

HP Compaq notebook single image white paper



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Introduction

Purpose

This white paper provides instructions on how to successfully create a Microsoft® Windows® Windows XP Professional single image on select HP Compaq Business notebooks. The following guidelines provide installation procedures independent of the currently installed operating system.

Audience

This white paper is for use by HP personnel and clients and describes the process for creating a single image on select HP Compaq Business notebook products using Microsoft Windows XP Professional and applicable HP drivers and applications.

System requirements and prerequisites

System requirements

Information regarding minimum hardware requirements for installing XP Professional is available at <http://www.microsoft.com>.

- Supported Systems
 - HP Compaq Business Notebook nc4200
 - HP Compaq Business Notebook nc6100
 - HP Compaq Business Notebook nc6200
 - HP Compaq Business Notebook nc8200

IMPORTANT

Back up all user data prior to installing Microsoft Windows XP Professional.

You will need the following items before creating a single image:

- All applicable systems
 - HP Compaq nc4200
 - HP Compaq nc6100
 - HP Compaq nc6200
 - HP Compaq nc8200
- When using the factory preinstall image (recommended), obtain:
 - HP Compaq Notebook nc4200 Restore Solution CD Kit
 - Proper OS License for each PC

– Or –

- When creating a clean install image, obtain:
 - Microsoft Windows XP Professional CD, Certificate of Authenticity, and documentation and appropriate Service Pack
 - Service Pack 2 for Windows XP

- The latest HP Support Software CD containing updated drivers and deliverables described in the section “Installation of HP Drivers and Enhancements”
Optionally, the software can be downloaded from the HP website at www.hp.com and burned onto a CD-R or CD-RW
- Proper OS License for each PC

IMPORTANT

This document does not provide a license to create and/or distribute an operating system image. This document is intended to be a technical resource for those who have the proper license to deploy the Windows XP operating system. The operating system license shipped with HP PCs does not grant re-imaging and deployment rights. Before using the document to deploy an image, please contact your Microsoft licensing representative to obtain the proper license agreements. HP cannot be held liable if a customer uses this document to create or deploy an image that violates Microsoft license agreements.

Note

Make sure you have the latest compatible version of Microsoft Windows XP Professional drivers and enhancements. Previous versions may not have been tested in this environment.

The HP Support Software CD is updated monthly and available by annual subscription or as a one-time purchase. You can also download all files, including the most current available ROM for the platform, from the HP website www.hp.com. See Appendix A for information on determining the current ROM version and how to update.

Installation – factory preinstalled images

Using the factory preinstall image

IMPORTANT

Follow the instructions in the order provided. Failure to complete these steps in the proper order can result in an unsuccessful or unstable installation.

This section provides guidelines for users who use the preinstalled image of Microsoft Windows XP Professional.

Preparing for installation

1. Undock the unit.
2. Disconnect all external peripherals and remove all PC card devices.
3. Connect AC power.
4. To check and upgrade ROM BIOS for each system, follow the steps below.
 - Start the system using the current operating system (OS).
 - Check the current ROM BIOS using Computer Setup or by pressing **Fn+Esc** after the OS boots.
 - Compare the current ROM version date to the latest ROMPaq release date on the HP website to ensure that you have the most recent version. If you do not have the most recent version, install the latest system ROM BIOS.

Note

Refer to the online download and installation instructions to complete the ROM upgrade.

Preparing for the preinstalled image for use on multiple models

1. Unbundle the preinstalled image on the nc8200.
 - Refer to the documentation included with the system for instructions.
2. Remove the primary hard drive from the nc8200.
 - Removal procedures are available in the Maintenance and Service Guide: “HP Compaq Business Notebook nc8200 Series.”
3. Remove the primary hard drive from the nc6200.
 - Removal procedures are available in the Maintenance and Service Guide: “HP Compaq Business Notebook nc6200 Series.”
4. Insert the drive removed from the nc8200 into the nc6200.
5. Apply power to the nc6200 and allow the OS to enumerate all of the new devices.
6. Power down the nc6200 and remove the hard drive.
7. Remove the primary hard drive from the nc6100.
 - Removal procedures are available in the Maintenance and Service Guide: “HP Compaq Business Notebook nc6100 Series.”
8. Insert the drive removed from the nc6200 into the nc6100.
9. Apply power to the nc6100 and allow the OS to enumerate all of the new devices.
10. Power down the nc6100 and remove the hard drive.
11. Remove the primary hard drive from the nc4200.
 - Removal procedures are available in the Maintenance and Service Guide: “HP Compaq Business Notebook nc4200 Series.”
12. Insert the drive removed from the nc6100 into the nc4200.
13. Apply power to the nc4200 and allow the OS to enumerate all of the new devices. The image is now ready for use with supported single image systems.

Installing the operating system and system software

Preparing for installation

IMPORTANT

Follow the instructions in the order provided. Failure to complete these steps in the proper order can result in an unsuccessful or unstable installation.

This section provides guidelines for users who perform a clean installation of Microsoft Windows XP Professional.

Installing drivers and enhancements

IMPORTANT

Upgrade the system ROM before beginning the Windows XP Professional installation.

Software installation

Perform the following steps before manually installing Windows XP Professional:

1. Change the boot order in ROM BIOS to make the Multibay the first boot device on the nc8200.
2. Install the OS (See note below).

Note

Contact the Network Administrators to properly set up the networking components of Microsoft Windows Professional. For installation, refer to the Microsoft documentation provided with Windows XP Professional for complete installation instructions.

3. Install the latest drivers and enhancements from the HP Software Support CD or the HP website at www.hp.com. See Table 1 for additional information.

Table 1 Minimum Versions of Necessary Drivers and Enhancements (along with recommended installation order)

Software Components	Priority	Version Number	Recommended Installation Order
System Enhancements	Required component	1.00 H	1
Intel Chipset Installation Utility	Required component	6.21 D	2
Intel nc4200 Video Driver	Required component	1.00 A	3
Intel Set Default Utility	Recommended component	1.00 A	4
Intel Set Resolution Utility	Recommended component	1.00 A	5
ATI 8200 Video Driver and Control Panel	Required component	1.00 A	6
ADI SoundMax Audio Driver	Required component	1.00 F	7
Broadcom BCM440x 10-100 Ethernet Driver	Required component	1.01 A	8
Broadcom NetXtreme Gigabit Ethernet PCI Express Driver	Required component	1.00 B	9
Agere Systems AC'97 Modem Driver	Required component	1.00 A	10
TI Cardbus Driver	Required component	1.02 A	11
Quick Launch Button Software	Recommended component	5.10 A	12
Synaptics Touchpad	Recommended component	7.12 H	13
HP Integrated Bluetooth Driver	Required component (on models configured with Bluetooth)	3.00 A	14
Infineon TPM Driver	Required component (on models configured with TPM)	3.00 A	15
System Default Settings	Recommended component	4.20 C	16

4. Remove the primary hard drive from the nc8200.
 - Removal procedures are available in the Maintenance and Service Guide: "HP Compaq Business Notebook nc8200 Series."
5. Remove the primary hard drive from the nc6200.

- Removal procedures are available in the Maintenance and Service Guide: “HP Compaq Business Notebook nc6200 Series.”
6. Insert the drive removed from the nc8200 into the nc6200.
 7. Apply power to the nc6200 and allow the OS to enumerate all of the new devices.
 8. Power down the nc6200 and remove the hard drive.
 9. Remove the primary hard drive from the nc6100.
 - Removal procedures are available in the Maintenance and Service Guide: “HP Compaq Business Notebook nc6100 Series.”
 10. Insert the drive removed from the nc6200 into the nc6100.
 11. Apply power to the nc6100 and allow the OS to enumerate all of the new devices.
 12. Power down the nc6100 and remove the hard drive.
 13. Remove the primary hard drive from the nc4200.
 - Removal procedures are available in the Maintenance and Service Guide: “HP Compaq Business Notebook nc4200 Series.”
 14. Insert the drive removed from the nc6100 into the nc4200.
 15. Apply power to the nc4200 and allow the OS to enumerate all of the new devices.
 - The image is now ready for use with supported single image systems.

Appendix A: System ROM versions

Determining the ROM version using Setup

Note

The ROM versions listed in this document are current as of the white paper publication date.

Use the HP Setup utility or HP Diagnostics for Windows to determine the system ROM version. Refer to Table 2 for the current ROM version.

Table 2 ROM versions

Portable family	Current ROM version
HP Compaq nc6100	F.02
HP Compaq nc6200	F.03
HP Compaq nc8200	F.04

■ A block cursor displays 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 Exit without Saving Changes is highlighted. Press **Enter**.
6. Press **F10** to confirm exiting the HP Utilities.
7. If the ROM requires upgrading and the ROMPaq diskette is not available, see "Creating a ROMPaq Diskette" in this appendix. Otherwise, proceed to "Upgrading the ROM."

Determining the ROM version using HP Diagnostics for Windows

1. If Diagnostics for Windows is installed on the notebook PC, the following steps can be used to determine the ROM version.
2. Click **Start**→**Settings**→**Control Panel**.
3. Double-click the **Diagnostics** icon.
4. Press **F8** after Diagnostics loads.
5. Click the system icon (the leftmost icon on the icon bar near the top of the window).
6. Scroll through the list until the System ROM information appears. Make note of the ROM version and compare it to listings in Table 2.
7. Close Diagnostics for Windows by clicking on the **X** in the upper right corner of the Diagnostics window.

If the ROM requires upgrading and the ROMPaq diskette is not available, see "Creating a ROMPaq Diskette" in this appendix; otherwise, proceed to "Upgrading the ROM."

Determining the ROM Version Using Windows System Information

1. Click **Start**→**All Programs**→**Accessories**→**System Tools**→**System Information** under Windows XP.
2. Scroll through the list until the BIOS Version/Date information appears. Make note of the ROM version and compare it to listings in Table 2.
3. Close Windows System Information by clicking on the **X** in the upper right corner of the window.

If the ROM requires upgrading and the ROMPaq diskette is not available, see “Creating a ROMPaq Diskette” in this appendix; otherwise, proceed to “Upgrading the ROM.”

Determining the ROM version using QuickLaunch Buttons for Windows

1. Press **Fn** (Function) and **Esc** (Escape) keys simultaneously.
2. HP System Information window appears which includes the System BIOS information. Make note of the ROM version and compare it to listings in Table 2.
3. Close HP System Information by clicking **OK**.

If the ROM requires upgrading and the ROMPaq diskette is not available, 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 HP website, follow the instructions on the download page to create a RomPaq diskette.

Upgrading the ROM

1. Connect the computer to external power.
2. Place the ROMPaq diskette into the diskette drive and restart the computer.
3. Press **Enter** at the Welcome to ROMPaq screen.
4. Press **Enter** to select the 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.

Turn off the computer after the system ROM has been successfully reprogrammed.

Appendix B: SoftPaqs

Unpacking a SoftPaq file

Several switches can be used when unpacking a SoftPaq file.

```
Sp#####.exe -pdf -f<path> -s
```

SP#####.exe is the Softpaq to unpack.

-pdf is a run time switch that overrides the build parameters.

-f<Path> is a run time switch that overrides the default path set at build time.

-s instructs the package to unpack in silent mode skipping the welcome, license and directory screens.

Descriptions of the software used on HP Compaq notebook PCs are listed in Table 3.

Table 3 SoftPaq descriptions

Name	Description
ADI SoundMax Audio Driver	Enables the integrated Audio hardware
Ethernet Drivers	Enables integrated NIC devices select models
Modem Drivers	Enables integrated modem devices select models
Video Drivers	Enables the integrated video hardware
Synaptics TouchPad Driver	Provides added functionality for the touchpad device
System Enhancements	This package contains required software patches which enhance the stability of the system
System Default Settings	Changes operating system settings to match HP defaults
System ROMPaq	System Firmware
Quick Launch Button Software	Enables the Quick Launch Buttons on the internal keyboard

Appendix C: Known anomalies

Mobile Intel 915GM/GM, 910GML Express Chipset Software

Anomaly: Windows logo testing error may appear during video driver installation

Description: Windows may display a logo testing error if the Intel video driver is installed prior to installation of the Systems Enhancements Diskette.

Systems Affected: HP Compaq Business Notebook nc6220 models

Operating Systems Affected: Windows XP

Resolution: The System Enhancements disk should be installed prior to any other software per the order listed in table 1.

ATI Hydravision

Anomaly: ATI Hydravision does not function on the some models.

Description: ATI Hydravision is preloaded on the nc8200 and nc6230. It is designed for use with models that include ATI video chipsets and provides additional features for multi-monitor configurations.

Systems Affected: HP Compaq Business Notebook nc6100 and nc6220 models

Operating Systems Affected: Windows XP

Resolution: This software should be used in environments where multiple display devices are used simultaneously on systems with ATI video chipsets. It is not required for single image environments and could potentially cause confusion for end users of systems Intel video chipsets.

Appendix D: Questions and answers

- Q . Is the HP Compaq Business Notebook nc4200 preinstall image also compatible with the Compaq nc8200, nc6100 and Compaq nc6200 series?**
- A .** Yes, the updated preinstalled software image has been tested with the Compaq nc8200, nc6100 and Compaq nc6200 series.
- Q . If a new model is introduced, will all previously released models in the family, that are still being manufactured, be updated with the new preinstall image?**
- A .** No, many customers have expressed a need for consistency. Therefore, HP will make reasonable commercial efforts to maintain a consistent software image on the HP Compaq nc4200, nc6100, nc6200 and nc8200 series during the life of the series. HP will publish white papers that provide customers with the information necessary to maintain a software components list for the Compaq nc4200, nc6100, nc6200 and nc8200 series.
- Q . How do I obtain updated software components?**
- A .** The latest software updates are available from the HP Web site at <http://h18007.www1.hp.com/support/files/notebooks/us/purchase.html>

For more information

To learn more about HP business notebooks, contact your local HP sales representative or visit our Web site at: <http://www.hp.com/go/notebooks>

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