

Prioris™ XL 6000 Server
PowerGrade with Pentium® Pro Chip
Upgrade

Installation Guide

Order Number: ER-PCB6U-IA. A01

Digital Equipment Corporation

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FCC Note: 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 modification made 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 and television reception; 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 of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to a different outlet than the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

DO NOT attempt to modify this equipment. If modified, the FCC may void your authority to operate this equipment.

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations and meets all requirements of the Australian/New Zealand Regulation AS3548.

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Conventions

Symbol	Meaning
	NOTE: Provides general information.
	WARNING: Indicates the presence of a hazard that can cause personal injury if the hazard is not avoided.



NOTE: You may lose data if you have not backed up your system. If you do not wish to install this kit yourself, contact Digital Customer Service. For a nominal fee, a Customer Service Technician can install it for you.

PowerGrade Option Warranty

This document is a supplement to the warranty information and terms provided with your Prioris Server.

PowerGrade Options Limited Warranty

PowerGrade option kits are qualified Digital Personal Computer Hardware Options that are warranted to be free from defects in material and workmanship under normal use. This Limited Warranty does not extend to any Product not purchased from Digital or from an Authorized Digital Reseller. This Limited Warranty also does not extend to any Product that has been damaged or rendered defective (a) by operation outside the usage parameters stated in section four entitled *Warranty Exclusions and Limitations of Liability* of the *Digital Personal Computers Warranty and Service Information* document; (b) as a result of accident, misuse or abuse; (c) as a result of service or installation by anyone other than Digital, an Authorized Digital Reseller, or an Authorized Digital Service Provider, or (d) by the use of parts not manufactured or sold by Digital.

Upon installation in the appropriate Prioris Server, the PowerGrade option will carry the longer of either a one year Return-to-Digital warranty or the remainder of the warranty period for the Digital Prioris Server.

Warranty Exclusions and Limitations of Liability

Installation of a PowerGrade option requires handling and installing a CPU chip, which must be performed with extreme care to avoid product damage. Therefore, Digital recommends that the installation of this option be performed by an Authorized Digital Service Provider.

Please refer to the “Digital Personal Computers Warranty and Service Information” document provided with your Digital Prioris Server for further information.

Prioris™ XL 6000 Server PowerGrade with Pentium® Pro Chip Upgrade

Introduction

Thank you for purchasing this PowerGrade kit. This kit contains all the components and instructions required to upgrade your CPU to a 200 MHz Pentium® Pro processor with 256KB cache.

Installing this kit may involve updating your system BIOS (Basic Input-Output System). To do this, you will need to remove any video option card, if installed, and enable the internal VGA controller. Once the BIOS process has completed successfully, you can then reinstall any video option card. You **must** install the new BIOS **before** installing your Powergrade kit. This installation guide provides the necessary details.

Kit Contents

Table 1. Kit Contents

Item
Pentium® Pro 200 MHz /256KB CPU assembly
Antistatic wrist strap
ServerWORKS Quick Launch CD-ROM
Installation Guide

Tools and Supplies Needed

- Phillips screwdriver, 1 pt.
- Antistatic wrist strap with grounding clip (supplied)
- Two MS-DOS formatted diskettes

Boot the Quick Launch CD-ROM and Create Diskettes

During this procedure, you will create a BIOS upgrade diskette and a System Configuration Utility (SCU) diskette. The ServerWORKS Quick Launch CD-ROM contains the required BIOS and SCU.

1. Power on your server and boot the ServerWORKS Quick Launch CD-ROM.
2. From the Quick Launch Main Screen, select the “Installations & Utilities” button and the Utility tab.
3. Insert a DOS-formatted diskette into drive A, and choose “BIOS Phlash Diskette,” and select Continue.
4. Insert another diskette into drive A, choose “System Configuration Utility (SCU)” diskette, and select Continue.
5. Select the BIOS version that you created in step 3 to create the appropriate SCU diskette.
6. Select Exit to end Quick Launch.
7. Remove the Quick Launch CD-ROM.

Enable the On-Board VGA Controller

If your system has an optional video controller, you will need to remove it and enable the on-board VGA controller. If you are already using the on-board controller, skip this procedure and go to “Power Down the Server.”

1. Insert the SCU diskette into drive A and turn on or reset your server. The diskette should boot automatically.
2. When the SCU title appears, press any key to continue. Afterwards, follow the instructions on your screen to access the SCU main menu.
3. From the main menu, use the arrow keys to highlight an item and then press Enter to select it. Press F1 at any time for help about a selection.
4. Select the Advanced Control Group and enable the Embedded - PCI VGA controller.
5. Select Save and Exit to save this selection.

Power Down the Server

1. Turn off your server.
2. Disconnect any external devices, the **ac power cord**, and the monitor power cord.
3. Unlock the security lock on the server.
4. Remove the left side panel by sliding it toward the rear of the server.
5. If present, remove any Video Option Card.

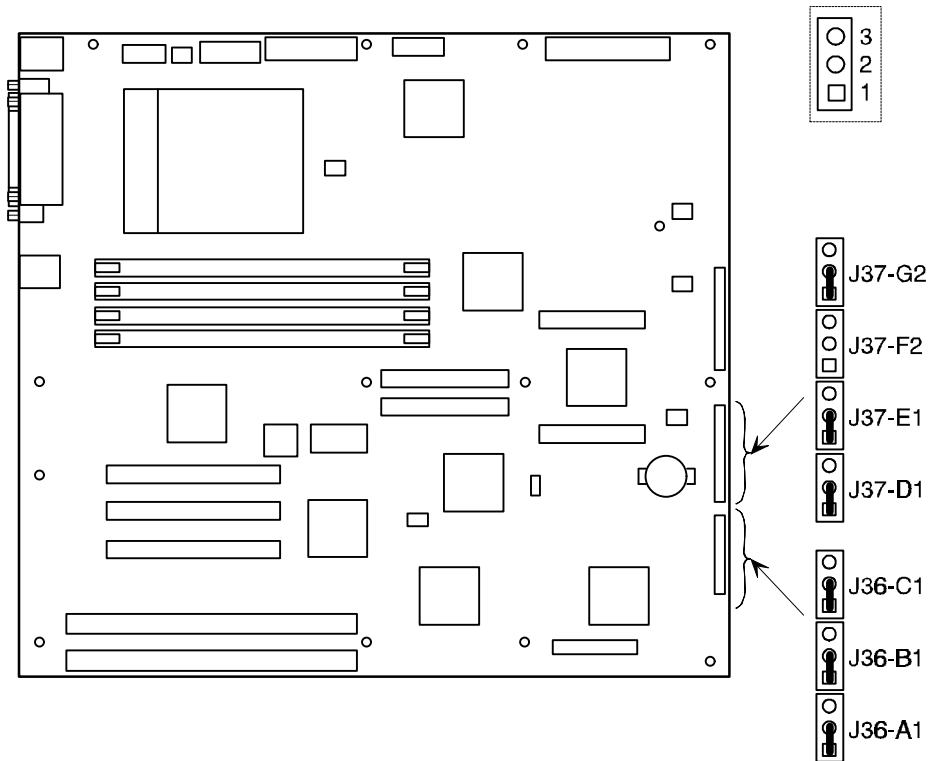


WARNING: You might injure yourself or damage your server if you attempt to remove the side panel before unplugging the ac and monitor power cords.

Set Jumper on the Main Logic Board

The Prioris XL 6000 uses a jumper on the main logic board to allow modification to the system BIOS. Set the following jumper:

J36-C1, pins 2 to 3 Flash Program to Program mode



DEC01088-8

Figure 1. XL 6000 Main Logic Board Jumper Locations

Replace the Panel and Reconnect the Cables

1. Install the left side panel. The server may not power up with the side panel removed.
2. Connect the monitor video cable to the embedded VGA connector if not already connected.
3. Connect the previously removed cables, the monitor power cord, and the server power cord to the back of the server.

Power Up the Server and Update Your BIOS

Use the following procedure to update your BIOS:

1. Power up and boot the server with the BIOS Upgrade diskette installed in drive A.
2. At the Utility screen, press Enter.
3. Use the arrow keys to highlight "Update FLASH Memory area from a file," and press Enter.



NOTE: DO NOT power down the system once this procedure has started.

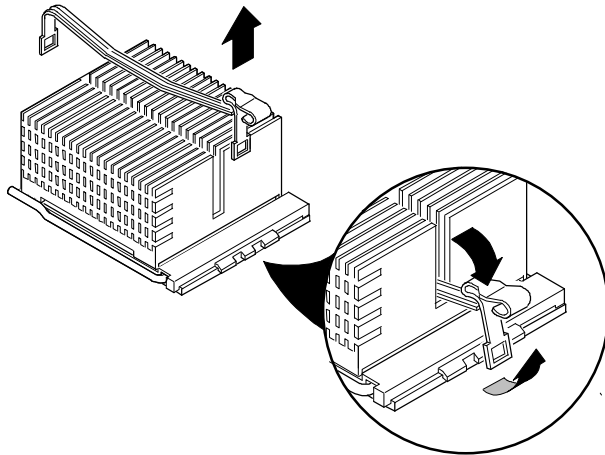
4. Highlight "Update System BIOS & User area," and press Enter.
5. Highlight "1P02DM0.BIO" and press Enter. (Note: This revision may change depending on the system level currently shipping.)
6. "Flash data file has been successfully loaded," is displayed. Using arrow keys, highlight "Continue with Programming," and press Enter.
7. "Reprogramming of the system FLASH memory has completed successfully," is displayed. Press Enter.
8. Remove the diskette from Drive A.

Powergrade Installation

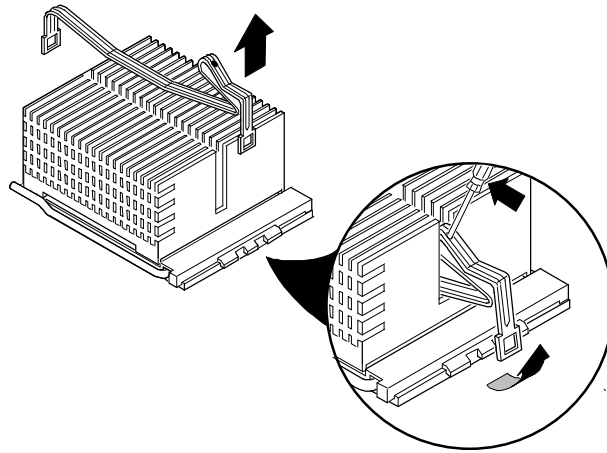
Power down the server as described on Page 3.

Install the CPU Chip

1. Remove the CPU chip from its shipping holder by removing the retaining clip. To remove the clip, press down firmly on the top of the clip. If needed, press down with a small screwdriver in the hole of the second style clip shown in Figure 2.



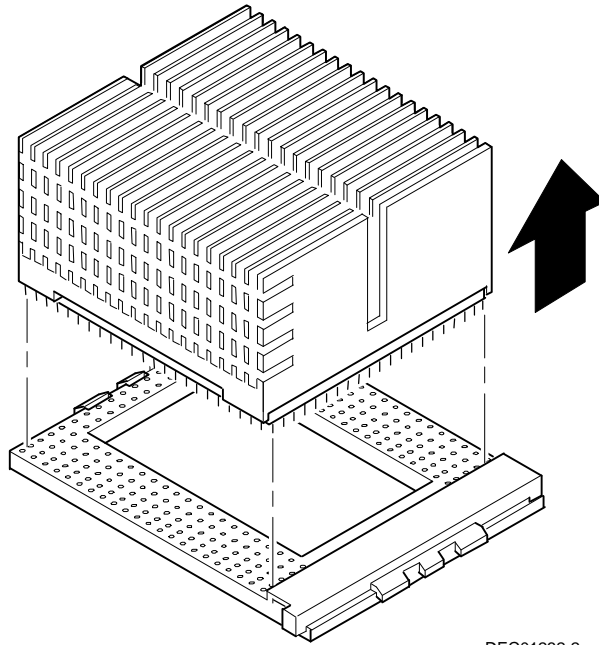
DEC01211-2



DEC01211-3

Figure 2. Removing the Clip from the Shipping Holder

2. Remove the CPU/heat sink assembly from its shipping holder. Do not pull the heat sink off of the CPU chip. Use care not to bend the pins.



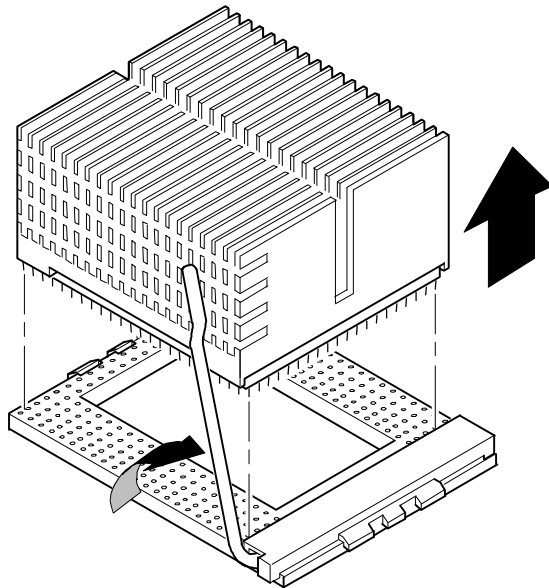
DEC01232-2

Figure 3. Removing the New CPU from its Shipping Holder



NOTE: On a Prioris XL 6000 Server, the new CPU will be installed on the main logic board.

3. On the main logic board, lift up on the lever of the CPU socket and remove the old CPU (Figure 4).
4. Position the pins of the new CPU chip in the socket. Note that the pins are denser on one side for correct orientation. Lower the lever to engage the pins.



DEC01212-2

Figure 4. Removing and Installing the CPU Chip

5. Install the retaining clip by installing the back side of the clip first, then pressing it into place as shown in the circle in Figure 5.

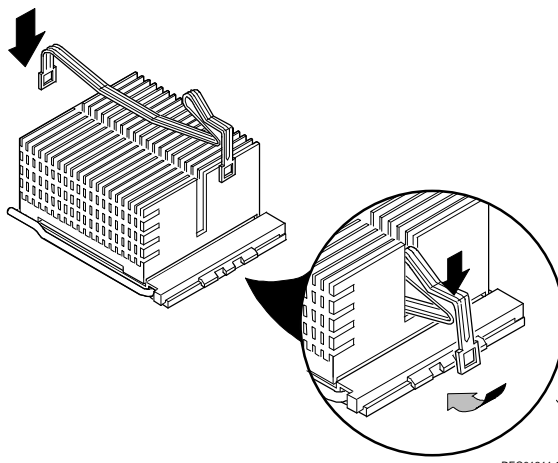
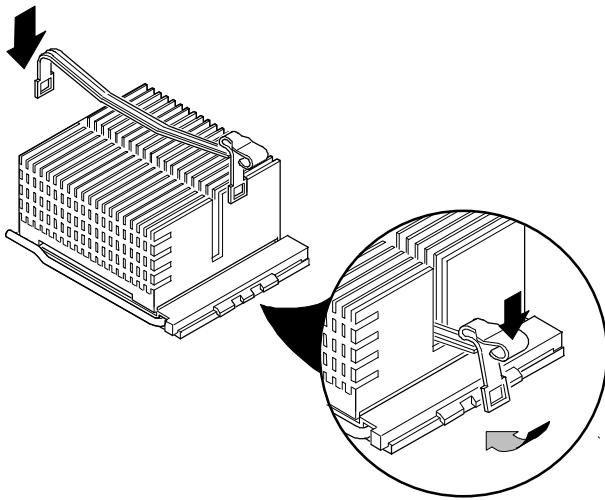


Figure 5. Installing the Clip to Secure the CPU Chip

Check the CPU Speed Settings

Check the jumper settings on the main logic board to make sure the CPU speed is set to 200 MHz and the other CPU Speed jumpers are removed.

Table 2. XL 6000 CPU Speed Jumper Settings

CPU Speed	Jumper	Position	Description
200 MHz	J37G	pins 1 to 2	Processor clock (default)
166 MHz	J37F	pins 1 to 2	
180 MHz	J37F	pins 2 to 3	

Reset the Flash Program Jumper

Reset the following jumper on the main logic board to protect your BIOS:

J36-C1, pins 1 to 2 Flash Program to Protect mode

Install any Video Option Card

If you previously removed a video option card, you can install it again.

Replace the Panel and Reconnect the Cables

1. Install the left side panel and lock the server. The server will not power up with the side panel removed.
2. Connect any cables and power cords previously removed to the back of the server.

Run the System Configuration Utility (SCU)

Power up and boot your server from the SCU diskette. The SCU enables you to check or change your server's configuration. Run the SCU to configure your server for the new CPU chip or module.

To start and run the SCU:

1. Insert the SCU diskette into drive A and turn on your server. The diskette should boot automatically.
2. When the SCU title appears, press any key to continue. Afterwards, follow the instructions on your screen to access the SCU main menu.
3. From the main menu, press the up or down arrow to highlight an item and then press Enter to select it. Press F1 at any time for help about a selection.
4. From the main menu select `Configure Computer` and then `View and Edit Details`. Example:

If you installed a video option card, select the `Advanced Control Group` and disable the `Embedded - PCI VGA controller`.
5. Select `Save and Exit` to configure your server for the CPU module.
6. When complete, remove the SCU diskette from drive A.
7. Move the video cable to the newly installed video card (if you have one) and reboot your server.

Refer to Chapter 2, "Server Software and Utilities," in your computer System Reference Guide for any additional information on running the SCU.

Bulletin Board Access

For future reference, you can access product information and software updates using the Internet at:

<http://www.windows.digital.com>

<http://www.windows.digital.com/~ftp/00-index.htm>

You can also access software updates through Digital's Bulletin Board Service (BBS) by calling in the United States **508-496-8800**.

The BBS is **not** a source for technical support. For advice, please call your local Authorized Digital Service Provider.