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CONTENTS

COMPAQ

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Installing Microsoft Windows 98 on Compaq Armada E, M, and V Portable Products

Abstract: This document provides steps for installing Microsoft Windows 98 (OSR2.1) on Compaq *Armada*™ E, M, and V Series Personal Computers. By following these steps and using one of three recommended software configurations, a variety of computing environments can be built to match any desired customer requirements. These configurations range from basic and enhanced setup to full hardware and software support for the enterprise customer.

For details on Compaq operating system support, features, and the installation of additional Service Packs, refer to the *Operating System Support for Compaq Portable Products* white paper.

Notice

Installing Microsoft Windows 95 on Compaq Armada E, M, and V Portable Products prepared by CPCG Software Product Management

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INTRODUCTION

This white paper provides instructions for installing Microsoft Windows 98 as a new operating system on Compaq *Armada*^{TM} E, M, and V Series Personal Computers. Use the setup configurations described in this paper to simplify the installation process and determine which computing environment works best. Complete all the steps outlined for the specific platform and configuration to successfully install Microsoft Windows 98 and all Compaq software. Once installed, Compaq software improves the functionality of the operating system and enhances the overall user experience.

> **Note:** Back up all data and applications before beginning any Microsoft Windows 98 installation procedures.

CLEAN INSTALLING WINDOWS 98

This section provides instructions for the following steps:

- Preparing for installation

- Modifying a Microsoft DOS boot diskette

- Preparing the hard drive

- Installing Microsoft Windows 98

Preparing for Installation

Obtain the following items before beginning the installation:

- Retail Microsoft Windows 98 CD-ROM and documentation

- Microsoft Windows 98 Drivers and Enhancements from Compaq

- One formatted 1.44-MB, 3.5-inch diskette

- Access to the Internet

Modifying a Microsoft DOS Boot Diskette

> **IMPORTANT:** Back up all data and applications before creating the DOS boot diskette.

Create a Microsoft DOS boot diskette to perform a clean installation of Windows 98. Complete the following steps to obtain the CPQLTECD.SYS and MSCDEX.EXE files and modify the DOS boot diskette:

1. Insert the DOS boot diskette into the appropriate drive.

2. Obtain the CPQLTECD.SYS and MSCDEX.EXE DOS files by downloading the IDE CD-ROM drivers from the Compaq Web site:

   a. Point the browser to
      http://www.compaq.com/support/files/Compaq_Armada_Laptops.html

b. Select the appropriate product series from the Family list.

> **Note:** Armada E500 users must select the Armada E700 product series from the drop-down box.

c. Select All Models from the Model list.

d. Select Windows 3.1 from the Operating System list.

e. Click on Go to browse to the Support Software page for a list of drivers, files, and utilities.

f. Select Storage from the software by category section.

g. Select the current version of the IDE CD-ROM drivers to browse to the download page.

h. Print the download page. This page contains instructions on downloading and installing the IDE CD-ROM drivers.

i. Follow the IDE CD-ROM drivers installation steps to download and install the IDE CD-ROM drivers.

3. Enter DOS mode after installing the IDE CD-ROM drivers.

4. Copy the CPQLTECD.SYS and MSCDEX.EXE files to the DOS boot diskette.

5. Complete the following steps to create CONFIG.SYS and AUTOEXEC.BAT files on the DOS boot diskette:

a. Click Start→Run.

b. Type A:EDIT to open MS-DOS EDIT.

c. Type DEVICE=CPQLTECD.SYS /D:CPQCD001.

d. Select File from the menu bar by pressing **Alt+F.** Press **A** or use the down or up arrow keys to select Save As. The Save As prompt will appear.

e. Type CONFIG.SYS in the File Name field and press **Enter** to save the CONFIG.SYS file to the DOS boot diskette and return to the EDIT prompt. A:\CONFIG.SYS should appear, centered under the menu bar.

f. Select File from the menu bar by pressing **Alt+F.** Press **N** or use the down or up arrow keys to select New. An untitled EDIT file will open.

g. Type MSCDEX /D:CPQCD001.

h. Select File from the menu bar by pressing **Alt+F.** Press **A** or use the down or up arrow keys to select Save As. The Save As prompt will appear.

i. Type AUTOEXEC.BAT in the File Name field and press **Enter** to save the AUTOEXEC.BAT file to the DOS boot diskette and return to the EDIT prompt. A:\AUTOEXEC.BAT should appear, centered under the menu bar.

j. Select File from the menu bar by pressing **Alt+F.** Press **X** or use the down or up arrow keys to select Exit.

The DOS boot diskette is now ready. Insert the Microsoft Windows 98 CD into the CD-ROM drive and reboot the computer before continuing to the next section.

Installing Microsoft Windows 98

> **Note:** Format the hard drive before beginning the installation of Microsoft Windows 98.

Complete the following steps to install Windows 98 on the system:

1. Turn the computer on.

2. Type D: at the system prompt and press **Enter.**

3. Type CD WIN98 and press **Enter.**

4. Type SETUP and press **Enter.** A screen appears, stating that Setup will perform a routine system check.

5. Press **Enter** to continue. The Windows 98 Setup screen appears.

6. Refer to the Windows 98 documentation to complete the installation.

7. After the Microsoft Windows 98 installation is complete, proceed to "Installing the Compaq Drivers and Support Software."

Installing the Compaq Drivers and Support Software

> **Note:** Install all the drivers to allow the system complete functionality.

The necessary drivers and enhancements available for the Compaq Armada E, M, and V Series of computers are summarized in Table 1 "SoftPaqs for Microsoft Windows 98." The list is current at the date of this publication. Refer to the Compaq Web site for an up-to-date list of available drivers and enhancements and their associated *SoftPaq*™ numbers.

Important Notes

- Ensure that the computer is undocked and that no PC Cards are inserted into the PC Card slots while installing drivers.

- Any item with an asterisk is considered optional and may not be needed by all users.

- Any first step that begins with "Double-click SETUP" assumes that My Computer or Explorer is used to navigate to the directory where the files are located after their extraction from the SoftPaq.

- These SoftPaqs are the minimum required for Microsoft Windows 98. They may be superceded, as noted on the Compaq Web site.

DOCKING FOR THE FIRST TIME

Before docking, ensure that all of the specific drivers and support software for the computer are installed. See the "Compaq Drivers and Enhancements" section in Appendix A for the list of software and instructions on how to install it.

Docking while the computer is off (cold) is recommended for the user's first docking session under Microsoft Windows 98. Shut down Microsoft Windows 98 by clicking Start→Shut Down and clicking on Yes. Place the computer in the docking station or convenience base and restart the unit.

Press **Enter** when prompted with questions. Continue doing this until the computer reboots and Microsoft Windows 98 loads, as usual.

> **Note:** If you did not upgrade over Microsoft Windows 98 along with the Compaq System Enhancements Disk, you will have one or more unknown devices shown in the Device Manager. These are cosmetic in nature and do not degrade performance in any way.

After docking for the first time, reinstall the video drivers.

APPENDIX A

Compaq Drivers and Enhancements

Table 1. SoftPaqs for Microsoft Windows 98

Family	Driver/Enhancement	Sequence	SoftPaq #
E700	System Enhancements	First	SP12015
	ATI Rage Pro Video Driver	Second	SP12698
	Audio Driver (M2E)	Third	SP12396
	Power Management	Fourth	SP12668
	Power Management Enhancements	Fifth	SP11335
	MultiBay	Sixth	SP11710
	Compaq Floppy Alert	N/A	SP13875
	Diagnostics	N/A	SP14020
	Insight Management Agents[1]	N/A	SP11608
	Insight Management Web Agents[2]	N/A	SP11921
	Compaq Floppy Alert	N/A	SP11392
	Easy Point IV	N/A	SP11934
	Hot Key Support	N/A	SP11922
	Fix for Power Management	N/A	SP11749
	Remote Management	N/A	SP11213
	3Com Global MiniPCI 56K (V.90) Modem	N/A	SP11390
	3Com MiniPCI 10/100 LAN 56K (V.90) Modem	N/A	SP11837
	MiniPCI Communications Support Software and Drivers	N/A	SP12942
	Worldport Application	N/A	SP11391
	Intel PCI NIC	N/A	SP10949
	Netflex-3 Ethernet Drivers	N/A	SP6599
	Real Mode Support	N/A	SP9090
	Security 32 Support	N/A	SP11215

[1] Must be installed before Insight Management Web agents.

[2] Must be installed after Insight Management agents.

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Table 1. SoftPaqs for Microsoft Windows 98 *(continued)*

Family	Driver/Enhancement	Sequence	SoftPaq #
E500	System Enhancements	First	SP13849
	ATI Rage Pro Video Driver	Second	SP12698
	Audio Driver (M2E)	Third	SP12396
	Power Management	Fourth	SP12668
	Power Management Enhancements	Fifth	SP11335
	MultiBay	Sixth	SP11710
	Diagnostics	N/A	SP14020
	Insight Management Agents[1]	N/A	SP13262
	Insight Management Web Agents[2]	N/A	SP11921
	Easy Point IV	N/A	SP11934
	Hot Key Support	N/A	SP11922
	Remote Management	N/A	SP11213
	CPQ Communications Support CD	N/A	SP12942
	Worldport Application	N/A	SP11391
	Real Mode Support	N/A	SP9090
	Security 32 Support	N/A	SP11945 Sp12129 (Arabic/Hebrew)

[1] Must be installed before Insight Management Web agents.

[2] Must be installed after Insight Management agents.

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Table 1. SoftPaqs for Microsoft Windows 98 *(continued)*

Family	Driver/Enhancement	Sequence	SoftPaq #
M700	System Enhancements	First	SP13640
	ATI Rage Pro Video Driver	Second	SP12698
	Audio Driver (M2E)	Third	SP12396
	Power Management	Fourth	SP12668
	Power Management Enhancements	Fifth	SP11335
	MultiBay	Sixth	SP11710
	Diagnostics	N/A	SP14020
	Insight Management Agents[1]	N/A	SP11608
	Insight Management Web Agents[2]	N/A	SP11921
	Easy Point IV	N/A	SP11934
	Hot Key Support	N/A	SP11922
	Synaptics TouchPad Drivers	N/A	SP11986
	Remote Management	N/A	SP11213
	3Com Global MiniPCI 56K (V.90) Modem	N/A	SP11390
	CPQ Communications Support CD	N/A	SP12942
	Worldport Application	N/A	SP11391
	3Com 10/100 LAN CardBus PC Card	N/A	SP11389
	3Com Etherlink 10/100 PCI NIC	N/A	SP11920
	Netflex-3 Ethernet Drivers	N/A	SP6599
	Real Mode Support	N/A	SP9090
	Security 32 Support	N/A	SP11215

[1] Must be installed before Insight Management Web agents.

[2] Must be installed after Insight Management agents.

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Table 1. SoftPaqs for Microsoft Windows 98 *(continued)*

Family	Driver/Enhancement	Sequence	SoftPaq #
M300	System Enhancements	First	SP12015
	ATI Rage Pro Video Drivers	Second	SP13549
	Audio Driver (M2E)	Third	SP12396
	Power Management	Fourth	SP12668
	Power Management Enhancements	Fifth	SP11335
	MultiBay	Sixth	SP11711
	Compaq Docking Enhancements	Seventh	SP13875
	Diagnostics	N/A	SP13366
	Insight Management Agents[1]	N/A	SP12948
	Insight Management Web Agents[2]	N/A	SP11921
	Hot Key Support	N/A	SP11922
	Real Mode Support	N/A	SP9090
	Synaptics TouchPad Drivers	N/A	SP11986
	Remote Management	N/A	SP11213
	3COM Global Mini PCI 56K (V.90) Internal Modem Drivers	N/A	SP11390
	Mini PCI Support Software and Drivers	N/A	SP19242
	3COM Etherlink 10/100 PCI NIC	N/A	SP11920
	Security 32 Support	N/A	SP11945

[1] Must be installed before Insight Management Web agents.

[2] Must be installed after Insight Management agents.

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Table 1. SoftPaqs for Microsoft Windows 98 *(continued)*

Family	Driver/Enhancement	Sequence	SoftPaq #
V300	System Enhancements	First	SP12015
	ATI Rage Pro Video Driver	Second	SP12698
	Audio Driver (M2E)	Third	SP12396
	Power Management	Fourth	SP12668
	Power Management Enhancements	Fifth	SP11335
	MultiBay	Sixth	SP11710
	Compaq Docking Enhancements	N/A	SP13875
	Diagnostics	N/A	SP13366
	Insight Management Agents	N/A	SP12948
	Insight Management Web Agents	N/A	SP11921
	Easy Point IV	N/A	SP11934
	Hot Key Support	N/A	SP11922
	Remote Management	N/A	SP11213
	3COM Etherlink 10/100 PCI/NIC	N/A	SP11920
	Mini PCI Communications Support and Software Drivers	N/A	SP12942
	Security 32 Support	N/A	SP11945 Sp12129 (Arabic/Hebrew)

[1] Must be installed before Insight Management Web agents.

[2] Must be installed after Insight Management agents.

APPENDIX B

Determining the ROM Version and Upgrade Version

Use the Compaq Setup utility or Compaq Diagnostics for Windows to determine the ROM version. Refer to Table 2 for the current ROM version, as of the date of this publication.

Table 2. Armada Family and Current ROM Version

Portable Family	Current ROM Version
Armada E700	11/29/99
Armada E500	6/01/00
Armada M700	11/29/99
Armada M300	12/04/99
Armada V300	6/01/00

Determining the ROM Version Using Setup

A block cursor is displayed in the upper right corner of the screen during startup if the Diagnostics and Setup are properly installed on the hard drive.

1. Press **F10** when the block cursor displays.

2. Scroll down using the down arrow key to highlight View System Information and press **Enter.** The System Information prompt appears.

3. Make note of the ROM date and compare it to the date in Table 2.

4. Press **Esc** to exit the ROM information screen.

5. Scroll down using the down arrow key until Save Changes and Exit is highlighted. Press **Enter.**

6. Press **F10** to confirm exiting the Compaq Utilities.

If the ROM requires upgrading and you do not have a *ROMPaq*™ diskette for your computer, see "Creating a ROMPaq Diskette" in this appendix; otherwise, proceed to "Upgrading the ROM."

Determining the ROM Version Using Compaq Diagnostics for Windows

1. Click Start→Settings→Control Panel.

2. Double-click the Compaq Diagnostics icon.

3. Press **F8** after Diagnostics loads.

4. Click the system icon.

5. Scroll through this list until the System ROM information appears. Make note of the date and compare it to the date in Table 2.

6. Close Diagnostics for Windows by clicking on the X in the upper right corner of the Diagnostics window.

If the ROM requires upgrading and you do not have a ROMPaq diskette for the computer, see "Creating a ROMPaq Diskette" in this appendix; otherwise, proceed to "Upgrading the ROM."

Creating a ROMPaq Diskette

Download the ROMPaq SoftPaq from http://www.compaq.com/support/files/portables/us/index.html. After downloading the appropriate SoftPaq from the Compaq Web site, follow the instructions on the download page to extract the image onto a diskette.

Upgrading the ROM

1. With the computer off, connect the computer to AC power.

2. Place your ROMPaq diskette into your diskette drive and restart the computer.

3. Press **Enter** on the Welcome to ROMPaq screen.

4. Press **Enter** to select the COMPAQ System ROM.

5. Press **Enter** to select the most current firmware image.

6. Press **Enter** to continue.

7. Press **Enter** to start the ROMPaq upgrade.

8. Turn off the computer after the system ROM has been successfully loaded.

APPENDIX C

SoftPaq Descriptions

Name	Description
3Com Etherlink 10/100 PCI NIC	Supports PCI NIC that is used in select Armada docking station models
3Com Global MiniPCI 56K (V.90) Modem	Enables internal Modem device on select E700 & M700 models
Compaq Check Dock Utility	Identifies supported docking stations for E500 and V300 models
Compaq Floppy Alert (E700 only)	Verifies the 3.5-inch diskette is installed in the correct internal MultiBay
Diagnostics	Provides tools to test hardware components
Easy Point IV	Provides added functionality for the stick pointing device
Hot Key Support	Allows users to quickly access BIOS and operating system features
Insight Management Agents	Provides asset management, security features, and alerting capabilities
Insight Management Web Agents	Provides Web-based asset management, security features, and alerting capabilities
M2E Audio Driver	Enables the integrated audio hardware
Mini PCI Communications Support and Drivers	Enables internal modem and modem/NIC combo devices and supports Intel PCI NIC that is used in select Armada docking station models
MultiBay Plug and Play Manager	Provides support for swapping MultiBay devices
Netflex-3 Ethernet Drivers	Enables the integrated network adapter on ArmadaStation I and II
Power Management	Allows users to customize power requirements of the PC to maximize battery life and set up hibernation functionality
Power Management Enhancements	Increases battery life by managing SMART drive data collection
Rage Video Drivers	Enables the integrated video hardware
Remote Management	Enables system administrator to update client ROM and setup over the network
Security 32	Allows users to access Compaq security options
Synaptics TouchPad Driver	Provides added functionality for the touchpad pointing device
System Enhancements	Provides users with an easy to install compilation of hardware-enabling operating system enhancements and fixes
System ROMPaq	System Firmware
Worldport Application	Allows homologation of 3Com modems