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AlphaServer 1000/1000A Systems
READ THIS FIRST: System-Specific Release Notes

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All AlphaServer 1000/1000A Systems:

Online Documentation

Your system includes documentation on a CDROM. This online document includes an easy-to-navigate hypertext version of all the information in the printed *Owner's Guide* plus information on upgrading, adding options, and support. You can install the CDROM files on any personal computer running Microsoft Windows Version 3.1 or later, Microsoft Windows NT Version 3.1 or later, Windows 95, or a Windows emulator. The disk on which you install the CDROM files must have approximately four megabytes of free space available.

To install the online documentation:

1. Insert the CDROM disc into your CDROM drive.

2. From the Windows Program Manager File menu, choose Run.

3. In the Command Line box, type D:\SETUP, where D is the letter of the CDROM drive.

4. Click OK.

5. Follow the instructions that appear on the screen.

Important Note on Firmware

Your system comes with the correct firmware versions already installed. If you should need to re-install the firmware for any reason, use the latest version of the firmware available on the Internet:

```
ftp.digital.com/pub/Digital/Alpha/firmware/V3.7
```

Online Information through Digital FTP Archive

If you are an Internet participant, you can obtain information related to the AlphaServer 1000/1000A systems through the Digital FTP archive:

```
ftp.digital.com:   /pub/DEC/Alpha/systems/as1000a/docs/
```

```
ftp.digital.com:   /pub/DEC/Alpha/systems/as1000/docs/
```

For access through the Digital World-Wide Web Server:

```
http://www.service.digital.com/alpha/server/as1000a
```

```
http://www.service.digital.com/alpha/server/as1000
```

Using System Firmware

On AlphaGeneration systems, which are based on the Alpha architecture, control of the system hardware is provided by a console subsystem. The console subsystem contains firmware code (software code embedded in the hardware) that offers service functions.

Some of these functions include initializing and testing the hardware, bootstrapping the system software, and providing a means for the system administrator or a management application to monitor and control the system.

Because the AlphaServer 1000/1000A systems are designed to support multiple operating systems, two separate interfaces to the subsystem are offered: a command-line interface called the SRM console, and a menu interface called the ARC or, on Model 5/xxx systems, AlphaBIOS, console.

Users of the OpenVMS and Digital UNIX operating systems should refer to the *AlphaServer 1000 Owner's Guide* or *AlphaServer 1000A Owner's Guide* to learn how to use the SRM console. Users of the Model 5/xxx system should consult the *Owner's Guide Supplement* for updates to this information.

Users of the Windows NT operating system should refer to the *Owner's Guide* to learn how to use the ARC console. Users of the Model 5/xxx system should consult the *Owner's Guide Supplement* for information on the AlphaBIOS console.

When to Switch Consoles

You can perform most console-related tasks from the interface designed to interace with your operating system. However, the console interfaces are designed so that you can easily switch between them. You need to switch in the following cases:

- If you are running the Digital UNIX or Open VMS operating systems and need to run the EISA Configuration Utility (ECU), switch to the ARC (or AlphaBIOS) console.

- If you are running Microsoft Windows NT and want to run system diagnostics with the `test` command, switch to the SRM console.

Startup Displays

A startup display scrolls on your monitor or terminal screen during the startup sequence. The following example shows a sample of the initial startup display, which appears on all systems regardless of the operating system. (The initial lines, related to copyright and patent information, remain on-screen for a few seconds only.)

Example: Initial Startup Display

```
BIOS Emulation V1.15a
Copyright (c) 1993-1995 Digital Equipment Corporation
All Rights Reserved
    Patent Pending

    initializing keyboard
    eb.....ea.e9.e8.e7.e6.e5.e4.e3.e2.e1.e0.
    Vn.n-nnnn, built on Oct  4  1996  at 14:48:51
```

What follows this display depends on your operating system and the setting of the `os_type` environment variable. For systems running the Windows NT operating system (`os_type` is set to NT), the initial startup display is followed by another startup test display, shown in the following example:

Example: Windows NT Startup Display

```
BIOS Emulation V1.15a
Copyright (c) 1993-1995 Digital Equipment Corporation
All Rights Reserved
Patent Pending
Initializing firmware
Initializing EISA bus 0
Initializing device drives: NCRC810, SWXCR, QLOGIC, KZPSA...OK
```

For systems running Digital UNIX or OpenVMS, the initial startup display is followed by the SRM console prompt (>>>). For systems running Windows NT, the Windows NT startup display is followed by the Windows NT Boot menu (see your AlphaServer 1000 or AlphaServer 1000A *Owner's Guide*) or the AlphaBIOS Boot Menu (see the *AlphaServer 1000/1000A Owner's Guide Supplement* for Model 5/xxx systems.)

Configuration Utilities

If you add, remove, or configure EISA or ISA options, you must run the EISA Configuration Utility (ECU). The ECU is provided on two diskettes with your server system–a diskette for Digital UNIX and OpenVMS Alpha and a diskette for Microsoft Windows NT. The AlphaServer 1000 or AlphaServer 1000A *Owner's Guide* explains how to run the EISA Configuration Utility.

The ECU does not automatically configure ISA cards. For example, if you add an option board to the bus, you need to choose the option "Add a board" within the ECU and select !ISA0000.CFG for the ISA slot. You can then manually configure the board, which will force the ECU to resolve ISA/EISA resource conflicts. Or, you can examine the resources used by the EISA cards using "View or edit details" and move those that conflict with the ISA cards.

Network Drivers

The DC21040 and DE435 Ethernet controllers are not automatically detected during Windows NT installation. To install the device driver for these adapters, use the diskette shipped with the option. The version shipped on the Windows NT CDROM may not be appropriate for your system.

During installation, respond to the prompt asking whether or not to automatically detect the network card installed by selecting Do Not Detect or Continue as appropriate. (The choice depends on whether or not you are performing an Express setup). When the "Add Network Adapter" dialog box is displayed, select Other, identify either the DC21040 or DE435 controller, and click on OK.

Resetting Environment Variables

Whenever you reset the following SRM environment variables, you must initialize the firmware to put the new setting into effect:

AlphaServer 1000/1000A	AlphaServer 1000 Only
auto_action	pk*0_fast
console	pk*_host_id
language	
os_type	
bus_probe_algorithm	

To reset SRM environment variables, use the set command and initialize the system with the init command. For example, to change the device on which power-up output

is displayed from a serial terminal to a graphics monitor, set the console environment variable to "graphics" and then enter the `init` command:

```
>>> show console
console serial
>>> set console graphics
>>> init
       .
       .
       .
>>> show console
console graphics
```

For more information on environment variables, see the AlphaServer 1000 or 1000A *Owner's Guide.*

General Hardware Installation

1. Unless your system has been configured with an additional SCSI controller, you cannot install a hard drive in slot 5 (SCSI ID 4), because the CDROM is located at this address.

2. Ensure that your monitor cable is plugged into the correct graphics port if you have an optional graphics card installed. Plug the cable into the connector of your option card, not into the connector on the system board. If your system configuration uses integrated graphics, please refer to your operating system documentation for specific installation information.

3. Do not install or remove any options without first turning off the system.

AlphaServer 1000 Systems:

Installing Microsoft Windows NT

Please note the following updates to installation information in Chapter 3 of the *AlphaServer 1000 Owner's Guide.*

In step 6 of the section "Setting Default Environment Variables," if you plan to partition your hard disk, set the partition number to 2. Otherwise, enter the boot partition number corresponding to your existing disk and NT configuration.

In step 8 of the section "Partitioning and Formatting Your Hard Disk," the number you enter depends on the maximum partition size. The number must equal the maximum size displayed minus 6. For example, if the largest possible value is 500, you would enter 494.

AlphaServer 1000A Systems:

Installing Microsoft Windows NT

Please note the following updates to Windows NT installation information in "Preparing Your Hard disk" in Chapter 3 of the *AlphaServer 1000A Owner's Guide.*

> Step 7: Select "Create System Partition" and press the Enter key. When the list of available disks appears, select the disk to be prepared and press the Enter key. You are prompted for the size of the partition.

> Step 8: Note that the number you enter depends on the maximum partition size. The number must equal the maximum size displayed minus 6. For example, if the largest possible value is 500, you would enter 494.

> Step 9: Press the Enter key to format the partition. The system prompts you with a question: "Do you want to make this the system partition?" Enter "No." Once the formatting is completed, press the Enter key again.

> Step 10: Select "Create System Partition" and press the Enter key. When the list of available disks appears, select the first disk again and press the Enter key. You are prompted for the size of the partition.

> Step 11: Type 6 after the "Enter size" prompt, then press the Enter key. A 6-megabyte partition is created. This partition will be a file allocation table (FAT) system partition.

Configuration Restrictions

AlphaServer 1000A PCI option slots are categorized as primary (top three slots 11,12,13) and secondary (bottom four slots 1,2,3,4). The following restrictions apply to installation of PCI options. Please note that these restrictions are subject to updates; for the latest information on restrictions, refer to the list of supported options on the AlphaServer 1000A World Wide Web page.

• A DJ-ML200 PCI NVRAM module must be installed in one of the primary PCI slots (11,12,13 at the top).

• A KZPSA-BB Fast Wide Differential SCSI controller must be installed in one of the primary slots if you plan to run Windows NT.

• A PB2GA-Jx-Trio64 PCI graphics card must be installed in one of the primary slots.

• A DE500 Ethernet controller should be installed in one of the primary slots.

The following example shows how PCI options that contain a PCI-to-PCI bridge are represented in the show config display . For each option that contains a PCI-to-PCI bridge, the bus number increments by 1, and the logical slot numbers start anew at 0.

The system configuration represented in the example contains the following options, with the PCI-to-PCI bridge options referenced by numbered callouts:

Primary Bus
    Physical PCI slot 11: KZPSM option with PCI-to-PCI bridge ❶
    Physical PCI slot 12: KZPSM option with PCI-to-PCI bridge ❷
    Physical PCI slot 13: —

Secondary Bus
    Physical PCI slot 1: —
    Physical PCI slot 2: —
    Physical PCI slot 3: KZPSM option with PCI-to-PCI bridge ❸
    Physical PCI slot 4: NCR810 SCSI controller

Note: The on-board SCSI controller (Qlogic 1020A) is always device pka.

Example: show config Display

```
>>> show config
Firmware
SRM Console:    V3.1-23
ARC Console:    V4.46
PALcode:     VMS PALcode X5.48-115, OSF PALcode X1.35-84
Serial ROM: V2.8

Processor
DECchip (tm) 21064A-6

MEMORY
     32 Meg of System Memory
     Bank 0 = 32 Mbytes () Starting at 0x00000000

   PCI Bus
     Bus 00  Slot 07: Intel  8275EB PCI to Eisa Bridge

     Bus 00  Slot 08: Digital PCI to PCI Bridge Chip

        Bus 02  Slot 00: ISP1020 SCSI Controller
                            pka0.7.0.2000.0          SCSI Bus ID 7
                            dka0.0.0.2000.0          RZ29B
                            dka500.5.0.2000.0        RRD45

        Bus 02  Slot 03: Digital PCI to PCI Bridge Chip ❸
           Bus 3     Slot 0     ewa.0.0.0.3000.0  08-00-3C-E6-6B-41
           Bus 3     Slot 0     ISP1020 Controller
              pkb0.7.0.3001.0
```

```
                 dkb0.0.0.3001.0
                 dkb100.0.0.3001.0

          Bus 02  Slot 04: NCR 810 SCSI Controller
                                    dkc100.1.0.2004.0
                 dkc200.2.0.2004.0

       Bus 00  Slot 11: Digital PCI to PCI Bridge Chip ❶
          Bus 04  Slot 0: DEC 21040 Network Controller
                             ewb0.0.0.4000.0    08-12-2E-C3-04-92
          Bus 04  Slot 1:  ISP1020 Controller
          pkd0.7.0.4001.0

       Bus 00  Slot 12: Digital PCI to PCI Bridge Chip ❷
          Bus 05  Slot 0: DEC 21040 Network Controller
                               ewc0.0.0.5000.0       08-24-3D-C6-08-04
          Bus 05  Slot 1: ISP1020 Controller
          pke0.7.0.5001.0

EISA Bus Modules (installed)
       Slot 01: MLX0075 SCSI Controller
             dkc0.7.0.2004.0

>>>
```

Model 5/xxx System Only:

Online Documentation

Your shipment includes supplemental hypertext documentation on a diskette. This diskette includes all the information in the printed *Owner's Guide Supplement*, also included in your shipment. You can install the files on any personal computer running Microsoft Windows Version 3.1 or later, Microsoft Windows NT Version 3.1 or later, Windows 95, or a Windows emulator. The disk on which you install the diskette files must have approximately four megabytes of free space available.

To install the online supplemental documentation:

1. Insert the diskette into your diskette drive.
2. From the Windows Program Manager File menu, choose Run.
3. In the Command Line box, type D:\INSTALL, where D is the letter of the diskette drive.
4. Click OK.
5. Follow the instructions that appear on the screen.

Using System Firmware

Because the AlphaServer 1000/1000A systems are designed to support multiple operating systems, two separate interfaces to the console subsystem are offered: a command-line interface called the SRM console, and a menu interface called the AlphaBIOS console.

Users of the OpenVMS and Digital UNIX operating systems should refer to the *AlphaServer 1000 Owner's Guide* or *AlphaServer 1000A Owner's Guide* to learn how to use the SRM console. See the *Owner's Guide Supplement* for updates to this information.

Users of the Windows NT operating system should refer to the *Owner's Guide Supplement* to learn how to use the AlphaBIOS console. Information in the supplement supersedes information on the ARC console in the *AlphaServer 1000 Owner's Guide* or *AlphaServer 1000A Owner's Guide.*

System Startup

For systems running Digital UNIX or OpenVMS, the initial startup display is followed by the SRM console prompt (>>>). For systems running Windows NT, the Windows NT startup display is followed by the AlphaBIOS Boot Menu (see the *AlphaServer 1000/1000A Owner's Guide Supplement*).