

# Using Integrated and Discrete Graphics Simultaneously

For HP Compaq 8200 Elite and 6200 Pro Series desktop models

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# Introduction

HP Compaq 8200 Elite and 6200 Pro Series business PC models support the simultaneous use of both the integrated Intel HD graphics and any supported discrete graphics cards. This capability provides the user with the ability to operate multiple displays from the PC using the VGA port and DisplayPort interface integrated on the PC's rear I/O panel, as well as any video output ports provided by a discrete graphics card, all at the same time.

This paper explains how to set up a system to support this configuration. This paper assumes the HP Compaq 8200 Elite or 6200 Pro Series business PC is a Convertible Minitower (CMT), Microtower (MT), or Small Form Factor (SFF), and that it has a PCI Express format discrete graphics card installed and working properly.

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## Note

The HP Compaq 8200 Elite Series Ultra-slim Desktop (USDT) does not have this capability. MXM graphics cards, the type of discrete graphics option available on the USDT platform, do not present additional video output interfaces. These types of graphics cards share the integrated video output interfaces provided by the PC with the integrated Intel HD graphics, essentially constraining the user to one graphics solution or the other.

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## System requirements

- HP Compaq 8200 Elite or 6200 Pro Series CMT, MT, or SFF PC
- Microsoft® Windows® 7 operating system
- PCI Express discrete graphics card from the HP-approved list of optional graphics cards, installed and operating properly
  - Other graphics cards neither sold by HP nor listed as compatible with the HP product may work, but they are not supported by HP. HP is not able to provide assistance with issues that may be encountered with non-supported graphics cards.
  - The discrete graphics card can be installed in any of the PCI Express slots on the PC system board.
- The driver softpaq for the Intel integrated HD graphics can be downloaded from <http://www8.hp.com/us/en/support-drivers.html>.

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## Caution

Do not execute/install the driver softpaq yet. Simply download the softpaq file and have it ready.

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# Configuring the system

PC systems shipped from HP with a discrete graphics card installed have the integrated Intel HD graphics disabled by default. The system is set up to use only video output interfaces provided by the installed discrete graphics card.

The following procedure describes how to enable the Intel HD graphics and integrated VGA and DisplayPort interfaces for use in conjunction with the discrete graphics card interfaces:

1. Connect one monitor to one of the discrete graphics card video output interfaces and a second monitor to either the integrated VGA or the DisplayPort interface.

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## Note

There may be a dust cover installed over the integrated VGA interface; this needs to be removed before making the video cable connection.

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2. Turn on the PC system and both monitors.
3. As the system begins the boot process, press **F10** to enter the computer's **BIOS Setup Menu**.
4. From the **BIOS Setup Menu**, select the **Advanced** tab, and then select the **Device Options** control.
5. Change the setting for **Integrated Video** from **Disabled** to **Enabled**.
6. Press **F10** to accept the change, and return to the **Main Setup** screen.
7. Select **Save Changes and Exit**, and then **Yes** to save the changes.  
The system restarts.
8. As the system begins the boot process, again press **F10** to enter the computer's BIOS Setup Menu.
9. Select the **Advanced** tab, and then select the **VGA configuration** control.
10. Select one device to be the **Primary device** and one to be the **non-boot device**.  
This setting determines which graphics solution is to be used as the video output when the PC system is starting.
11. Select **F10** to save changes (or **ESC** to cancel) and return to the **Advanced** tab.
12. Select the **File** tab, and then select **Save Changes and Exit**. Answer **Yes** to save the changes and restart the PC system.  
The active display appears as selected in step 9, and the boot screens are displayed appropriately.  
As the Microsoft Windows 7 operating system completes booting to the desktop, prompts to install the drivers for the integrated Intel HD graphics may appear.  
These drivers may not be already installed on the system and must be downloaded from the HP website at <http://www8.hp.com/us/en/support-drivers.html>. The prompts to install drivers can be ignored or cancelled.
13. Wait until the operating system has completed booting to the desktop, then run the previously downloaded softpaq and follow any on-screen prompts in order to install the Intel HD graphics drivers.
14. Restart the PC system when prompted after the Intel driver installation is completed.

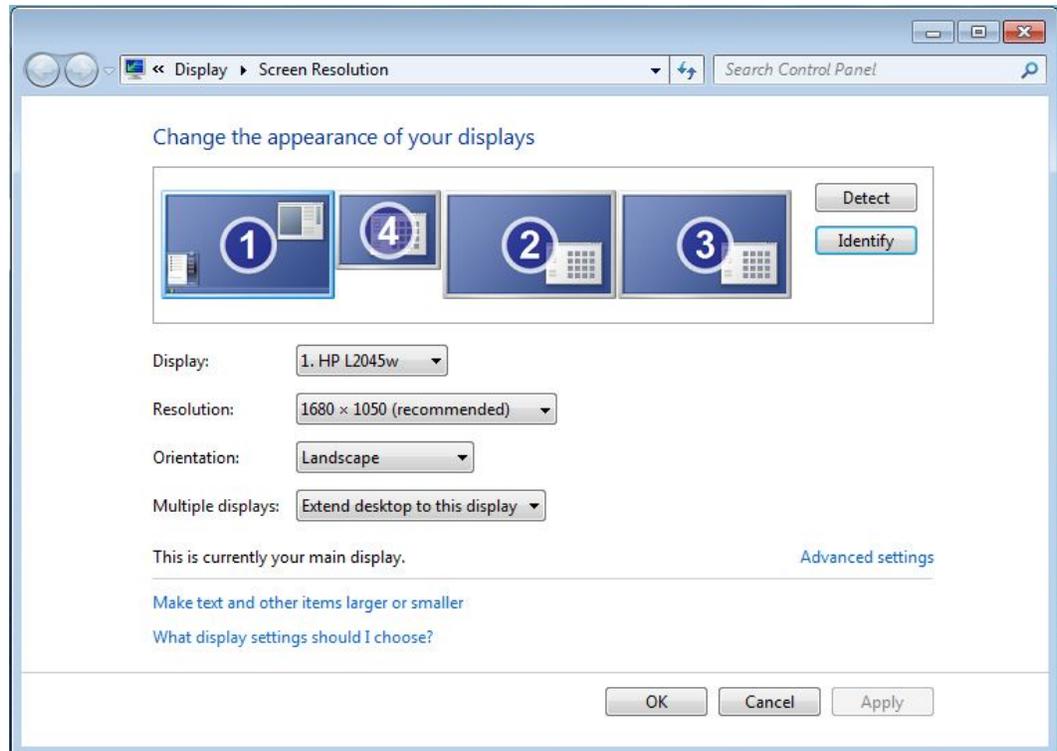
# Configuring the connected displays

After the drivers have been successfully installed, the displays can be enabled and configured using a combination of the Microsoft Windows 7 operating system controls and the graphics control panels for both the integrated Intel HD graphics and the discrete graphics card.

To open the operating system controls:

1. Right-click on open desktop space and select **Screen Resolution**, or open the system **Control Panel** and select **Adjust Screen Resolution** under the **Appearance and Personalization** group.

A window similar to the following appears showing up to four independent monitors connected to the system.



From this screen, monitors can be enabled and disabled and the resolution and orientation for each display can be adjusted. The monitors can also be selected and moved around to match the physical layout of the monitors on the desktop. The Windows taskbar appears on the monitor selected as the main display.

2. The Intel HD graphics and discrete graphics card control panels can be used to adjust specific features of the respective graphics solutions.
  - a. Open the Intel HD graphics control panel by right-clicking open desktop space and selecting **Graphics Properties**.
  - b. Open the Nvidia graphics card control panel by right-clicking open desktop space and selecting **Nvidia Control Panel**.
  - c. Open the AMD graphics card control panel by right-clicking open desktop space and selecting **Catalyst Control Center**.
  - d. Alternatively, open the control panels by right-clicking on one of the monitors in the window and selecting **Properties**. Look for the control panels on the tabs of the new window that appears.

## For more information

The following sites provide additional information:

HP Compaq 8200 Elite Series QuickSpec:

[http://h18000.www1.hp.com/products/quickspecs/13879\\_div/13879\\_div.PDF](http://h18000.www1.hp.com/products/quickspecs/13879_div/13879_div.PDF)

HP Compaq 6200 Pro Series Quickspec:

[http://h18000.www1.hp.com/products/quickspecs/13879\\_div/13879\\_div.PDF](http://h18000.www1.hp.com/products/quickspecs/13879_div/13879_div.PDF)

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