Digital Semiconductor

Alpha Microprocessor Evaluation Board

System Configuration and Windows NT 3.5 Installation Guide

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This document describes how to configure an Alpha microprocessor evaluation board system and install Microsoft Windows NT Workstation 3.5 and Windows NT Server 3.5.

Revision/Update Information: This is a new manual.

Operating System and Version: Microsoft Windows NT Workstation 3.5 and Windows NT Server 3.5

Digital Equipment Corporation
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Preface

This document describes how to install the Microsoft Windows NT Workstation 3.5 and the Microsoft Windows NT Server 3.5 operating systems on the following Alpha microprocessor evaluation boards:

- DECchip 21064 and DECchip 21064A PCI Evaluation Board
  This is also referred to as the EB64+. The EB64+ includes a DECchip 21064 or 21064A microprocessor with the DECchip 21072 Core Logic Chipset for PCI support.
- DECchip 21066 and DECchip 21068 Evaluation Board
  This is also referred to as the EB66. The EB66 includes a DECchip 21066 or 21068 microprocessor with onchip PCI support.

Your Alpha microprocessor evaluation board must be properly configured before you install the Windows NT 3.5 operating system. If you received an Alpha microprocessor evaluation board kit, we recommend that you read this entire document. If you have a fully assembled Alpha microprocessor evaluation board system, start at Chapter 2, Preparing the System. If you already have Windows NT 3.1 on a fully assembled Alpha microprocessor evaluation board system and want to upgrade to Windows NT 3.5, start at Chapter 3, Installing Windows NT Workstation or Windows NT Server.

This document applies only to Microsoft Windows NT Workstation 3.5 or Windows NT Server 3.5. It may not be accurate for other versions of Windows NT.

Document Conventions and Terms

In this document, the term “evaluation board” refers to an Alpha microprocessor evaluation board, and the term “Windows NT 3.5” refers to Microsoft Windows NT Workstation 3.5 and Windows NT Server 3.5 operating systems.

The following conventions are used in this document:

Convention	Description
boldface type	Boldface type in text indicates a command or menu selection.
Italic type	Italic type emphasizes important information and indicates complete titles of manuals.
Note:	Notes provide additional information about a topic.

Related Documentation

In addition to this document, the following documents provide information necessary to configure your system and install Windows NT 3.5 on an evaluation board:

For information about...	See...
Microsoft Windows NT Workstation 3.5 and Windows NT Server 3.5 operating systems	• Microsoft Windows NT Workstation Installation Guide • Microsoft Windows NT Server Installation Guide
EB64+ jumper and connector locations, component locations, Ethernet information	DECchip 21064 and DECchip 21064A Alpha AXP PCI Evaluation Board User's Guide
EB64+ power supply and terminal connections	DECchip 21064 and DECchip 21064A PCI Evaluation Board Design Package Read Me First
Debug monitor commands	Alpha AXP Evaluation Board Debug Monitor User's Guide
EB66 jumper and connector locations, component locations, Ethernet information	DECchip 21066 and DECchip 21068 Alpha AXP Evaluation Board User's Guide
EB66 power supply and terminal connections	DECchip 21066 and DECchip 21068 Alpha AXP Evaluation Board Read Me First

See Appendix C for information about ordering related documentation.

1. Building the System

1.1 Overview

This chapter describes the hardware requirements and system configuration details necessary to assemble a fully functional Alpha microprocessor evaluation board system. It includes the following topics:

- Hardware Requirements
- Connecting the Communications Port and Power
- Installing Peripheral Components

If you already have a fully functional evaluation board system, you may skip this chapter and go to Chapter 2, Preparing the System.

1.2 Hardware Requirements

Various hardware components are needed to assemble an evaluation board system. This section lists the hardware provided in the evaluation board kit and the hardware that you must provide. The additional components required depend on your intended use. You can order an evaluation board kit through Digital.

To assemble your system, you need the following components:

Components Provided in Alpha Microprocessor Evaluation Board Kit∗	**Components You Need to Supply**
• Evaluation board with memory and an Alpha microprocessor • 2 Serial ports • Floppy drive • Parallel port • Ethernet interface • NCR 53C810 SCSI host adapter	• Video subsystem – VGA monitor and cables – Number 9 GXE S3 graphics card • SCSI subsystem – SCSI CD-ROM drive – SCSI hard drive – 50-pin terminated SCSI ribbon cable • Input devices – PS/2 style 101-key keyboard – PS/2 style mouse • Standard PC power supply • Terminal set to 9600 baud (required only if using the debug monitor)

∗A detailed description of these components is in Appendix A.

When building your own system using an evaluation board kit, it is necessary to validate that the system has been correctly assembled. A debug monitor ROM is provided in the evaluation board kit to help you validate the correct assembly of your system.

1.3 Connecting the Communication Port and Power

Follow this procedure to provide power and a serial connection, and to verify the integrity of the evaluation board:

1. Connect your terminal to the Serial Communications Port 1 (COM1) connector. The terminal must be set to 9600 baud.
2. Connect your standard PC power supply to the connectors on the evaluation board.
3. Turn on the terminal.
4. Turn on the power supply for the evaluation board.
5. Observe the debug monitor messages on the terminal when the evaluation board is powered on. These messages describe the system configuration, version date, and memory size, and conclude with an EB64+ or EB66 system prompt. For more information about the debug monitor, see the *Alpha AXP Evaluation Board Debug Monitor User's Guide*.
6. Verify that the memory size on the evaluation board agrees with the debug monitor messages. If the sizes do not correlate, check your memory configuration.

1.4 Installing Peripheral Components

Follow this procedure to install the peripheral components:

1. Turn off the power supply for the evaluation board.
2. Connect a PS/2 compatible keyboard and mouse to the 2-tier connector on the motherboard.
    a) Connect the keyboard to the socket of the 2-tier connector that is located closest to the motherboard.
    b) Connect the mouse to the socket of the 2-tier connector that is located farthest from the motherboard.
3. Connect a 3.5-inch floppy drive to the evaluation board using the 34-conductor ribbon cable provided in the kit. This 34-conductor ribbon cable has a twist located in one end of the cable. Be sure to connect the ribbon cable so the end with the twist is closest to the floppy drive.
4. Connect your standard PC power supply to the power connection on the floppy drive.
5. Attach a 50-pin, terminated SCSI cable to the SCSI connector on your evaluation board. The SCSI cable must be terminated with a terminator either on the end of the cable away from the evaluation board or on the last device on the cable.
6. Connect the SCSI CD-ROM and SCSI hard disk to the 50-pin SCSI cable.
7. Verify that the SCSI ID settings on both the hard disk and the CD-ROM drive are set to unique values between 0 and 6. The SCSI controller on the evaluation board uses SCSI ID 7.

    Note: Suggested SCSI ID settings are 0 for the hard disk and 4 for the CD-ROM drive.

8. Connect your standard PC power supply to the power connection on the hard disk and the CD-ROM drive.

9. Install the graphics card into either a PCI slot or an ISA slot depending on the card you are using. After installing the graphics card, connect it to a compatible monitor. Refer to the manufacturer's documentation for installation and monitor information.

10. Install the HALO Ethernet Module and connect the two HALO ribbon cables.

11. Connect to the Ethernet network using either the ThinWire cable or the twisted-pair cable.

12. Turn on the power supply for the evaluation board. Verify that you receive debug monitor startup messages on the terminal.

    If you do not receive debug monitor startup messages:

    a) Verify that steps 1 through 11 were performed correctly.

    b) Refer to the *Alpha AXP Evaluation Board Debug Monitor User's Guide* for detailed debugging information.

2. Preparing the System

2.1 Overview

This chapter describes the preparations necessary for installing Windows NT 3.5 on an Alpha microprocessor evaluation board system. It includes the following topics:

- Software Requirements
- Windows NT 3.5 ARC Firmware
- Configuring the System
- Preparing the Hard Disk

2.2 Software Requirements

The following table lists the software required to install Windows NT 3.5 on an evaluation board system and indicates where you can obtain it:

EB64+ Software	EB66 Software	Available From
Microsoft Windows NT 3.5 compact disc	Microsoft Windows NT 3.5 compact disc	Microsoft Corporation
EB64+ Manufacturer-supplied hardware support disk	EB66 Manufacturer-supplied hardware support disk	Digital Equipment Corporation
EB64+ Windows NT 3.5 ARC Firmware ROM	EB66 Windows NT 3.5 ARC Firmware ROM	Digital Equipment Corporation

2.3 Windows NT 3.5 ARC Firmware

Two ROMs were factory installed on your evaluation board: a debug monitor ROM and a blank ROM. Either of these ROMs may be enabled by a jumper on the evaluation board. The factory default selection is the debug monitor ROM. Your Windows NT 3.5 installation kit includes a Windows NT 3.5 ARC Firmware ROM that contains firmware necessary to install and boot Windows NT 3.5 on your evaluation board.

The firmware initializes the hardware and Windows NT 3.5 system variables after power-on or reset and performs similar functions to the PC BIOS in an x86 system. It also enables you to install Windows NT 3.5 and boot the system.

2.3.1 Installing the Windows NT 3.5 ARC Firmware ROM

Follow this procedure to replace the blank ROM shipped on the evaluation board with the Windows NT 3.5 ARC Firmware ROM, then enable the ROM with the UVPROM Select jumper on the evaluation board.

1. Turn off the power for the evaluation board system.
2. Locate and remove the unlabeled (blank) ROM from the evaluation board, noting the correct orientation of the ROM.
3. Insert the Windows NT 3.5 ARC Firmware ROM with the correct orientation.

4. Select the Windows NT 3.5 ARC Firmware ROM device with the UVPROM Select jumper as described in the evaluation board user's guide.
5. Turn on the power for the evaluation board system.
6. Observe the Boot menu on the VGA monitor.

   Note: If the Boot menu does not appear on the VGA monitor within one minute, verify that the Windows NT 3.5 ARC Firmware ROM has been correctly installed and selected. Also verify that the graphics cable and other hardware have been properly connected, then check the output of COM1 for error messages.

2.3.2 Windows NT 3.5 ARC Firmware Conventions

When you power on your evaluation board, the firmware displays a blue screen on the VGA monitor and initializes the firmware drivers. After initialization, the firmware displays the Boot menu. The Boot menu is identified by the string "Boot menu:" located approximately five lines from the top of the screen. If autoboot has previously been enabled, you will need to press an arrow key within a few seconds of when the Boot menu appears to prevent autoboot from occurring.

The following conventions are used in the Windows NT 3.5 ARC firmware:

Convention	**Description**
Name of current screen	The menu name is located approximately five lines from the top of the screen, immediately before the menu being displayed.
Highlighted item	A highlighted item indicates the currently selected option.
Arrow keys	The arrow keys are used to select different options.
Enter key	The Enter key is used to choose the highlighted option.
Escape key	The escape key is used to close a menu.

See Appendix B for a list of the firmware menus.

2.4 Configuring the System

You must configure the system before you can install Windows NT 3.5. Configuring the system defines the default system partition and describes the hardware. Follow this procedure to configure the system:

1. From the Boot menu, choose **Supplementary menu...**.
2. From the Supplementary menu, choose **Set up the system...**.

3. Configure your system with typical values:

Step	From the Setup Menu, choose...	Set the values...
a) Define the default system partition.	**Set default environment variables**	Media: **SCSI Hard Disk** SCSI bus number: **0** SCSI ID: **0** Partition: **1** **Note**: Defining the default system partition removes any existing boot selections.
b) Describe your hardware.	**Set default configuration**	Monitor Resolution: **1024x768** First floppy drive capacity: **3.5" 1.44MB** Second floppy drive capacity: **None** Keyboard: **U.S. 101-key keyboard** SCSI Host ID: **7** **Note:** SCSI Host ID refers to the SCSI ID of the SCSI host adapter on a given SCSI bus. The SCSI Host ID of the onboard NCR 53C810 SCSI host adapter is 7.
c) Save the changes.	**Supplementary menu, and save changes...**	–

2.5 Preparing the Hard Disk

The following table specifies the space and file system requirements for installing Windows NT 3.5:

File Name	Space Required	File System
System partition	5 MB	FAT
Windows NT 3.5	94 MB	FAT or NTFS

Windows NT 3.5 may be installed on its own partition or on the system partition. If Windows NT 3.5 is installed on the system partition, the system partition must have 99 MB of available space and be formatted with the FAT file system.

If you have a new hard disk or do not have the required partitions on your hard disk, you must partition the hard disk using ARCinst before installing Windows NT 3.5.

2.5.1 Partitioning the Hard Disk

ARCinst, which is a program used to partition a hard disk, is located on the Windows NT 3.5 compact disc. The following subsections describe how to use the ARCinst program.

Starting ARCinst

To start the ARCinst program, follow this procedure:

1. Insert the Windows NT 3.5 compact disc in the CD-ROM drive.
2. Restart your computer.
3. From the Boot menu, choose **Run a Program**.
4. Type **cd:\alpha\arcinst** and press the Enter key.

Deleting a Partition Using ARCinst

To delete a partition on a hard disk using the ARCinst program, follow this procedure:

1. From the ARCinst main menu, choose **Configure Partitions**.
2. From the Configure Partitions menu, choose **Delete a Partition**.
3. If you have multiple hard disks, choose the disk on which to delete a partition.
4. From the list of existing partitions, choose the partition you want to delete.

Creating a Partition Using ARCinst

To create a partition on a hard disk using the ARCinst program, follow this procedure:

1. From the ARCinst main menu, choose **Configure Partitions**.
2. From the Configure Partitions menu, choose **Create a Partition**.
3. If you have multiple hard disks, choose the disk on which to create a partition.
4. Enter the size in megabytes of the partition you want to create.
   ARCinst will create the partition and format it using the FAT file system.

Exiting from ARCinst

To terminate the ARCinst program, from the ARCinst main menu, choose **Exit**.

3. Installing Windows NT Workstation or Windows NT Server

3.1 Overview

This chapter describes how to install Microsoft Windows NT Workstation 3.5 and Windows NT Server 3.5 operating systems on an Alpha microprocessor evaluation board system that has been prepared as described in Chapter 2. It includes the following topics:

- Starting Windows NT Setup
- Upgrading from Windows NT 3.1
- Installing the DC21040 Ethernet Driver

If you are upgrading from Windows NT 3.1, go directly to Section 3.3.

3.2 Starting Windows NT Setup

Windows NT Setup is located on the Windows NT 3.5 compact disc and is used to install Windows NT 3.5. Throughout Windows NT Setup, a brief description of available key functions is provided at the bottom of the screen. The following procedure supersedes the Starting Setup on a RISC-Based Computer sections of the Microsoft *Windows NT Workstation Installation Guide* and *Windows NT Server Installation Guide*.

Installing Windows NT 3.5

To install Windows NT 3.5, follow this procedure:

1. Insert the Windows NT 3.5 compact disc in the CD-ROM drive.
2. Restart your computer.
3. From the Boot menu, choose **Supplementary menu...**.
4. From the Supplementary menu, choose **Install Windows NT from CD-ROM**.
5. When prompted for the type of computer you have, choose **Other** and insert the Manufacturer-supplied hardware support disk into drive A.
6. Follow the instructions on screen.

   Note: The default display type, **VGA compatible**, can be used for the Number 9 GXE, a graphics card based on an S3 graphics chip. For other graphics cards:

   a) Choose **Custom Setup**.

   b) Choose display type **Other** and insert the Manufacturer-supplied hardware support disk that contains the graphics driver.

7. Go to Section 3.4 to install the DC21040 Ethernet driver.

3.3 Upgrading from Windows NT 3.1

Before you upgrade from Windows NT 3.1, you must do the following:

1. Record your environment variables, system configuration values, and boot selections.
2. Replace the old firmware ROM with the Windows NT 3.5 ARC Firmware ROM.
3. Set the environment variables, system configuration values, and boot selections to the original values.

The following subsections describe how to accomplish these tasks.

Windows NT Setup, which is located on the Windows NT 3.5 compact disc, is used to upgrade from Windows NT 3.1. Throughout Windows NT Setup, a brief description of available key functions is provided at the bottom of the screen.

The following subsections supersede the Upgrading from Windows NT 3.1 sections of the Microsoft *Windows NT Workstation Installation Guide* and *Windows NT Server Installation Guide*.

Note: Do not use winnt32.exe on the Windows NT 3.5 compact disc to perform the upgrade.

Recording your System Variables

To record your system variables, follow this procedure:

1. Restart your computer.
2. From the boot menu, choose **Supplementary menu...**.
3. From the Supplementary menu, choose **Set up the system...**.
4. From the Setup menu, choose **Manage boot selection menu...**.
5. From the Boot selections menu, choose **Change a boot selection**.
6. From the Selection to edit menu, choose the name of the boot selection that corresponds to the operating system you want to upgrade. A report of your environment variables appears on the screen.
7. Record your environment variables in the following worksheet:

Environment Variables Worksheet

Step	Environment Variables
a	Example: System Partition SYSTEMPARTITION: **scsi(0)disk(0)rdisk(0)partition(1)** Media: **SCSI Hard Disk** SCSI Bus Number: **0** SCSI ID: **0** Partition: **1** Record your System Partition values: SYSTEMPARTITION:___________________________________ Media: **<u>SCSI Hard Disk</u>** SCSI Bus Number: ____ SCSI ID: ____ Partition: ____
b	Example: OSLOADER OSLOADER: **scsi(0)disk(0)rdisk(0)partition(1)\os\nt\loader.exe** Media: **SCSI Hard Disk** SCSI Bus Number: **0** SCSI ID: **0** Partition: **1** OSLOADER directory and name: **\os\nt\loader.exe** Record your OSLOADER values: OSLOADER: ____ Media: **<u>SCSI Hard Disk</u>** SCSI Bus Number: ____ SCSI ID: ____ Partition: ____ OSLOADER directory and name: ________________

Continued...

Environment Variables Worksheet, continued

Step	Environment Variables
c	Example: OSLOADPARTITION OSLOADPARTITION: **scsi(0)disk(0)rdisk(0)partition(1)** Media: **SCSI Hard Disk** SCSI Bus Number: **0** SCSI ID: **0** Partition: **1** Record your OSLOADPARTITION values: OSLOADPARTITION: ___________________________________ Media: **SCSI Hard Disk** SCSI Bus Number: ____ SCSI ID: ____ Partition: ____
d	Example: OSLOADFILENAME OSLOADFILENAME: **\winnt** Record your OSLOADFILENAME value: OSLOADFILENAME: ___________________________________
e	Are the Media, SCSI Bus Number, SCSI ID, and Partition values in SYSTEMPARTITION the same as in OSLOADER? (Circle one) Yes No
f	Are the Media, SCSI Bus Number, SCSI ID, and Partition values in OSLOADPARTITION the same as in OSLOADER? (Circle one) Yes No

Replacing the Firmware ROM

To replace the firmware ROM, follow this procedure:

1. Turn off the power for the evaluation board system.
2. Locate and remove the old firmware ROM from the evaluation board, noting the correct orientation of the ROM.
3. Insert the Windows NT 3.5 ARC Firmware ROM with the correct orientation.
4. Turn on the power for the evaluation board system.

Configuring the System Values

To configure the system values with the previous values, follow this procedure:

1. From the Boot menu, choose **Supplementary menu...**.
2. From the Supplementary menu, choose **Set up the system...**.
3. Set the default environment variables:
    a) From the Setup menu, choose **Set default environment variables**.
    b) Using the values that you recorded in step a of the Environment Variables Worksheet, set the default environment variables to the original values.
4. Describe your hardware configuration:
    a) From the Setup menu, choose **Set default configuration**.
    b) Set the default configuration to the original values. If you are unable to determine the values for **Set default configuration**, enter the typical values listed in Section 2.4.
5. Create a boot selection:
    a) From the Setup menu, choose **Manage boot selections menu...**.
    b) From the Boot selections menu, choose **Add a boot selection**.

c) Set the boot selection to its original value by responding to the system prompts. Use the information you recorded in the Environment Variables Worksheet. The following table lists the prompts and describes the actions you should follow:

Prompt	Action
Select a system partition for this boot selection:	If the answer to Environment Variables Worksheet step e is **Yes** - Choose the default system partition. **No** - Choose **New system partition** and enter the values recorded from OSLOADER in step b of the Environment Variables Worksheet.
Enter the osloader directory and name:	Enter the value that you recorded for OSLOADER directory and name in step b of the Environment Variables Worksheet.
Is the operating system on the same partition as the osloader:	If the answer to Environment Variables Worksheet step f is **Yes** - Choose **Yes**. The default values are entered for you automatically. **No** -Choose **No** and, when prompted, enter the values recorded from OSLOADPARTITION in step c of the Environment Variables Worksheet.
Enter the operating system root directory:	Enter the value that you recorded in step d of the Environment Variables Worksheet.
Enter a name for this boot selection:	Enter a name of your choice.
Do you want to initialize the debugger at boot time:	Choose **No**.

6. From the Boot selections menu, choose **Setup menu...**.
7. From the Setup menu, choose **Supplementary menu, and save changes...**.

Validating your Environment Variables

To validate your environment variables, follow this procedure:

1. From the boot menu, choose **Supplementary menu...**.
2. From the Supplementary menu, choose **Set up the system...**.
3. From the Setup menu, choose **Manage boot selection menu...**.
4. From the Boot selection menu, choose **Change a boot selection**.
5. From the Selection to edit menu, choose the name of the boot selection you entered.
6. Compare your recorded values with the values on the screen. Edit any variables necessary to make the results identical with the recorded values.
7. From the Boot selections menu, choose **Setup menu...**.
8. From the Setup menu, choose **Supplementary menu, and save changes...**.

Upgrading to Windows NT 3.5

To upgrade to Windows NT 3.5, follow this procedure:

1. Insert the Windows NT 3.5 compact disc in the CD-ROM drive.
2. Restart your computer.
3. From the Boot menu, choose **Supplementary menu...**.
4. From the Supplementary menu, choose **Install Windows NT from CD-ROM**.
5. When prompted for the type of computer you have, choose **Other** and insert the Manufacturer-supplied hardware support disk into drive A.
6. If a previous version of Windows NT is found, choose **Enter** to perform the upgrade.
7. Follow the instructions on the screen.

Note: Not all Windows NT 3.1 device drivers will work with Windows NT 3.5. Those drivers that do not work need to be upgraded for Windows NT 3.5. Contact the device manufacturer to obtain an updated driver.

3.4 Installing the DC21040 Ethernet Driver

Windows NT Setup will not recognize the DC21040 Ethernet Controller. To install the DC21040 Ethernet Driver, see the sections on setting up a Network Adapter card and configuring the Network Adapter card in the Microsoft *Windows NT Workstation Installation Guide* or *Windows NT Server Installation Guide*. During the installation, when you are at the Add Network Adapter dialog box, use the following procedure:

1. From the Add Network Adapter dialog box of network device drivers, select:

   <Other> Requires disk from manufacturer

   Then choose **Continue**.

2. At the prompt, type:

   ***D*:\DrvLib\netcard\alpha\de435**

   Where ***D*** is the drive letter of your CD-ROM drive.

3. From the Select OEM option dialog box, select:

   DEC DC21040 PCI Ethernet Controller

   Then choose **OK**.

4. Follow the instructions on the screen.

Appendix A: Hardware Included with Evaluation Board Kits

This appendix lists the components that are included with the evaluation board kits. This list provides a description of the part and the associated part number, and may be beneficial in identifying components.

Category	Description of Part	Digital Part Number
Evaluation board	Alpha microprocessor evaluation board with 32 MB of memory.	Part number is dependent upon evaluation board and CPU speed. See Appendix C, Technical Support and Ordering Information for a list of Alpha microprocessor and peripheral chips.
Serial Ports	• Two 10-conductor ribbon cables	17-03833-01
	• Two 9-pin DB-9/MMJ serial port adapters	H8571-J
	• Two 10-foot, 6-conductor serial null modem cables	BC16E-10
Ethernet	• Small HALO Ethernet module labeled DC2T-L	20-41553-01
	• Ethernet T-connector	H8223
	• Ethernet terminator	H8225
	• Twisted-pair Ethernet cable	BNE4D-05
	• 6-inch, 16-conductor ribbon cable for HALO card	17-03899-01
	• ThinWire Ethernet cable	BC16M-15
	• 6-inch, 10-conductor ribbon cable for HALO card	17-03900-01

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Category	Description of Part	Digital Part Number
Floppy Drive	• 34-conductor ribbon cable for floppy drive	17-03458-01
	• 3.5-inch, 1.44-MB floppy drive unit	RX231-AA
Parallel Port	• 25-pin DB-25/MMJ parallel port adapter	H8575-A
	• 25-conductor parallel port ribbon cable	17-04060-01

Note: All ribbon cables are keyed, or pin 1 is identified by a red stripe.

Appendix B: Firmware Menus

This appendix lists the main Windows NT 3.5 ARC Firmware menus. These are examples, similar to the menus you will see when using the Windows NT 3.5 ARC Firmware. The text of some of the options may differ, and some options may not be available.

Boot menu:

Boot the default operating system
Boot an alternate operating system
Run a program
Supplementary menu...

Supplementary menu:

Install new firmware	(Not functional.)
Install Windows NT from CD-ROM	
Set up the system...	(Displays the Setup menu.)
Display hardware configuration	
Boot menu...	

Setup menu:

Set system time	
Set default environment variables	
Set default configuration	
Manage boot selections menu...	(Displays boot selections menu.)
Setup autoboot	
Edit environment variables	
Reset system to factory defaults	
Help	
Supplementary menu, and do not save changes...	
Supplementary menu, and save changes...	(If the configuration was changed, the **Supplementary Menu, and save changes...** option restarts the firmware instead of returning you to the Supplementary menu.)

Boot selections menu:

Add a boot selection
Change a boot selection
Check boot selections
Delete a boot selection
Dump boot selections
Rearrange boot selections
Setup menu...

Appendix C: Technical Support and Ordering Information

This appendix describes how to obtain information and technical support, and order products and associated literature.

Technical Support

If you need technical support or help deciding which literature best meets your needs, call the Digital Semiconductor Information Line:

United States and Canada	**1-800-332-2717**
TTY (United States only)	**1-800-332-2515**
Outside North America	**+1-508-568-6868**

Ordering Digital Semiconductor Products

To order Digital's Alpha microprocessor chips and related products, contact your local distributor.

To order samples or Sample Kits, call **1-800-DIGITAL**.

You can order the following semiconductor products from Digital:

Microprocessor and Peripheral Chips

Product	Speed	Order Number
DECchip 21030 PCI Graphics Accelerator	–	21030-AA
DECchip 21040 Ethernet LAN Controller for PCI	–	21040-AA
DECchip 21050 PCI-to-PCI Bridge	–	21050-AA
DECchip 21064-150 Alpha AXP Microprocessor	150 MHz	21064-AA
DECchip 21064-166 Alpha AXP Microprocessor	166 MHz	21064-CA
DECchip 21064-200 Alpha AXP Microprocessor	200 MHz	21064-BA
DECchip 21064-233 Alpha AXP Microprocessor	233 MHz	21064-BB
DECchip 21064-275 Alpha AXP Microprocessor	275 MHz	21064-DB
DECchip 21066-166 Alpha AXP Microprocessor	166 MHz	21066-AA
DECchip 21068-66 Alpha AXP Microprocessor	66 MHz	21068-AA
DECchip 21071 Core Logic Chipset	–	21071-AA
DECchip 21072 Core Logic Chipset	–	21072-AA

Evaluation Board Kits

Product	Speed	Order Number
DECchip 21064 Evaluation Board Kit -150 MHz	150 MHz	21A01-03
DECchip 21064 PCI Evaluation Board Kit -200 MHz	200 MHz	21A02-01
DECchip 21064A PCI Evaluation Board -275 MHz	275 MHz	21A02-02
DECchip 21066 and DECchip 21068 Evaluation Board Kit -166 MHz	166 MHz	21A03-01

Ordering Associated Literature

The following tables lists some of the available Digital Semiconductor literature. For a complete list, contact the Digital Semiconductor Information Line. For ordering information, see the Ordering Electronically and Ordering by Telephone and Through Direct Mail sections.

EB64+ Documentation

Title	Order Number
DECchip 21064 and DECchip 21064A Alpha AXP PCI Evaluation Board User's Guide	EC-N0640-72
DECchip 21064 and DECchip 21064A PCI Evaluation Board Design Package Read Me First	EC-QCJGA-TE
Alpha AXP Evaluation Board Debug Monitor User's Guide	EC-N0661-72

EB66 Documentation

Title	Order Number
DECchip 21066 and DECchip 21068 Alpha AXP Evaluation Board User's Guide	EC-N0626-72
Alpha AXP Evaluation Board Debug Monitor User's Guide	EC-N0661-72
DECchip 21066 and DECchip 21068 Alpha AXP Evaluation Board Read Me First	EC-N0658-72

Ordering Third-Party Software and Literature

To order Microsoft software and documentation, contact your local Microsoft sales office. The following products and documentation are available from Microsoft:

Title	Vendor Address
• Microsoft Windows NT Workstation 3.5 operating system • Microsoft Windows NT Server 3.5 operating system • Windows NT Workstation Installation Guide • Windows NT Server Installation Guide	Microsoft Corporation One Microsoft Way Redmond, WA 98052-6399

Ordering Electronically

To place an order through your account at the Electronic Store, dial 1-800-234-1998, using a modem set to 2400- or 9600-baud. You must use a VT terminal or terminal emulator set at 8 bits, no parity. If you need assistance using the Electronic Store, call 1-800-DIGITAL (1-800-344-4825) and ask for an Electronic Store specialist.

Ordering by Telephone and Through Direct Mail

From	Call	Write
U.S.A.	DECdirect Phone: 1-800-DIGITAL (1-800-344-4825) FAX: 603-884-5597	Digital Equipment Corporation P.O. Box CS2008 Nashua, NH 03061
Puerto Rico	Phone: 809-781-0505 FAX: 809-749-8377	Digital Equipment Corporation 3 Digital Plaza, 1st Street Suite 200 Metro Office Park San Juan, Puerto Rico 00920
Canada	Phone: 1-800-267-6215 FAX: 613-592-1946	Digital Equipment of Canada Ltd. 100 Herzberg Road Kanata, Ontario, Canada K2K 2A6 Attn: DECdirect Sales
International	–	Local Digital subsidiary or approved distributor
Internal orders	DTN 264-3030 603-884-3030 FAX: 603-884-9690	U.S. Software Supply Business Digital Equipment Corporation 10 Cotton Road Nashua, NH 03063-1260