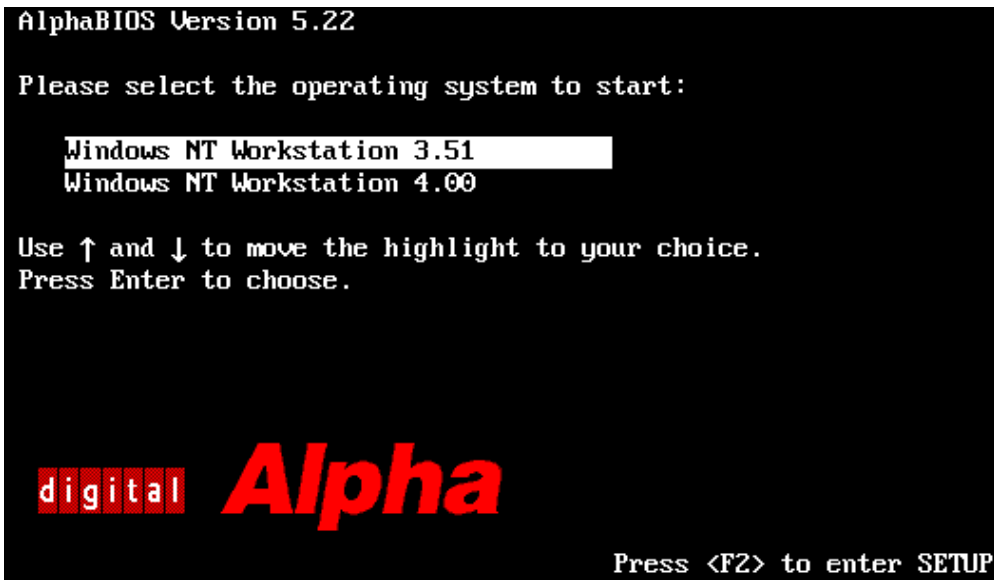
If you are upgrading from an Alpha XL 233, 266, or 300 to an Alpha XL 366 system, skip this chapter and go directly to Chapter 6, Configuring the Alpha XL 366 and 433 System.

### Powering On the System

When you power on the Digital Alpha XL 366 or 433 system, the system is initialized and the AlphaBIOS firmware is started. AlphaBIOS performs several initialization tasks. Among these are: initializing the keyboard and video devices, testing memory, and detecting and initializing SCSI disk controllers. After the video device is initialized, subsequent steps are displayed on the monitor in an initialization window.

## Preparing the Disk

When the SCSI initialization is complete, AlphaBIOS leaves the initialization window and displays the boot screen similar to the following one:



## Displaying the System Configuration

The `Display System Configuration . . .` command is selected from the AlphaBIOS Setup screen. Use this command to look at your system and display information about:

- Devices that were detected (and are supported) by the AlphaBIOS firmware.
- Processor revision and speed as well as physical memory size.
- Video option.
- PCI slots including vendor, revision, and device type.

## Setting the PCI Parity and SCSI Termination

PCI parity and SCSI termination are controlled from the Advanced CMOS Setup menu. Press [F6] while the CMOS Setup screen is displayed to enter Advanced CMOS Setup.

In the Alpha XL 366 and 433 system, the SCSI termination is controlled by the hardware. The AlphaBIOS value has no effect on SCSI termination. Check the PCI parity setting to see that it matches the value recorded before the hardware part of the upgrade was started.

## Partitioning and Formatting the Disk

Digital recommends that partitions on the system disk (typically, disk 0 on the first SCSI controller in non-RAID Windows NT Workstation systems) be set up as follows:

- Partition 1 (typically, the "C" drive) is the size of the disk *less* 6 MB and formatted FAT. Normally, you select "convert to NTFS" during the Windows NT installation.
- Partition 2 (typically, the "D" drive) is 6 MB, formatted FAT, and identified as the system partition.

Follow the procedure in Table 4-1 to set up partitions on the system disk.

**Table 4-1: Setting Up Partitions with AlphaBIOS Firmware**

Step	Action	Result
1	Power on the system.	AlphaBIOS initializes the system and displays the AlphaBIOS boot screen.
2	From the AlphaBIOS boot screen, press [F2].	AlphaBIOS setup screen displays.
3	Select Hard Disk Setup... Press [Enter].	If disk 0 is partitioned, proceed to Step 4. If the message "No partitions were found on disk 0." displays, go to Step 5.
4	Press [F7].	Express Hard Disk Setup confirmation message displays.
5	Press [Enter] to continue.	Express Setup Complete message displays.
6	Press [Enter].	A list of disks, including partitions, displays.
7	Press [Escape].	AlphaBIOS setup screen displays.
8	Press [Escape].	AlphaBIOS boot screen displays.



# 5

---

## Installing the Operating System

### Introduction

This chapter provides the information you need to begin a Windows NT operating system installation when upgrading from a Celebris XL to an Alpha XL 366 or 433 system. Once you have started the installation, follow the on-screen instructions and refer to the appropriate operating system documentation.

### Windows NT V3.51 Operating System Installation Steps

Refer to Table 5-1 for the steps to start installing Windows NT Workstation on a properly partitioned and formatted disk. Steps are included for video driver installation as well.

**Table 5-1: Starting a Windows NT Workstation V3.51 Installation**

Step	Action	Result or Displayed Text
1	Insert the Microsoft® Windows NT™ Workstation (Version 3.51) CD-ROM into the CD drive.	CD-ROM drive is ready.
2	From the AlphaBIOS Boot screen, Press [F2]	AlphaBIOS Setup screen appears.
3	Select Install Windows NT	Windows NT Setup displays the message, "Windows NT Setup could not determine what type of computer you have."

## Installing the Operating System

**Table 5-1: Starting a Windows NT Workstation V3.51 Installation (continued)**

Step	Action	Result or Displayed Text
4	Select <code>Other</code> . Press [Enter].	Insert the Manufacturer-supplied hardware support disk into Drive A:.
5	Insert the manufacturer-supplied hardware support disk. Press [Enter] when ready.	You have chosen to change your computer type to one supported by a disk provided by a hardware manufacturer. A list of systems is displayed.
6	Select the <code>Alpha XL 300/366 Family</code> system type. Press [Enter].	The Windows NT Workstation Setup screen displays.
7	Press [Enter].	You may now continue the installation process.
8	Select <code>Custom Setup</code> by pressing C.	Setup has recognized the following mass storage devices in your computer: NCR PCI (53c810)
9	Press [Enter] to continue.	Setup has determined that your computer contains the following hardware and software components: Computer: Alpha XL 300/366 Family Display: VGA Compatible Keyboard: XT, AT, or Enhanced (83-102 keys) Keyboard Layout: US Pointing Device: Mouse Port Mouse No Changes: The above list matches my computer.
10	Select <code>Display:</code> (to load a display driver). Press [Enter].	You have asked to change the type of display to be installed.
11	If your display controller type is <i>not</i> listed, select <code>Other</code> . Press [Enter].	Please insert the disk labeled Manufacturer-supplied hardware support disk into drive A:.
12	Insert the appropriate display driver diskette. Press [Enter].	A list of display types appears.
13	Select the appropriate display. Press [Enter].	The list of hardware and software components is displayed.
14	Select <code>The above list matches my computer</code> . Press [Enter].	"The list below shows existing partitions and spaces available for creating new partitions."
15	Select the target disk for the Windows NT installation. Press [Enter].	Follow the on-screen instructions and continue the installation. For more information, refer to the <i>Microsoft Windows NT Workstation System Guide</i> .

## Installing the Operating System

### Windows NT V4.0 Operating System Installation Steps

Refer to Table 5-2 for the steps to start installing Windows NT Workstation on a properly partitioned and formatted disk. Steps are included for video driver installation as well.

**Table 5-2: Starting a Windows NT Workstation V4.0 Installation**

Step	Action	Result or Displayed Text
1	Insert the Microsoft® Windows NT™ Workstation (Version 4.0) CD-ROM into the CD drive.	CD-ROM drive is ready.
2	From the AlphaBIOS Boot screen, Press [F2]	AlphaBIOS Setup screen appears.
3	Select <b>Install Windows NT</b> , press [Enter]	Windows NT Setup screen appears and files are loaded. After loading, the Windows NT Workstation Setup screen displays.
4	Press [Enter] to continue.	Setup has recognized the following mass storage devices in your computer: Symbios Logic C810 PCI SCSI Host Adapter.
5	Press [Enter] to continue.	Windows NT Licensing Agreement is displayed. Use the [Page Down] key to display the remaining pages of the agreement.
6	Press [F8] to agree.	Setup searches for previous versions of Windows NT. If none are found, setup displays the following:  Setup has determined that your computer contains the following hardware and software components: Computer: Alpha XL 300/366 Family Display: VGA Compatible Keyboard: XT, AT, or Enhanced (83-104 keys) Keyboard Layout: US Pointing Device: Mouse Port Mouse No Changes: The above list matches my computer.
7	If no changes are required, go to Step 12; to change the display, go to Step 8.	None.
8	Select <b>Display:</b> (to load a display driver). Press [Enter].	You have asked to change the type of display to be installed.
9	If your display controller type is <i>not</i> listed, select <b>Other</b> . Press [Enter].	Please insert the disk labeled Manufacturer-supplied hardware support disk into drive A:.

## Installing the Operating System

**Table 5-2: Starting a Windows NT Workstation V4.0 Installation (continued)**

Step	Action	Result or Displayed Text
10	Insert the appropriate display driver diskette. Press [Enter].	A list of display types appears.
11	Select the appropriate display. Press [Enter].	The list of hardware and software components is displayed.
12	Select The above list matches my computer. Press [Enter].	"The list below shows existing partitions and spaces available for creating new partitions."
13	Select the target partition, then press [Enter].	The partition you have chosen is recognized by Windows NT but is unformatted or damaged.
14	Press [C] to continue.	You have asked to install Windows NT on the partition...
15	Select the format, then Press [Enter].	Follow the on-screen instructions and continue the installation.



# 6

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## Configuring the Alpha XL 366 and 433

### Introduction

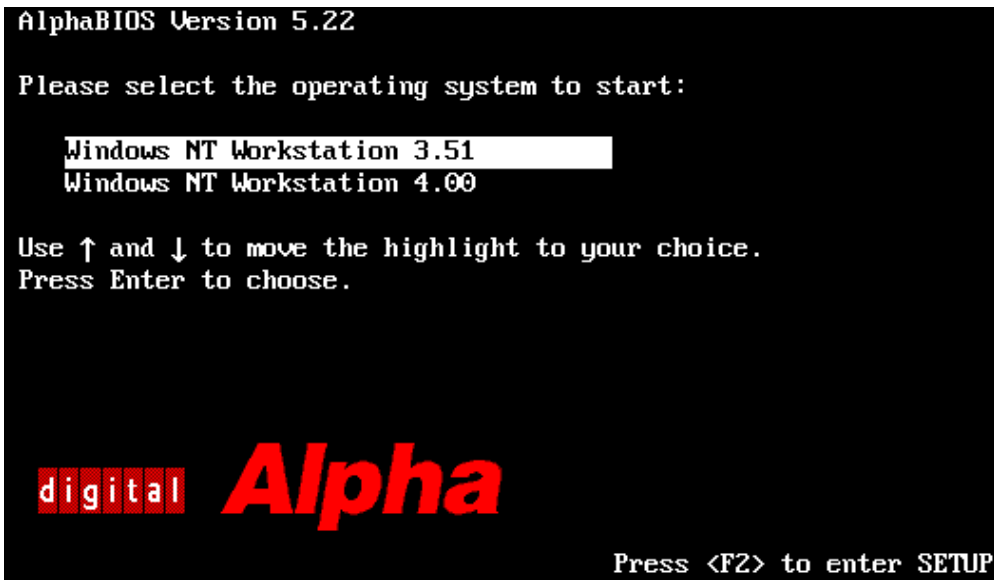
This chapter describes how to configure your Alpha XL 366 or 433 system using the AlphaBIOS firmware. Use the information you recorded in Chapter 1 before the hardware portion of the upgrade was started.

### Powering On the System

When you power on the Digital Alpha XL 366 or 433 system, the system is initialized and the AlphaBIOS firmware is started. AlphaBIOS performs several initialization tasks. Among these are: initializing the keyboard and video devices, testing memory, and detecting and initializing SCSI disk controllers. After the video device is initialized, subsequent steps are displayed on the monitor in an initialization window.

## Configuring the Alpha XL 366 and 433

When the SCSI initialization is complete, AlphaBIOS leaves the initialization window and displays the boot screen similar to the following one:



## Displaying the System Configuration

The `Display System Configuration . . .` command is selected from the AlphaBIOS Setup screen. Use this command to look at your system and display information about:

- Devices that were detected (and are supported) by the AlphaBIOS firmware.
- Processor revision and speed as well as physical memory size.
- Video option.
- PCI slots including vendor, revision, and device type.

## Setting the PCI Parity and SCSI Termination

PCI parity and SCSI termination are controlled from the Advanced CMOS Setup menu. Press [F6] while the CMOS Setup screen is displayed to enter Advanced CMOS Setup.

In the Alpha XL 366 and 433 system, the SCSI termination is controlled by the hardware. The AlphaBIOS value has no effect on SCSI termination. Check the PCI parity setting to see that it matches the value recorded before the hardware part of the upgrade was started.

## Configuring the Alpha XL 366 and 433

### Background

There are some basic function keys you can use to navigate and select items in AlphaBIOS. For more details at any time during the configuration process, press [F1].

### Configuration Steps

Follow the steps in Table 6-1 to configure the Alpha XL 366 or 433 system with AlphaBIOS.

**Table 6-1: Configuring the Alpha XL 366 or 433 with AlphaBIOS**

Step	Action	Result or Displayed Text
1	At the AlphaBIOS boot screen, press [F2].	AlphaBIOS Setup screen appears.
2	Select CMOS Setup; press [Enter].	CMOS Setup screen appears.
3	Press [F7].	The default values are loaded.
4	Set the date and time.	Correct date and time are displayed.
5	Verify the other values displayed are the same as recorded earlier. Change the values if necessary.	The values are the same as those recorded earlier.
6	Press [F6].	The Advanced CMOS Setup screen appears.
7	Verify that the following values are the same as recorded earlier:  PCI Parity Checking Power-Up Memory Test AlphaBIOS Password Option	The default values that ship with new systems are:  Disabled Enabled Disabled
8	Press [F10].	The changes are saved.

### Booting the System

From the AlphaBIOS boot screen, select the appropriate boot name and press [Return].

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#### NOTE

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When the system is booted and Windows NT discovers a different Ethernet controller than was previously used, you may have to remove and install the driver.

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