

Dell™ Inspiron™ 1200 and 2200

# Owner's Manual

Model PP10S

[www.dell.com](http://www.dell.com) | [support.dell.com](http://support.dell.com)

## Notes, Notices, and Cautions



**NOTE:** A NOTE indicates important information that helps you make better use of your computer.



**NOTICE:** A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



**CAUTION:** A CAUTION indicates a potential for property damage, personal injury, or death.

If you purchased a Dell™ n Series computer, any references in this document to Microsoft® Windows® operating systems are not applicable.

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Model PP10S

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# Finding Information

 **NOTE:** Some features may not be available for your computer or in certain countries.

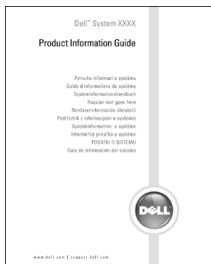
 **NOTE:** Some additional information may ship with your computer.

## What Are You Looking For?

- Warranty information
- Terms and Conditions (U.S. only)
- Safety instructions
- Regulatory information
- Ergonomics information
- End User License Agreement

## Find It Here

### Dell™ Product Information Guide



- How to set up my computer

## Setup Diagram



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## What Are You Looking For?

- Service Tag and Express Service Code
- Microsoft Windows License Label

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## Find It Here

### Service Tag and Microsoft Windows License

These labels are located on the bottom of your computer.

- Use the Service Tag to identify your computer when you use [support.dell.com](http://support.dell.com) or contact technical support.
- Enter the Express Service Code to direct your call when contacting technical support.



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**What Are You Looking For?****Find It Here**

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- Solutions — Troubleshooting hints and tips, articles from technicians, online courses, frequently asked questions
- Community — Online discussion with other Dell customers
- Upgrades — Upgrade information for components, such as memory, the hard drive, and the operating system
- Customer Care — Contact information, service call and order status, warranty, and repair information
- Service and support — Service call status and support history, service contract, online discussions with technical support
- Reference — Computer documentation, details on my computer configuration, product specifications, and white papers
- Downloads — Certified drivers, patches, and software updates
- Notebook System Software (NSS) — If you reinstall the operating system for your computer, you should also reinstall the NSS utility. NSS provides critical updates for your operating system and support for Dell™ 3.5-inch USB floppy drives, Intel® Pentium® M processors, optical drives, and USB devices. NSS is necessary for correct operation of your Dell computer. The software automatically detects your computer and operating system and installs the updates appropriate for your configuration.

To download Notebook System Software:

- 1** Go to [support.dell.com](http://support.dell.com) and click **Downloads**.
- 2** Enter your Service Tag or product model.
- 3** In the **Download Category** drop-down menu, click **All**.
- 4** Select the operating system and operating system language for your computer, and click **Submit**.
- 5** Under **Select a Device**, scroll to **System and Configuration Utilities**, and click **Dell Notebook System Software**.

**Dell Support Website** — [support.dell.com](http://support.dell.com)

**NOTE:** Select your region to view the appropriate support site.

**NOTE:** Corporate, government, and education customers can also use the customized Dell Premier Support website at [premier.support.dell.com](http://premier.support.dell.com). The website may not be available in all regions.

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<b>What Are You Looking For?</b>	<b>Find It Here</b>
<ul style="list-style-type: none"><li>• How to use Windows XP</li><li>• Documentation for my computer</li><li>• Documentation for devices (such as a modem)</li></ul>	<p><b>Windows Help and Support Center</b></p> <ol style="list-style-type: none"><li><b>1</b> Click the <b>Start</b> button and click <b>Help and Support</b>.</li><li><b>2</b> Type a word or phrase that describes your problem and click the arrow icon.</li><li><b>3</b> Click the topic that describes your problem.</li><li><b>4</b> Follow the instructions on the screen.</li></ol>

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# About Your Computer

## Front View



**DISPLAY LATCH RELEASE** — Press this button to release the display latch and open the display.

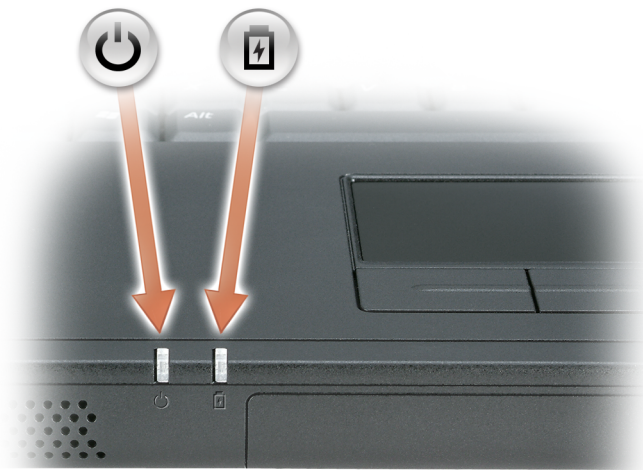
**DISPLAY** — For information on adjusting your display, see "Display Functions" on page 42.



**POWER BUTTON** — Press the power button to turn on the computer or to enter or exit a power management mode.

**NOTICE:** To avoid losing data, use the **Start** menu to shut down your computer instead of pressing the power button.

**SPEAKERS** — To adjust the volume of the integrated speakers, press the volume-control key combinations. For more information, see page 43.


## DEVICE STATUS LIGHTS



-  Turns on when you turn on the computer or pulses when the computer is in a power management mode.
-  Turns on steadily when the battery is being charged or flashes when the battery charge is low.

If the computer is connected to an electrical outlet, the  light operates as follows:

- Solid green: The battery is charging.
- Off: The battery is adequately charged, the computer is turned off, or no battery is installed.
- Rapidly flashing green: An error has occurred regarding the battery.

If the computer is running on a battery, the  light operates as follows:

- Off: The battery is discharging normally with use.
- Flashing amber: The battery charge is low.






**TOUCH PAD AND TOUCH PAD BUTTONS** — Touch pad and touch pad buttons provide the functionality of a mouse. See page 44 for more information.

**KEYBOARD** — The keyboard includes a numeric keypad as well as the Microsoft® Windows® logo key. For information on supported key combinations, see page 42.

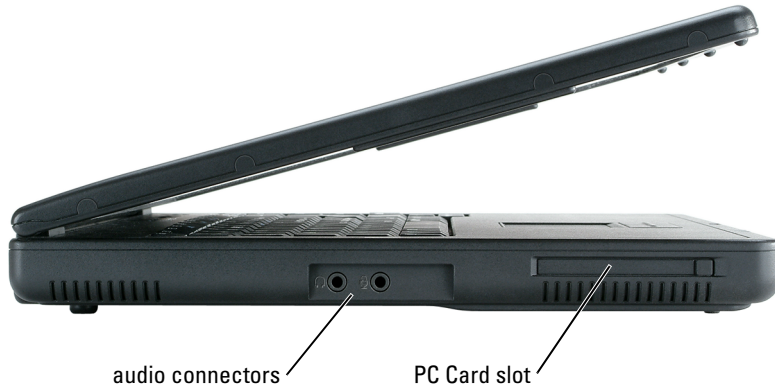
## HARD DRIVE AND KEYBOARD STATUS LIGHTS



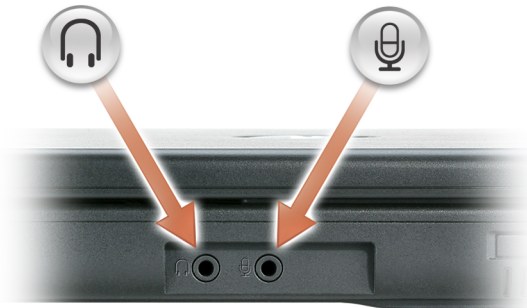
The green lights located above the keyboard indicate the following:


-  Turns on when the computer reads or writes data.  
**NOTICE:** To avoid loss of data, never turn off the computer while the  light is flashing.
-  Turns on when the numeric keypad is enabled.
-  Turns on when the caps lock function is enabled.
-  Turns on when the scroll lock function is enabled.


## Left Side View



### AUDIO CONNECTORS



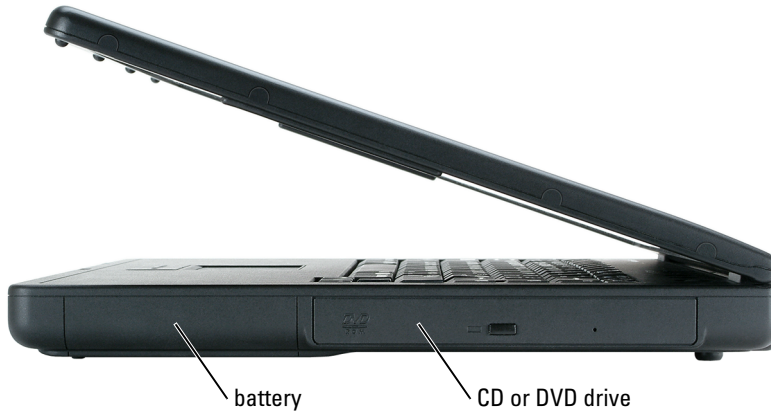
Attach headphones or speakers to the  connector.

Attach record/playback devices, such as cassette players, CD players, and microphones to the  connector.

**PC CARD SLOT** — Supports one PC Card, such as a modem, wireless card, or network adapter. For more information, see "Using PC Cards" on page 45.



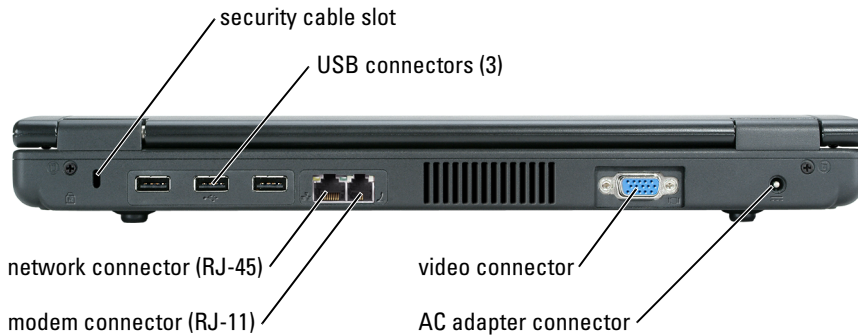
## Right Side View



**BATTERY/BATTERY BAY** — When a battery is installed, you can use the computer without connecting the computer to an electrical outlet. See "Using a Battery" on page 27.

**CD OR DVD DRIVE BAY** — Accommodates a CD drive or DVD drive.

## Back View

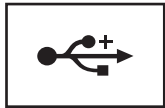




**SECURITY CABLE SLOT** — Lets you attach a commercially available antitheft device to the computer. For more information, see the instructions included with the device.

**NOTICE:** Before you buy an antitheft device, ensure that it will work with the security cable slot.

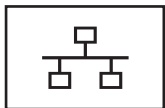
#### USB CONNECTORS



Connects USB 2.0 compliant devices, such as a mouse, keyboard, or printer.

#### NETWORK CONNECTOR (RJ-45)

**NOTICE:** The network connector is slightly larger than the modem connector. To avoid damaging the computer, do not plug a telephone line into the network connector.



Connects the computer to a network. The lights next to the connector indicate activity for both wired and wireless network communications.

For information on using the network adapter, see the online network-adapter documentation supplied with your computer.

## MODEM CONNECTOR (RJ-11)



Connects the telephone line to the modem connector.  
For information on using the modem, see the online modem documentation supplied with your computer.

## VIDEO CONNECTOR



Connects an external monitor.

**AC ADAPTER CONNECTOR** — Connects the AC adapter so that you can run the computer on AC power instead of battery power.



The AC adapter converts AC power to the DC power required by the computer. You can connect the AC adapter with your computer turned either on or off.

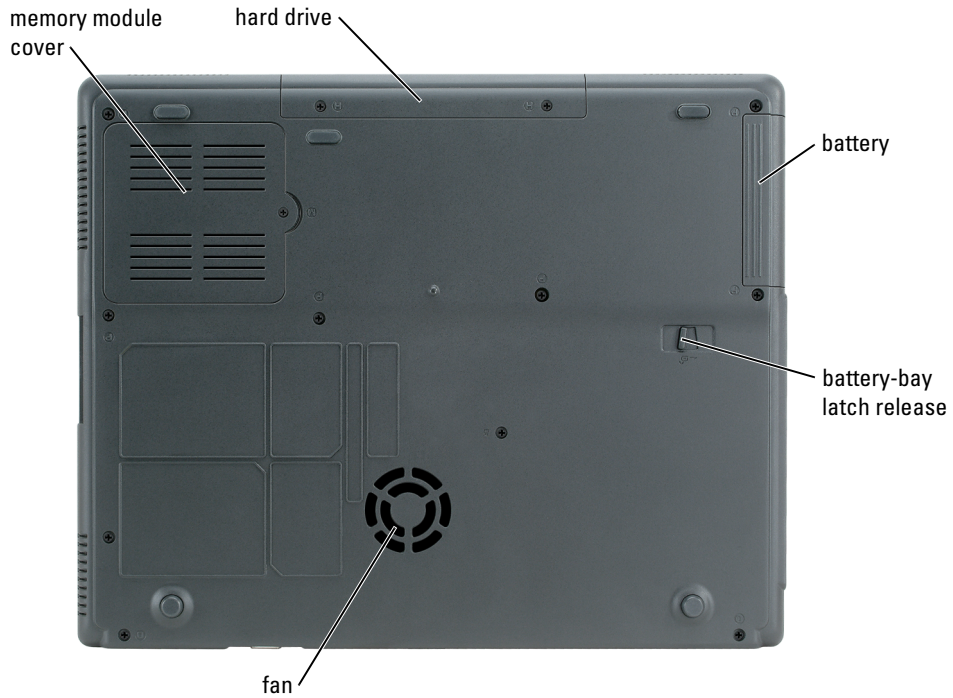


**CAUTION:** The AC adapter works with electrical outlets worldwide. However, power connectors and power strips vary among countries. Using an incompatible cable or improperly connecting the cable to the power strip or electrical outlet may cause fire or equipment damage.



**NOTICE:** When you disconnect the AC adapter cable from the computer, grasp the connector, not the cable itself, and pull firmly but gently to avoid damaging the cable.

## Bottom View




**MEMORY MODULE COVER** — Covers the compartment that contains the memory module(s).


**HARD DRIVE** — Stores software and data.

**BATTERY/BATTERY BAY** — When a battery is installed, you can use the computer without connecting the computer to an electrical outlet. See "Using a Battery" on page 27.

**BATTERY-BAY LATCH RELEASES** — Releases the battery.


**FAN** — The computer uses an internal fan to create airflow through the vents, which prevents the computer from overheating.

 **NOTE:** The computer turns on the fan when the computer gets hot. Fan noise is normal and does not indicate a problem with the fans or the computer.

 **CAUTION:** Do not block, push objects into, or allow dust to accumulate in the air vents. Do not store your computer in a low-airflow environment, such as a closed briefcase, while it is running. Restricting the airflow can damage the computer or cause a fire.

# Setting Up Your Computer

## Connecting to the Internet

 **NOTE:** ISPs and ISP offerings vary by country.

To connect to the Internet, you need a modem or network connection and an Internet service provider (ISP). Your ISP will offer one or more of the following Internet connection options:

- Dial-up connections that provide Internet access through a telephone line. Dial-up connections are considerably slower than DSL and cable modem connections.
- DSL connections that provide high-speed Internet access through your existing telephone line. With a DSL connection, you can access the Internet and use your telephone on the same line simultaneously.
- Cable modem connections that provide high-speed Internet access through your local cable TV line.

If you are using a dial-up connection, connect a telephone line to the modem connector on your computer and to the telephone wall jack before you set up your Internet connection. If you are using a DSL or cable modem connection, contact your ISP for setup instructions.

## Setting Up Your Internet Connection

To set up an Internet connection with a provided ISP desktop shortcut:

- 1 Save and close any open files, and exit any open programs.
- 2 Double-click the ISP icon on the Microsoft® Windows® desktop.
- 3 Follow the instructions on the screen to complete the setup.


If you do not have an ISP icon on your desktop or if you want to set up an Internet connection with a different ISP:

- 1 Save and close any open files, and exit any open programs.
- 2 Click the **Start** button and click **Internet Explorer**.  
The **New Connection Wizard** appears.
- 3 Click **Connect to the Internet**.
- 4 In the next window, click the appropriate option:
  - If you do not have an ISP and want to select one, click **Choose from a list of Internet service providers (ISPs)**.

- If you have already obtained setup information from your ISP but you did not receive a setup CD, click **Set up my connection manually**.
- If you have a CD, click **Use the CD I got from an ISP**.

**5** Click **Next**.

If you selected **Set up my connection manually**, continue to step 6. Otherwise, follow the instructions on the screen to complete the setup.

 **NOTE:** If you do not know which type of connection to select, contact your ISP.

**6** Click the appropriate option under **How do you want to connect to the Internet?**, and then click **Next**.

**7** Use the setup information provided by your ISP to complete the setup.


If you are having problems connecting to the Internet, see "E-Mail, Modem, and Internet Problems" on page 55. If you cannot connect to the Internet but have successfully connected in the past, the ISP might have a service outage. Contact your ISP to check the service status, or try connecting again later.

## Transferring Information to a New Computer

The Microsoft® Windows® XP operating system provides a Files and Settings Transfer wizard to move data from the source computer to the new computer. You can move data such as:

- E-mails
- Toolbar settings
- Window sizes
- Internet bookmarks

You can transfer the data to the new computer over a network or serial connection, or you can store it on a removable medium, such as a writable floppy disk or CD, for transfer to the new computer.

 **NOTE:** You can transfer information from the old computer to the new computer by directly connecting a serial cable to the input/output (I/O) ports of the two computers. To transfer data over a serial connection, you must access the **Network Connections** utility from the **Control Panel** and perform additional configuration steps, such as setting up an **advanced** connection and designating the **host** computer and the **guest** computer.

For instructions on setting up a direct cable connection between two computers, see Microsoft Knowledge Base Article #305621, titled *How to Set Up a Direct Cable Connection Between Two Computers in Windows XP*.

For transferring information to a new computer, you must run the Files and Settings Transfer wizard. You can create a Wizard disk with the Transfer Wizard utility or use the *Operating System* CD for this process.

## Running the Files and Settings Transfer Wizard Without the Operating System CD

To run the Files and Settings Transfer Wizard without the *Operating System* CD, you must create a Wizard disk that will allow you to create a backup image file to removable media.

To create a Wizard disk, use your new computer with Windows XP and perform the following steps:

- 1 Click the **Start** button.
- 2 Click **Files and Settings Transfer Wizard**.
- 3 When the **Files and Settings Transfer Wizard** welcome screen appears, click **Next**.
- 4 On the **Which computer is this?** screen, click **New Computer** and click **Next**.
- 5 On the **Do you have a Windows XP CD?** screen, click **I want to create a Wizard Disk in the following drive:** and click **Next**.
- 6 Insert the removable media, such as a floppy disk or CD, and click **OK**.
- 7 When the disk creation completes and the **Now go to your old computer** message appears, *do not* click **Next**.
- 8 Go to the old computer.

To copy data from the old computer:

- 1 On the old computer, insert the removable **Wizard Disk**.
- 2 Click the **Start** button and click **Run**.
- 3 In the **Open** field on the **Run** window, type in **a:\fastwiz** and click **OK**.
- 4 On the **Files and Settings Transfer Wizard** welcome screen, click **Next**.
- 5 On the **Which computer is this?** screen, click **Old Computer** and click **Next**.
- 6 On the **Select a transfer method** screen, click the transfer method you prefer.
- 7 On the **What do you want to transfer?** screen, select the items you want to transfer and click **Next**.

After the information has been copied, the **Completing the Collection Phase** screen appears.

- 8 Click **Finish**.


To transfer data to the new computer:

- 1 On the **Now go to your old computer** screen on the new computer, click **Next**.
- 2 On the **Where are the files and settings?** screen, select the method you chose for transferring your settings and files and click **Next**. Follow the instructions on the screen.


The wizard reads the collected files and settings and applies them to your new computer.

When all of the settings and files have been applied, the **Finished** screen appears.

- 3 Click **Finished** and restart the new computer.

 **NOTE:** For more information about this procedure, search [dell.support.com](http://dell.support.com) for document #PA1089586 (*How Do I Transfer Files From My Old Computer to My New Dell Computer using the Microsoft® Windows® XP Operating System?*).

## Running the Files and Settings Transfer Wizard With the Operating System CD

 **NOTE:** This procedure requires the *Operating System* CD. This CD is optional and may not be included with all computers.

To prepare the new computer for the file transfer:

- 1 Start the **Files and Settings Transfer Wizard**.
- 2 When the **Files and Settings Transfer Wizard** welcome screen appears, click **Next**.
- 3 On the **Which computer is this?** screen, click **New Computer** and click **Next**.
- 4 On the **Do you have a Windows XP CD?** screen, click **I will use the wizard from the Windows XP CD** and click **Next**.
- 5 When the **Now go to your old computer** screen appears, go to your old or source computer. Do *not* click **Next** at this time.

To copy data from the old computer:

- 1 On the old computer, insert the *Windows XP Operating System* CD.
- 2 On the **Welcome to Microsoft Windows XP** screen, click **Perform additional tasks**.
- 3 Under **What do you want to do?**, click **Transfer files and settings**.
- 4 On the **Files and Settings Transfer Wizard** welcome screen, click **Next**.
- 5 On the **Which computer is this?** screen, click **Old Computer** and click **Next**.
- 6 On the **Select a transfer method** screen, click the transfer method you prefer.
- 7 On the **What do you want to transfer?** screen, select the items you want to transfer and click **Next**.

After the information has been copied, the **Completing the Collection Phase** screen appears.

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The wizard reads the collected files and settings and applies them to your new computer.

When all of the settings and files have been applied, the **Finished** screen appears.

- 3 Click **Finished** and restart the new computer.



## Setting Up a Printer

**NOTICE:** Complete the operating system setup before you connect a printer to the computer.

See the documentation that came with the printer for setup information, including how to:

- Obtain and install updated drivers.
- Connect the printer to the computer.
- Load paper and install the toner or ink cartridge.
- Consult the printer *Owner's Manual* for technical assistance, or call the printer manufacturer.

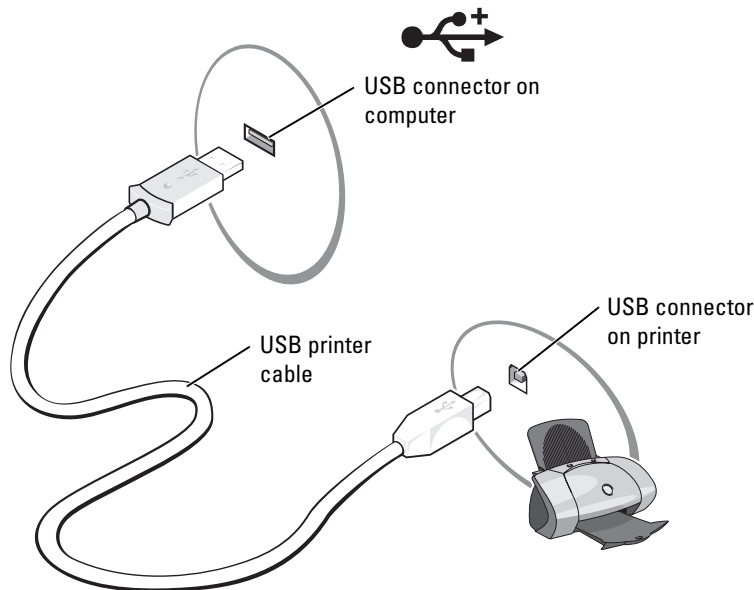
### Printer Cable

Your printer connects to your computer with a USB cable. Your printer may not come with a printer cable, so if you purchase a cable separately, ensure that it is compatible with your printer. If you purchased a printer cable at the same time you purchased your computer, the cable may arrive in the computer box.

### Connecting a USB Printer

**NOTE:** You can connect USB devices while the computer is turned on.

- 1 Complete the operating system setup if you have not already done so.
- 2 Attach the USB printer cable to the USB connectors on the computer and the printer. The USB connectors fit only one way.



- 3 Turn on the printer and then turn on the computer. If the **Add New Hardware Wizard** window appears, click **Cancel**.
- 4 Install the printer driver if necessary. See the documentation that came with your printer.


## Power Protection Devices

Several devices are available to protect against power fluctuations and failures:


- Surge protectors
- Line conditioners
- Uninterruptible power supplies (UPS)

### Surge Protectors


Surge protectors and power strips equipped with surge protection help to prevent damage to your computer from voltage spikes that can occur during electrical storms or following power interruptions. The level of protection is usually commensurate with the cost of the surge protector. Some surge protector manufacturers include warranty coverage for certain types of damage. Carefully read the device warranty when choosing a surge protector. A device with a higher joule rating offers more protection. Compare joule ratings to determine the relative effectiveness of different devices.

 **NOTICE:** Most surge protectors do not protect against power fluctuations or power interruptions caused by nearby lightning strikes. When lightning occurs in your area, disconnect the telephone line from the telephone wall jack and disconnect your computer from the electrical outlet.

Many surge protectors have a telephone jack for modem protection. See the surge protector documentation for modem connection instructions.


 **NOTICE:** Not all surge protectors offer network adapter protection. Disconnect the network cable from the network wall jack during electrical storms.


### Line Conditioners

 **NOTICE:** Line conditioners do not protect against power interruptions.

Line conditioners are designed to maintain AC voltage at a fairly constant level.

### Uninterruptible Power Supplies

 **NOTICE:** Loss of power while data is being saved to the hard drive may result in data loss or file damage.


 **NOTE:** To ensure maximum battery operating time, connect only your computer to a UPS. Connect other devices, such as a printer, to a separate power strip that provides surge protection.

A UPS protects against power fluctuations and interruptions. UPS devices contain a battery that provides temporary power to connected devices when AC power is interrupted. The battery charges while AC power is available. See the UPS manufacturer documentation for information on battery operating time and to ensure that the device is approved by Underwriters Laboratories (UL).


# Using a Battery

## Battery Performance


 **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.

 **NOTE:** For information about the Dell warranty for your computer, see the *Product Information Guide* or separate paper warranty document that shipped with your computer.


For optimal computer performance and to help preserve BIOS settings, operate your Dell™ portable computer with the main battery installed at all times. Use a battery to run the computer when it is not connected to an electrical outlet. One battery is supplied as standard equipment in the battery bay.

 **NOTE:** Battery capacity (the time it can hold a charge) decreases over time. Depending on how often the battery is used and the conditions under which it is used, you may need to purchase a new battery during the life of your computer.

- Battery operating time varies depending on operating conditions. Operating time is significantly reduced when you perform operations including, but not limited to, the following:
- Using optical drives, such as DVD or CD drives
- Using wireless communications devices, PC Cards, or USB devices
- Using high-brightness display settings, 3D screen savers, or other power-intensive programs such as 3D games
- Running the computer in maximum performance mode

 **NOTE:** It is recommended that you connect your computer to an electrical outlet when writing to a CD or DVD.

You can set power management options to alert you when the battery charge is low.

 **CAUTION:** Using an incompatible battery may increase the risk of fire or explosion. Replace the battery only with a compatible battery purchased from Dell. The lithium-ion battery is designed to work with your Dell computer. Do not use a battery from other computers with your computer.

 **CAUTION:** Do not dispose of batteries with household waste. When your battery no longer holds a charge, call your local waste disposal or environmental agency for advice on disposing of a lithium-ion or Nickel metal-hydrate battery. See "Battery Disposal" in the *Product Information Guide*.

**⚠ CAUTION:** Misuse of the battery may increase the risk of fire or chemical burn. Do not puncture, incinerate, disassemble, or expose the battery to temperatures above 65°C (149°F). Keep the battery away from children. Handle damaged or leaking batteries with extreme care. Damaged batteries may leak and cause personal injury or equipment damage.

## Checking the Battery Charge

The Dell QuickSet Battery Meter and the low-battery warning provide information on the battery charge.

### Dell QuickSet Battery Meter

If Dell QuickSet is installed, press <Fn><F3> to display the QuickSet Battery Meter.

The **Battery Meter** window displays status, charge level, and charge completion time for the battery in your computer.

The following icons appear in the **Battery Meter** window:



- The computer is running on battery power.
- The battery is discharging or idle.



- The computer is connected to an electrical outlet and running on AC power.
- The battery is charging.



- The computer is connected to an electrical outlet and running on AC power.
  - The battery is discharging, idle, or charging.
- 

For more information about QuickSet, right-click the  icon in the taskbar, and click **Help**.


### Low-Battery Warning



**NOTICE:** To avoid losing or corrupting data, save your work immediately after a low-battery warning. Then connect the computer to an electrical outlet. If the battery runs completely out of power, hibernate mode begins automatically.


A low-battery warning occurs when the battery charge is approximately 90 percent depleted. The computer beeps once, indicating that minimal battery operating time remains. During that time, the speaker beeps periodically. The computer enters hibernate mode when the battery charge is at a critically low level. For more information about low-battery alarms, see "Power Management" on page 31.

## Charging the Battery

 **NOTE:** The AC adapter charges a completely discharged battery in approximately 2 hours (for nickel-metal hydride batteries [NiMH], and 2.5 hours for lithium-ion [Li-ion] batteries) with the computer turned off. Charge time is longer with the computer turned on. You can leave the battery in the computer as long as you like. The battery's internal circuitry prevents the battery from overcharging.

When you connect the computer to an electrical outlet or install a battery while the computer is connected to an electrical outlet, the computer checks the battery charge and temperature. If necessary, the AC adapter then charges the battery and maintains the battery charge.

If the battery is hot from being used in your computer or being in a hot environment, the battery may not charge when you connect the computer to an electrical outlet.

The battery is too hot to start charging if the  light flashes alternately green and orange. Disconnect the computer from the electrical outlet and allow the computer and the battery to cool to room temperature. Then connect the computer to an electrical outlet to continue charging the battery.

For more information about resolving problems with a battery, see "Power Problems" on page 62.

## Recalibrating a Battery


If your system is configured with a nickel-metal hydride (NiMH) battery, you can recalibrate the battery by running the Battery Recalibration software. Recalibrating the battery ensures that the Power Meter indicator is accurate.

Recalibrate your NiMH battery when one of the following occurs:

- A message appears, prompting you to recalibrate your battery.
- The typical battery operating time decreases.

When you recalibrate your NiMH battery, do not remove the battery. Allow several hours for the procedure to complete.

### Recalibrating a Battery When the Recalibrating Message Appears

 **NOTE:** A battery recalibration message will appear only during booting.


If your computer displays a message that prompts you to recalibrate your battery:

- 1 Turn off the computer by pressing and holding the power button until all device status-light activity ceases (approximately 5 seconds).
- 2 Connect the computer to an electrical outlet and turn it back on.  
The battery recalibration message should appear on the screen immediately following the Dell logo.
- 3 To skip the battery recalibration process and continue the system boot, press <ESC>.

- 4 To start the Battery Recalibration procedure, press <F1>.

The battery recalibration begins and the AC adapter charges the battery until the battery gauge on the battery information screen states 100% charged.


- The Battery Recalibration Process screen appears showing the functions (Charge or Discharge) on the left of the screen and the Battery Info charge status on the right of the screen.
- The AC adapter begins charging the battery. The **Charge Battery to Full** option is highlighted on the left of the screen. The battery charge information is displayed on the right of the screen.
- The AC adapter charges the battery until the battery gauge states 100% charged. The battery status light turns off after the battery is fully charged.


 **NOTE:** A message prompting you to remove the AC adapter appears when the battery is fully charged.

- 5 When prompted, disconnect the AC adapter.

The battery discharges until the battery gauge states 0% charged. The **Discharge Battery to Empty** option is highlighted on the left of the screen. When the battery is completely discharged, the computer automatically turns off.


- 6 Connect the AC adapter to your computer.


- 7 Allow the AC adapter to charge the battery until the battery status light  turns off.

 **NOTE:** You can operate your computer while the battery is charging. However, do not operate your computer using battery power until the battery is fully charged.

## Recalibrating a Battery Through the System Setup Utility

- 1 Connect the computer to an electrical outlet.
- 2 Turn on (or restart) the computer.
- 3 When the Dell Logo appears, press <F2> immediately. If you wait too long and the logo for the Microsoft® Windows® operating system appears, continue to wait until you see the Windows desktop. Then shut down your computer and try again.


 **NOTE:** For information about a specific item on a System Setup screen highlight the item and see the Help area on the screen.


- 4 Using the down-arrow key, select **Battery Info**.
  - The **Battery Info** charge status is displayed on the right side of the screen.
  - The AC adapter charges the battery until the battery gauge states 100% charged.
  - The battery status light  turns off after the battery is fully charged.
- 5 Ensure that the battery status light is off.

- 6 Disconnect the AC adapter.

The battery discharges until the battery gauge states 0% charged. When the battery is completely discharged, the computer automatically turns off.

- 7 Connect the AC adapter to your computer.

- 8 Allow the AC adapter to charge the battery until the battery status light  turns off.

 **NOTE:** You can operate your computer while the battery is charging. However, do not operate your computer using battery power until the battery is fully charged.

## Removing a Battery

 **CAUTION:** Before performing these procedures, disconnect the modem from the telephone wall jack. Ensure that the computer is turned off and disconnected from the electrical outlet.

- 1 Slide and hold the battery-bay latch release on the bottom of the computer, and then remove the battery from the bay.



## Installing a Battery

Ensure that the computer is turned off. Slide the battery into the bay until the latch release clicks.

## Storing a Battery

Remove the battery when you store your computer for an extended period of time. A battery discharges during prolonged storage. After a long storage period, recharge the battery fully before you use it (see page 29).





# Power Management

## Power Management Tips




**NOTE:** See "Using a Battery" on page 27 for more information on conserving battery power.

- Connect the computer to an electrical outlet when possible because battery life is largely determined by the number of times the battery is charged.
- Place the computer in standby mode (see page 33) or hibernate mode (see page 34) when you leave the computer unattended for long periods of time.
- You can use the Power Management Wizard to configure the computer to enter or exit power management modes by pressing the power button, closing the display, or pressing <Fn><Esc>.

## Power Management Wizard



**NOTE:** The Power Management Wizard is not available if you have restricted access rights.

Click or double-click the  icon to open the Power Management Wizard.

The first two screens of the wizard—**Welcome** and **What is Power Management?**—describe and define various power management options.



**NOTE:** On the **What is Power Management?** screen, you can select **Do not show this page again**. When you select this option, the **Welcome** screen also does not appear again.

Use the screens that follow **Welcome** and **What is Power Management?** to set various power management options, including sleep modes, power schemes, and low battery-charge alarms.


### Setting Sleep Modes

The screen defines standby and hibernate modes. From the screen you can:


- Set standby-mode password options.
- Enable or disable hibernate mode.
- Select how the computer will respond when you close the display:
  - Choose no action.
  - Enter standby mode.
  - Enter hibernate mode.

- Select how the computer will respond when you press the power button:
  - Choose no action.
  - Enter standby mode.
  - Enter hibernate mode.
  - Shut down the operating system and turn off the computer.
  - Prompt a user for an action (**Ask me what to do**).
- Select how the computer will respond when you press <Fn><Esc>:
  - Choose no action.
  - Enter standby mode.
  - Enter hibernate mode.
  - Shut down Microsoft Windows and turn off the computer.
  - Prompt a user for an action (**Ask me what to do**).

## Selecting a Power Scheme

 **NOTE:** When your computer is running on battery power, the Network Disabled power scheme disables your internal network and wireless activity. When your computer is connected to an electrical outlet, the Network Disabled power scheme disables only your wireless activity. You must set the power scheme through QuickSet (not the Microsoft® Windows® operating system) for the Network Disabled power scheme to work.


The screen allows you to select, create, and edit power scheme settings. In addition, you can delete power schemes that you create, but you cannot delete Dell™ QuickSet predefined power schemes (Maximum Battery, Maximum Performance, Presentation, and Network Disabled).

 **NOTE:** QuickSet automatically adds the word (**QuickSet**) after the names of power schemes created using QuickSet.

All QuickSet power schemes are displayed in a drop-down menu near the center of the screen. The power settings for each scheme in the menu are listed below the menu. The power settings are listed separately for when the computer is running on battery or connected to an electrical outlet.

The Power Management Wizard also allows you to associate the display brightness level with a power scheme. You must enable brightness-level power schemes through QuickSet in order to set the brightness level.

The display brightness, internal network-card activity, and wireless activity features are not available through the Control Panel power schemes. In order to make use of these value-added features, you must set them through QuickSet power schemes.

 **NOTE:** Brightness shortcut keys only affect the display on your portable computer, not monitors that you attach to your portable computer. If your computer is in CRT-only mode and you try to change the brightness level, the **Brightness Meter** appears, but the brightness level on the monitor does not change.


## Setting Battery Alarms and Actions

The screen allows you to enable the low-battery and critical-battery alarms and to change settings for the alarms. For example, you can set the low-battery alarm to 20 percent to remind you to save work and switch to AC power, and you can set the critical-battery alarm to 10 percent to enter hibernate mode. From the screen, you can:

- Select whether the alarm will notify you by sound or text.
- Adjust the power level at which you want the alarm to notify you.
- Select how the computer will respond when the alarm notifies you:
  - Choose no action.
  - Enter standby mode.
  - Enter hibernate mode.
  - Shut down Windows and turn off the computer.

## Completing the Power Management Wizard

The screen summarizes the QuickSet power scheme, sleep mode, and battery alarm settings for your computer. Review the settings you have selected and click **Finish**.

For more information about QuickSet, right-click the  icon in the taskbar and click **Help**.

# Power Management Modes

## Standby Mode

Standby mode conserves power by turning off the display and the hard drive after a predetermined period of inactivity (a time-out). When the computer exits standby mode, it returns to the same operating state it was in before entering standby mode.

 **NOTICE:** If your computer loses AC and battery power while in standby mode, it may lose data.


To enter standby mode:

- Click the **Start** button, click **Turn off computer**, and then click **Stand by**.  
or
- Depending on how you set the power management options on the **Advanced** tab (see page 35) in the **Power Options Properties** window, use one of the following methods:
  - Press the power button.
  - Close the display.
  - Press <Fn><Esc>.

To exit standby mode, press the power button or open the display depending on how you set the options on the **Advanced** tab. For more information on the **Advanced** tab in the Power Management Wizard, see page 35. You cannot make the computer exit standby mode by pressing a key or touching the touch pad.

## Hibernate Mode


Hibernate mode conserves power by copying system data to a reserved area on the hard drive and then completely turning off the computer. When the computer exits hibernate mode, it returns to the same operating state it was in before entering hibernate mode.

 **NOTICE:** You cannot remove devices or USB mobile docking stations while your computer is in hibernate mode.

Your computer enters hibernate mode if the battery charge level becomes critically low.

To manually enter hibernate mode:

- Click the **Start** button, click **Turn off computer**, press and hold <Shift>, and then click **Hibernate**.
- or
- Depending on how you set the power management options on the **Advanced** tab (see page 35) in the **Power Options Properties** window, use one of the following methods to enter hibernate mode:
  - Press the power button.
  - Close the display.
  - Press <Fn><Esc>.

 **NOTE:** Some PC Cards may not operate correctly after the computer exits hibernate mode. Remove and reinsert the card, or simply restart (reboot) your computer.

To exit hibernate mode, press the power button. The computer may take a short time to exit hibernate mode. You cannot make the computer exit hibernate mode by pressing a key or touching the touch pad. For more information on hibernate mode, see the documentation that came with your operating system.


## Power Options Properties

The **Power Options Properties** window helps you to manage power consumption and monitor battery charge status. To access the Windows **Power Options Properties** window, click the **Start** button→ **Control Panel**→ **Performance and Maintenance**→ **Power Options**.

### Power Schemes Tab

The **Power schemes** drop-down menu displays the selected preset power scheme. Keep the default **Portable/Laptop** power scheme to maximize battery power.

## Alarms Tab

 **NOTE:** To enable audible alarms, click each **Alarm Action** button and select **Sound alarm**.

The **Low battery alarm** and **Critical battery alarm** settings alert you with a message when the battery charge falls below a certain percentage. When you receive your computer, the **Low battery alarm** and **Critical battery alarm** check boxes are selected. It is recommended that you continue to use these settings. See "Using a Battery" on page 27 for more information on low-battery warnings.

## Power Meter Tab

The **Power Meter** tab displays the current power source and amount of battery charge remaining.

## Advanced Tab

The **Advanced** tab allows you to:

- Set power icon and standby mode password options.
- Program the following functions (depending on your operating system):
  - Prompt a user for an action (**Ask me what to do**).
  - Enter standby mode.
  - Enter hibernate mode.
  - Shut down Windows and turn off the computer.
  - Choose no action (**None** or **Do nothing**).

To program these functions, click an option from the corresponding drop-down menu and then click **OK**.

## Hibernate Tab

The **Hibernate** tab lets you enable hibernate mode by clicking the **Enable hibernate support** check box.



# Using CDs, DVDs, and Other Multimedia

## Playing a CD or DVD

- ➡ **NOTICE:** Do not press down on the CD or DVD tray when you open or close it. Keep the tray closed when you are not using the drive.
- ➡ **NOTICE:** Do not move the computer while playing CDs or DVDs.
  - 1 Press the eject button on the front of the drive.
  - 2 Pull the tray out.



- 3 Place the disc, label side up, in the center of the tray and snap the disc onto the spindle.
- ✎ **NOTE:** If you use a module that shipped with another computer, you need to install the drivers and software necessary to play DVDs or write data. For more information, see the *Drivers and Utilities* CD.
- 4 Push the tray back into the drive.

To format CDs for storing data, to create music CDs, or to copy CDs, see the CD software that came with your computer.

**NOTE:** Ensure that you follow all copyright laws when you create CDs.


For more information on playing CDs or DVDs, click **Help** on the CD or DVD player (if available).

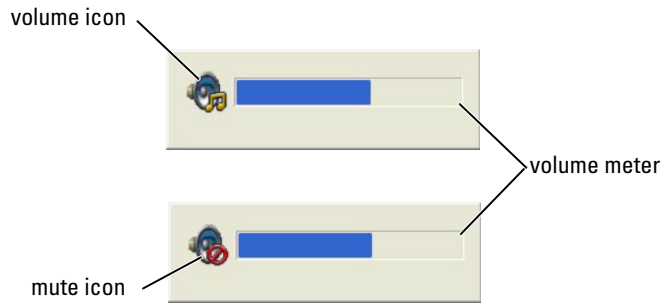
## Adjusting the Volume

**NOTE:** When the speakers are muted, you do not hear the CD or DVD playing.

- 1 Click the **Start** button, point to **All Programs**→**Accessories**→**Entertainment**, and then click **Volume Control**.
- 2 In the **Volume Control** window, click and drag the bar in the **Volume Control** column and slide it up or down to increase or decrease the volume.


For more information on volume control options, click **Help** in the **Volume Control** window.

The Volume Meter displays the current volume level, including mute, on your computer. Right-click the  icon in the taskbar to enable or disable the Volume Meter on the screen.



When the meter is enabled, adjust the volume by pressing the following keys:

- Press <Fn> <PageUp> to increase volume.
- Press <Fn> <PageDn> to decrease volume.
- Press <Fn> <End> to mute volume.

For more information about QuickSet, right-click the  icon in the taskbar and click **Help**.



## Adjusting the Picture

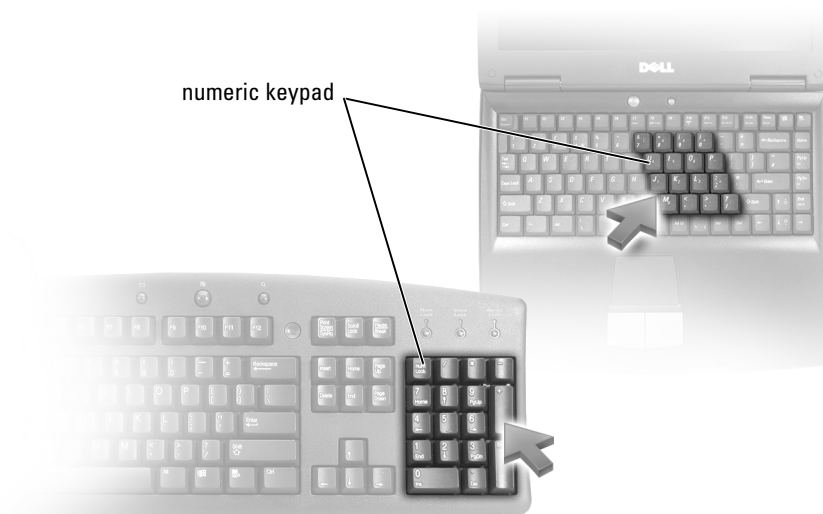
If an error message notifies you that the current resolution and color depth are using too much memory and preventing DVD playback, adjust the display properties.

- 1 Click the **Start** button and click **Control Panel**.
- 2 Under **Pick a category**, click **Appearance and Themes**.
- 3 Under **Pick a task...**, click **Change the screen resolution**.
- 4 In the **Display Properties** window, click and drag the bar in **Screen resolution** to change the setting to **1024 by 768 pixels**.
- 5 Click the drop-down menu under **Color quality**, and then click **Medium (16 bit)**.
- 6 Click **OK**.




# Using the Keyboard and Touch Pad

## Numeric Keypad



The numeric keypad functions like the numeric keypad on an external keyboard. Each key on the keypad has multiple functions. The keypad numbers and symbols are marked in blue on the right of the keypad keys. To type a number or symbol, hold down <Fn> and press the desired key.

- To enable the keypad, press <Num Lk>. The  light indicates that the keypad is active.
- To disable the keypad, press <Num Lk> again.

# Key Combinations

## System Functions

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<Ctrl><Shift><Esc> Opens the **Task Manager** window

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## Battery

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<Fn><F3> Displays the Dell™ QuickSet Battery Meter. For more information about Dell QuickSet, see page 28.

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## CD or DVD Tray

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<Fn><F10> Ejects the tray out of the drive (if Dell QuickSet is installed). For more information about Dell QuickSet, see page 28.

---

## Display Functions

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<Fn><F8> Displays a list of all currently available display options. Highlight the desired state to switch the display to that state.

---


<Fn> and up-arrow key Increases brightness on the integrated display only (not on an external monitor).

---

<Fn> and down-arrow key Decreases brightness on the integrated display only (not on an external monitor).

---

## Radios (Including Wireless Networking)

 **NOTE:** Wireless networking equipment is optional for some systems and may not be included with your computer.

---

<Fn><F2> Enables and disables radios, including wireless networking equipment.

---

## Power Management

---

<Fn><Esc> Activates a power management mode. You can reprogram this keyboard shortcut to activate a different power management mode using the **Advanced** tab in the **Power Options Properties** window. See page 35.

---

<Fn><F1> Puts the system into hibernate mode (if Dell QuickSet is installed). For more information, see page 34.

---

## Speaker Functions

<Fn><Page Up>	Increases the volume of the integrated speakers and external speakers, if attached
<Fn><Page Dn>	Decreases the volume of the integrated speakers and external speakers, if attached
<Fn><End>	Enables and disables the integrated speakers and external speakers, if attached

## Microsoft® Windows® Logo Key Functions

Windows logo key and <m>	Minimizes all open windows
Windows logo key and <Shift><m>	Maximizes all windows
Windows logo key and <e>	Runs Windows Explorer
Windows logo key and <r>	Opens the <b>Run</b> dialog box
Windows logo key and <f>	Opens the <b>Search Results</b> dialog box
Windows logo key and <Ctrl><f>	Opens the <b>Search Results-Computer</b> dialog box (if the computer is connected to a network)
Windows logo key and <Pause>	Opens the <b>System Properties</b> dialog box

To adjust keyboard operation, such as the character repeat rate, open the Control Panel, click **Printers and Other Hardware**, and click **Keyboard**.

## Touch Pad

The touch pad detects the pressure and movement of your finger to allow you to move the cursor on the display. Use the touch pad and touch pad buttons as you would use a mouse.

- To move the cursor, lightly slide your finger over the touch pad.
- To select an object, lightly tap once on the surface of the touch pad or use your thumb to press the left touch-pad button.
- To select and move (or drag) an object, position the cursor on the object and tap down-up-down on the touch pad. On the second down motion, leave your finger on the touch pad and move the selected object by sliding your finger over the surface.
- To double-click an object, position the cursor on the object and tap twice on the touch pad or use your thumb to press the left touch-pad button twice.

### Customizing the Touch Pad


You can use the **Mouse Properties** window to disable the touch pad or adjust their settings.

- 1 Open the Control Panel, click **Printers and Other Hardware**, and then click **Mouse**.
- 2 In the **Mouse Properties** window, click the **Touch Pad** tab to adjust touch pad settings.
- 3 Click **OK** to save the settings and close the window.

# Using PC Cards

## PC Card Types

The PC Card slot has one connector that supports a single Type I or Type II card. The PC Card slot supports CardBus technology and extended PC Cards. "Type" of card refers to its thickness, not its functionality.

 **NOTE:** A PC Card is not a bootable device.

See "Specifications" on page 81 for information on supported PC Cards.

## Extended PC Cards

An extended PC Card (for example, a wireless network adapter) is longer than a standard PC Card and extends outside the computer. Follow these precautions when using extended PC Cards:

- Protect the exposed end of an installed card. Striking the end of the card can damage the system board.
- Always remove an extended PC Card before you pack the computer in its carrying case.

## Installing a PC Card

You can install a PC Card in the computer while the computer is running. The computer automatically detects the card.

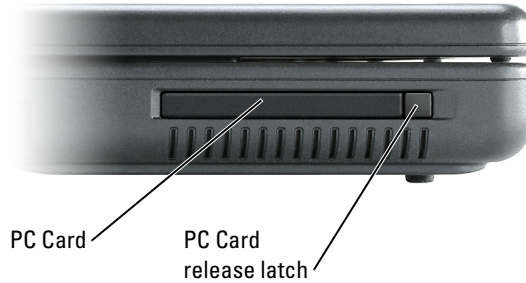
PC Cards are generally marked with a symbol (such as a triangle or an arrow) to indicate which end to insert into the slot. The cards are keyed to prevent incorrect insertion. If card orientation is not clear, see the documentation that came with the card.

 **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.

To install a PC Card:

- 1 Hold the card with its orientation symbol pointing into the slot and the top side of the card facing up.


- Slide the card into the slot until the card is completely seated in its connector.  
If you encounter too much resistance, do not force the card. Check the card orientation and try again.



The computer recognizes most PC Cards and automatically loads the appropriate device driver. If the configuration program tells you to load the manufacturer's drivers, use the floppy disk or CD that came with the PC Card.

## Removing a PC Card or Blank

**⚠ CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.

**➡ NOTICE:** Before you remove a PC Card from the computer, click the  icon in the taskbar to select a card and stop it from functioning before you remove it from the computer. If you do not stop the card in the configuration utility, you could lose data. Do not attempt to eject a card by pulling its cable, if one is attached.

Press the latch and remove the card or blank.





# Setting Up a Network

## Connecting to a Network Adapter

**NOTE:** Plug the network cable into the network adapter connector on the computer. Do not plug the network cable into the modem connector on the computer. Do not plug a network cable into a telephone wall jack.


To connect a network cable:

- 1 Connect the network cable to the network adapter connector on the back of your computer. Insert the cable until it clicks into place, and then gently pull it to ensure that it is secure.
- 2 Connect the other end of the network cable to a network device.




## Network Setup Wizard

The Microsoft® Windows® XP operating system provides a Network Setup Wizard to guide you through the process of sharing files, printers, or an Internet connection between computers in a home or small office.

- 1 Click the **Start** button, point to **All Programs**→**Accessories**→**Communications**, and then click **Network Setup Wizard**.
  - 2 On the **Network Setup Wizard** welcome screen, click **Next**.
  - 3 Click **Checklist for creating a network**.
-  **NOTE:** Selecting the connection method **This computer connects directly to the Internet** enables the integrated firewall provided with Windows XP Service Pack 2 (SP2) or later.
- 4 Complete the checklist and required preparations.
  - 5 Return to the Network Setup Wizard and follow the instructions on the screen.

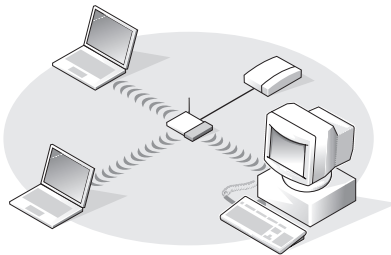
## Connecting to a Wireless Local Area Network

-  **NOTE:** The wireless networking capability is available with installation of an optional wireless network card.

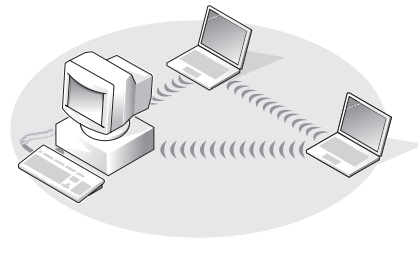
### Determining Your Network Type

-  **NOTE:** Most wireless networks are of the infrastructure type.

Wireless networks fall into two categories—infrastructure networks and ad-hoc networks. An infrastructure network uses routers or access points to connect several computers. An ad-hoc network does not use routers or access points and consists of computers that broadcast to one another. For additional assistance with setting up your wireless connection, go to [support.dell.com](http://support.dell.com) and search for the keyword *wireless setup*.



infrastructure network



ad-hoc network

### Connecting to a Wireless Network in Microsoft® Windows® XP

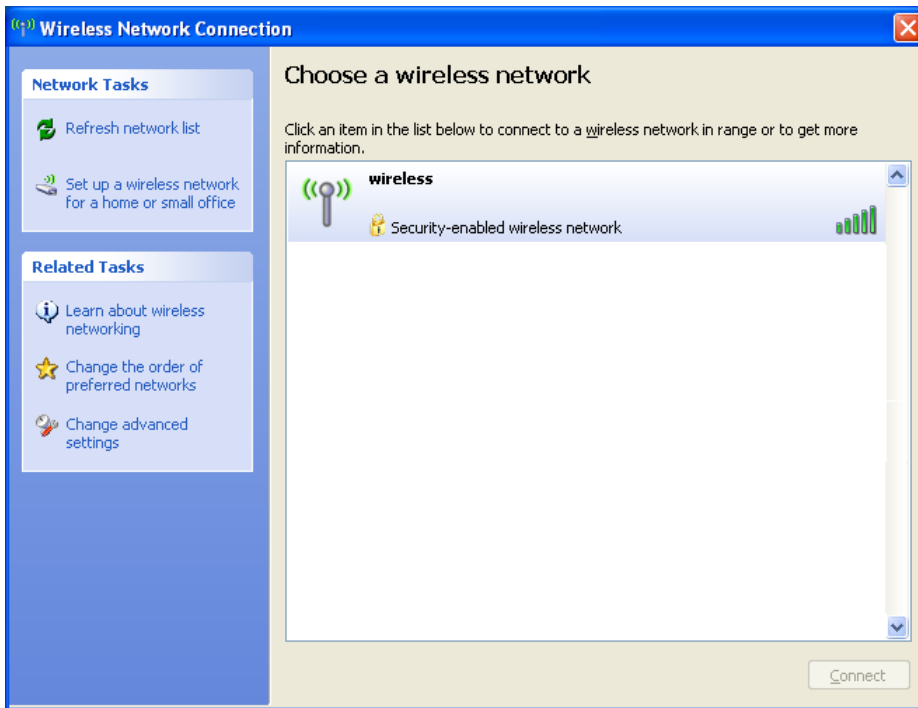
Your wireless network card requires specific software and drivers in order to connect to a network. The software is already installed. If the software is removed or corrupted, follow the instructions included in the user's guide for your wireless network card. The user's guide is available on the Dell Support website at [support.dell.com](http://support.dell.com).


When you turn on your computer, a pop-up appears from the network icon in the notification area (located in the lower-right corner of the Windows desktop) whenever a network, for which your computer is not configured, is detected in the area.





- 1 Click either the pop-up or the network icon to configure your computer for one of the available wireless networks.

The **Wireless Network Connections** window lists the wireless networks available in your area.

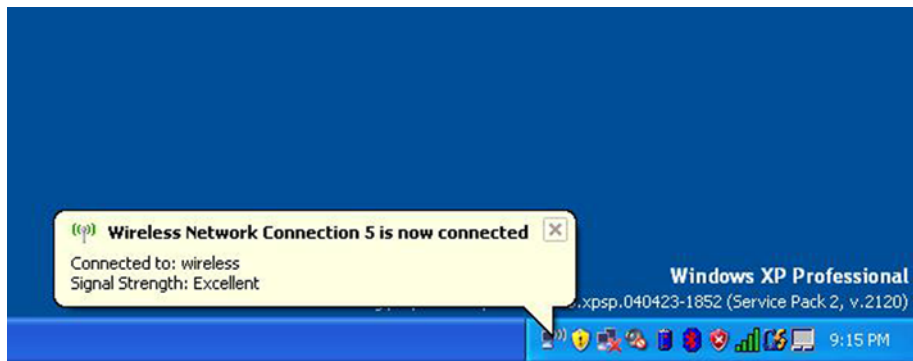


- 2 Click to select the network you want to configure, and then click **Connect** or double-click the network name in the list. If you select a secure network (identified by a  icon), you must enter a WEP or WPA key when prompted.

 **NOTE:** Network security settings are unique to your network. Dell cannot provide this information. Your network is configured automatically.

 **NOTE:** Your computer can take up to 1 minute to connect to the network.

After your computer is configured for the wireless network you selected, another pop-up notifies you that your computer is connected to the network you selected.



Thereafter, whenever you log on to your computer in the area of the wireless network, the same pop-up notifies you of the wireless network connection.

# Solving Problems

## Dell Diagnostics



**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions located in the *Product Information Guide*.

### When to Use the Dell Diagnostics

If you experience a problem with your computer, perform the checks in this chapter and run the Dell Diagnostics before you contact Dell for technical assistance.



**NOTICE:** The Dell Diagnostics works only on Dell™ computers.

The Dell Diagnostics is located on a hidden diagnostic utility partition on your hard drive.



**NOTE:** If your computer cannot display a screen image, contact Dell (see page 91).

- 1 Shut down the computer.
- 2 Connect the computer to an electrical outlet.
- 3 Turn on the computer. When the DELL™ logo appears, press <F12> immediately.

If you wait too long and the operating system logo appears, continue to wait until you see the Microsoft® Windows® desktop. Then shut down your computer and try again.

The one-time boot menu displays with a list of bootable devices.

- 4 Use the down-arrow key to select **Diagnostics** and press <Enter> to start the Dell Diagnostics from the diagnostics utility partition on your hard drive.



**NOTE:** If the boot device list does not display and the screen is blank, press the <End> key. Then press the <Enter> key to begin the Dell Diagnostics.

- During the assessment, answer any questions that appear.
- If a failure is detected, the computer stops and beeps. To stop the assessment and restart the computer, press <n>; to continue to the next test, press <y>; to retest the component that failed, press <r>.
- If failures are detected during the Pre-boot System Assessment, write down the error code(s) and contact Dell before continuing on to the Dell Diagnostics. See "Contacting Dell" on page 91.

## Dell Diagnostics Main Menu

- 1 After the Dell Diagnostics loads and the **Main Menu** screen appears, click the button for the option you want.

Option	Function
Express Test	Performs a quick test of devices. This test typically takes 10 to 20 minutes and requires no interaction on your part. Run <b>Express Test</b> first to increase the possibility of tracing the problem quickly.
Extended Test	Performs a thorough check of devices. This test typically takes an hour or more and requires you to answer questions periodically.
Custom Test	Tests a specific device. You can customize the tests you want to run.
Symptom Tree	Lists the most common symptoms encountered and allows you to select a test based on the symptom of the problem you are having.

- 2 If a problem is encountered during a test, a message appears with an error code and a description of the problem. Write down the error code and problem description and follow the instructions on the screen.

If you cannot resolve the error condition, contact Dell (see page 91).



**NOTE:** The Service Tag for your computer is located at the top of each test screen. If you contact Dell, technical support will ask for your Service Tag.

- 3 If you run a test from the **Custom Test** or **Symptom Tree** option, click the applicable tab described in the following table for more information.

Tab	Function
Results	Displays the results of the test and any error conditions encountered.
Errors	Displays error conditions encountered, error codes, and the problem description.
Help	Describes the test and may indicate requirements for running the test.

Tab	Function
Configuration	Displays your hardware configuration for the selected device. The Dell Diagnostics obtains configuration information for all devices from system setup, memory, and various internal tests, and it displays the information in the device list in the left pane of the screen. The device list may not display the names of all the components installed on your computer or all devices attached to your computer.
Parameters	Allows you to customize the test by changing the test settings.

- When the tests are complete, close the test screen to return to the **Main Menu** screen. To exit the Dell Diagnostics and restart the computer, close the **Main Menu** screen.

## Drive Problems

 **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

**ENSURE THAT MICROSOFT® WINDOWS® RECOGNIZES THE DRIVE** — Click the **Start** button and click **My Computer**. If the optional floppy, CD, or DVD drive is not listed, perform a full scan with your antivirus software to check for and remove viruses. Viruses can sometimes prevent Windows from recognizing a drive.

### TEST THE DRIVE —

- Insert another floppy disk, CD, or DVD to eliminate the possibility that the original one is defective.
- If testing an optional floppy drive, insert a bootable floppy disk and restart the computer.

### CLEAN THE DRIVE OR DISK —

1 Hold the disc by its outer edge. You can also touch the inside edge of the center hole.



**NOTICE:** To prevent damaging the surface, do not wipe in a circular motion around the disc.

2 With a soft, lint-free cloth, gently wipe the bottom of the disc (the unlabeled side) in a straight line from the center to the outer edge of the disc.

3 For stubborn dirt, try using water or a diluted solution of water and mild soap. You can also purchase commercial products that clean discs and provide some protection from dust, fingerprints, and scratches. Cleaning products for CDs are safe to use on DVDs.


### ENSURE THAT THE CD IS SNAPPED ONTO THE SPINDLE


### CHECK THE CABLE CONNECTIONS

**CHECK FOR HARDWARE INCOMPATIBILITIES** — See page 70.

**RUN THE DELL DIAGNOSTICS** — See page 51.

## CD and DVD drive problems

 **NOTE:** High-speed CD or DVD drive vibration is normal and may cause noise, which does not indicate a defect in the drive or the CD or DVD.

 **NOTE:** Because of different regions worldwide and different disc formats, not all DVD titles work in all DVD drives.

## If there is no audio

### **ADJUST THE WINDOWS VOLUME CONTROL** —

- Click the speaker icon in the lower-right corner of your screen.
- Ensure that the volume is turned up by clicking the slider and dragging it up.
- Ensure that the sound is not muted by clicking any boxes that are checked.

**CHECK THE SPEAKERS AND SUBWOOFER** — See page 65.

## If you hear an unfamiliar scraping or grinding sound

- Ensure that the sound is not caused by the program that is running.
- Ensure that the disk or disc is inserted properly.

## Hard drive problems

**ALLOW THE COMPUTER TO COOL BEFORE TURNING IT ON** — A hot hard drive may prevent the operating system from starting. Try allowing the computer to return to room temperature before turning it on.



### **RUN CHECK DISK —**

- 1 Click the **Start** button and click **My Computer**.
- 2 Right-click **Local Disk C:**.
- 3 Click **Properties**.
- 4 Click the **Tools** tab.
- 5 Under **Error-checking**, click **Check Now**.
- 6 Click **Scan for and attempt recovery of bad sectors**.
- 7 Click **Start**.

## **E-Mail, Modem, and Internet Problems**



**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.



**NOTE:** Connect the modem to an analog telephone jack only. The modem does not operate while it is connected to a digital telephone network.

**CHECK THE MICROSOFT OUTLOOK® EXPRESS SECURITY SETTINGS —** If you cannot open your e-mail attachments:

- 1 In Outlook Express, click **Tools**, click **Options**, and then click **Security**.
- 2 Click **Do not allow attachments** to remove the checkmark.

**CHECK THE TELEPHONE LINE CONNECTION —**

**CHECK THE TELEPHONE JACK —**

**CONNECT THE MODEM DIRECTLY TO THE TELEPHONE WALL JACK —**

**USE A DIFFERENT TELEPHONE LINE —**

- Verify that the telephone line is connected to the jack on the modem. (The jack has either a green label or a connector-shaped icon next to it.)
- Ensure that you detect a click when you insert the telephone line connector into the modem.
- Disconnect the telephone line from the modem and connect it to a telephone. Listen for a dial tone.
- If you have other telephone devices sharing the line, such as an answering machine, fax machine, surge protector, or line splitter, then bypass them and use the telephone to connect the modem directly to the telephone wall jack. If you are using a line that is 3 m (10 ft) or more in length, try a shorter one.

**RUN THE MODEM HELPER DIAGNOSTICS —** Click the **Start** button, point to **All Programs**, and then click **Modem Helper**. Follow the instructions on the screen to identify and resolve modem problems. (Modem Helper is not available on certain computers.)

**VERIFY THAT THE MODEM IS COMMUNICATING WITH WINDOWS —**

- 1 Click the **Start** button and click **Control Panel**.
  - 2 Click **Printers and Other Hardware**.
  - 3 Click **Phone and Modem Options**.
  - 4 Click the **Modems** tab.
  - 5 Click the COM port for your modem.
  - 6 Click **Properties**, click the **Diagnostics** tab, and then click **Query Modem** to verify that the modem is communicating with Windows.
- If all commands receive responses, the modem is operating properly.

**ENSURE THAT YOU ARE CONNECTED TO THE INTERNET —** Ensure that you have subscribed to an Internet provider. With the Outlook Express e-mail program open, click **File**. If **Work Offline** has a checkmark next to it, click the checkmark to remove it and connect to the Internet. For help, contact your Internet service provider.

**SCAN THE COMPUTER FOR SPYWARE —** If you are experiencing slow computer performance, you frequently receive pop-up advertisements, or you are having problems connecting to the Internet, your computer might be infected with spyware. Use an antivirus program that includes anti-spyware protection (your program may require an upgrade) to scan the computer and remove spyware. For more information, go to [support.dell.com](http://support.dell.com) and search for the keyword *spyware*.

## Error Messages



**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

If the message is not listed, see the documentation for the operating system or the program that was running when the message appeared.

**BAD COMMAND OR FILE NAME —** Ensure that you have spelled the command correctly, put spaces in the proper place, and used the correct pathname.

**CD DRIVE CONTROLLER FAILURE —** The CD drive does not respond to commands from the computer. See page 53.

**DATA ERROR —** The hard drive cannot read the data. See page 53.

**THE FILE BEING COPIED IS TOO LARGE FOR THE DESTINATION DRIVE** — The file that you are trying to copy is too large to fit on the disk, or the disk is too full. Try copying the file to a different disk or use a larger capacity disk.

**A FILENAME CANNOT CONTAIN ANY OF THE FOLLOWING CHARACTERS: \ / : \* ? " < > |** — Do not use these characters in filenames.

**INSERT BOOTABLE MEDIA** — The operating system is trying to boot to a nonbootable CD. Insert a bootable CD.

**NOT ENOUGH MEMORY OR RESOURCES. EXIT SOME PROGRAMS AND TRY AGAIN** — You have too many programs open. Close all windows and open the program that you want to use.

**OPERATING SYSTEM NOT FOUND** — Reinstall the hard drive, see page 79. If the problem persists, contact Dell (see page 91).

**A REQUIRED .DLL FILE WAS NOT FOUND** — The program that you are trying to open is missing an essential file. Remove and then reinstall the program.

- 1 Click the **Start** button and click **Control Panel**.
- 2 Click **Add or Remove Programs**.
- 3 Select the program you want to remove.
- 4 Click **Remove** or **Change/Remove** and follow the prompts on the screen.
- 5 See the program documentation for installation instructions.

**<DRIVE LETTER>:\ IS NOT ACCESSIBLE. THE DEVICE IS NOT READY** — Insert a disk into the drive and try again.

## Keyboard Problems




**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.



**NOTE:** Use the integrated keyboard when working in MS-DOS® mode or when running the Dell Diagnostics or the system setup program. When you attach an external keyboard, the integrated keyboard remains fully functional.

## External Keyboard Problems

 **NOTE:** When you attach an external keyboard, the integrated keyboard remains fully functional.

**CHECK THE KEYBOARD CABLE** — Shut down the computer. Disconnect the keyboard cable and check it for damage, and firmly reconnect the cable.

If you are using a keyboard extension cable, disconnect it and connect the keyboard directly to the computer.

### **CHECK THE EXTERNAL KEYBOARD** —

- 1 Shut down the computer, wait 1 minute, and turn it on again.
- 2 Verify that the numbers, capitals, and scroll lock lights on the keyboard blink during the boot routine.
- 3 From the Windows desktop, click the **Start** button, point to **Programs**, point to **Accessories**, and click **Notepad**.
- 4 Type some characters on the external keyboard and verify that they appear on the display.

If you cannot verify these steps, you may have a defective external keyboard.

### **TO VERIFY THAT THE PROBLEM IS WITH THE EXTERNAL KEYBOARD, CHECK THE INTEGRATED KEYBOARD** —

- 1 Shut down the computer.
- 2 Disconnect the external keyboard.
- 3 Turn on the computer.
- 4 From the Windows desktop, click the **Start** button, point to **Programs**, point to **Accessories**, and click **Notepad**.
- 5 Type some characters on the internal keyboard and verify that they appear on the display.

If the characters appear now but did not with the external keyboard, you may have a defective external keyboard. Contact Dell (see page 91).

## Unexpected Characters

**DISABLE THE NUMERIC KEYPAD** — Press <Num Lk> to disable the numeric keypad if numbers are displayed instead of letters. Verify that the numbers lock light is not lit.


# Lockups and Software Problems

 **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

## The computer does not start up

**ENSURE THAT THE AC ADAPTER IS FIRMLY CONNECTED TO THE COMPUTER AND TO THE ELECTRICAL OUTLET.**

## The computer stops responding

 **NOTICE:** You might lose data if you are unable to perform an operating system shutdown.

**TURN THE COMPUTER OFF** — If you are unable to get a response by pressing a key on your keyboard or moving your mouse, press and hold the power button for at least 8 to 10 seconds until the computer turns off. Then restart your computer.

## Slow computer performance or problems connecting to the Internet


**SCAN THE COMPUTER FOR SPYWARE** — If you are experiencing slow computer performance, you frequently receive pop-up advertisements, or you are having problems connecting to the Internet, your computer might be infected with spyware. Use an antivirus program that includes anti-spyware protection (your program may require an upgrade) to scan the computer and remove spyware. For more information, go to [support.dell.com](http://support.dell.com) and search for the keyword spyware.

## A program stops responding

### **END THE PROGRAM** —

- 1 Press <Ctrl><Shift><Esc> simultaneously.
- 2 Click **Applications**.
- 3 Click the program that is no longer responding.
- 4 Click **End Task**.

## A program crashes repeatedly

 **NOTE:** Software usually includes installation instructions in its documentation or on a floppy disk or CD.

**CHECK THE SOFTWARE DOCUMENTATION** — If necessary, uninstall and then reinstall the program.

## A program is designed for an earlier Windows operating system

**RUN THE PROGRAM COMPATIBILITY WIZARD** — The Program Compatibility Wizard configures a program so it runs in an environment similar to non-Windows XP operating system environments.

- 1 Click the **Start** button, point to **All Programs**, point to **Accessories**, and then click **Program Compatibility Wizard**.
- 2 In the welcome screen, click **Next**.
- 3 Follow the instructions on the screen.

## A solid blue screen appears

**TURN THE COMPUTER OFF** — If you are unable to get a response by pressing a key on your keyboard or moving your mouse, press and hold the power button for at least 8 to 10 seconds until the computer turns off. Then restart your computer.

## Other software problems

**CHECK THE SOFTWARE DOCUMENTATION OR CONTACT THE SOFTWARE MANUFACTURER FOR TROUBLESHOOTING INFORMATION** —

- Ensure that the program is compatible with the operating system installed on your computer.
- Ensure that your computer meets the minimum hardware requirements needed to run the software. See the software documentation for information.
- Ensure that the program is installed and configured properly.
- Verify that the device drivers do not conflict with the program.
- If necessary, uninstall and then reinstall the program.

**BACK UP YOUR FILES IMMEDIATELY.**

**USE A VIRUS-SCANNING PROGRAM TO CHECK THE HARD DRIVE, FLOPPY DISKS, OR CDS.**

**SAVE AND CLOSE ANY OPEN FILES OR PROGRAMS AND SHUT DOWN YOUR COMPUTER THROUGH THE Start MENU.**

**RUN THE DELL DIAGNOSTICS** — If all tests run successfully, the error condition is related to a software problem.

## Memory Problems



**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

### **IF YOU RECEIVE AN INSUFFICIENT MEMORY MESSAGE** —

- Save and close any open files and exit any open programs you are not using to see if that resolves the problem.
- See the software documentation for minimum memory requirements.
- Run the Dell Diagnostics.

### **IF YOU EXPERIENCE OTHER MEMORY PROBLEMS** —

- Ensure that you are following the memory installation guidelines.
- Run the Dell Diagnostics.

## Network Problems



**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

**CHECK THE NETWORK CABLE CONNECTOR** — Ensure that the network cable is firmly inserted into both the network connector on the back of the computer and the network jack.

**RESTART THE COMPUTER AND LOG ON TO THE NETWORK AGAIN.**

**CHECK YOUR NETWORK SETTINGS** — Contact your network administrator or the person who set up your network to verify that your network settings are correct and that the network is functioning.

## PC Card Problems



**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

**CHECK THE PC CARD** — Ensure that the PC Card is properly inserted into the connector.

**ENSURE THAT THE CARD IS RECOGNIZED BY WINDOWS** — Double-click the Safely Remove Hardware icon in the Windows taskbar. Ensure that the card is listed.

**IF YOU HAVE PROBLEMS WITH A DELL-PROVIDED PC CARD** — Contact Dell (see page 91).

**IF YOU HAVE PROBLEMS WITH A PC CARD NOT PROVIDED BY DELL** — Contact the PC Card manufacturer.

## Power Problems



**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.



**NOTE:** See page 33 for information on standby mode.

**CHECK THE POWER LIGHT** — When the power light is lit or blinking, the computer has power. If the power light is blinking, the computer is in standby mode—press the power button to exit standby mode. If the light is off, press the power button to turn on the computer.

**CHARGE THE BATTERY** — The battery charge may be depleted.

- 1 Reinstall the battery.
- 2 Use the AC adapter to connect the computer to an electrical outlet.
- 3 Turn on the computer.

**CHECK THE BATTERY STATUS LIGHT** — If the battery status light slowly flashes green without the AC adapter connected, the battery charge is low or depleted. Connect the computer to an electrical outlet.

If the battery status light rapidly flashes green with the AC adapter connected, the battery may be too hot to charge. Shut down the computer, disconnect the computer from the electrical outlet, and then let the battery and computer cool to room temperature.



**CHECK THE BATTERY TEMPERATURE** — If the battery temperature is below 0° C (32° F), the computer will not start up.

**TEST THE ELECTRICAL OUTLET** — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

**CHECK THE AC ADAPTER** — Check the AC adapter cable connections. If the AC adapter has a light, ensure that the light is on.

**CONNECT THE COMPUTER DIRECTLY TO AN ELECTRICAL OUTLET** — Bypass power protection devices, power strips, and the extension cable to verify that the computer turns on.

**ELIMINATE POSSIBLE INTERFERENCE** — Turn off nearby fans, fluorescent lights, halogen lamps, or other appliances.

**ADJUST THE POWER PROPERTIES** — See "Power Management Wizard" on page 31 for more information.

## Printer Problems



**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.



**NOTE:** If you need technical assistance for your printer, contact the printer's manufacturer.



**NOTE:** If you need technical assistance for your Dell printer, contact Dell (see page 91). Use the code available on the Service Tag located on your printer to direct your call when contacting technical support.

**CHECK THE PRINTER DOCUMENTATION** — See the printer documentation for setup and troubleshooting information.

**ENSURE THAT THE PRINTER IS TURNED ON.**

**CHECK THE PRINTER CABLE CONNECTIONS** —

- See the printer documentation for cable connection information.
- Ensure that the printer cables are securely connected to the printer and the computer (see page 26).

**TEST THE ELECTRICAL OUTLET** — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

**VERIFY THAT THE PRINTER IS RECOGNIZED BY WINDOWS** —

- 1 Click the **Start** button, click **Control Panel**, and then click **Printers and Other Hardware**.
- 2 Click **View installed printers or fax printers**.  
If the printer is listed, right-click the printer icon.
- 3 Click **Properties** and click the **Ports** tab. Ensure that the **Print to the following port(s)**: setting is **USB**.

**REINSTALL THE PRINTER DRIVER** — See the printer documentation for instructions.

## Scanner Problems



**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.



**NOTE:** If you need technical assistance for your scanner, contact the scanner's manufacturer.

**CHECK THE SCANNER DOCUMENTATION** — See the scanner documentation for setup and troubleshooting information.

**UNLOCK THE SCANNER** — Ensure that your scanner is unlocked if it has a locking tab or button.

**RESTART THE COMPUTER AND TRY THE SCANNER AGAIN.**

**CHECK THE CABLE CONNECTIONS** —

- See the scanner documentation for cable connection information.
- Ensure that the scanner cables are securely connected to the scanner and the computer.

**VERIFY THAT THE SCANNER IS RECOGNIZED BY MICROSOFT WINDOWS** —

- 1 Click the **Start** button, click **Control Panel**, and then click **Printers and Other Hardware**.
- 2 Click **Scanners and Cameras**.  
If your scanner is listed, Windows recognizes the scanner.

**REINSTALL THE SCANNER DRIVER** — See the scanner documentation for instructions.

## Sound and Speaker Problems

 **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.


### No sound from integrated speakers

**ADJUST THE WINDOWS VOLUME CONTROL** — Double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and that the sound is not muted. Adjust the volume, bass, or treble controls to eliminate distortion.

**ADJUST THE VOLUME USING KEYBOARD COMBINATIONS** — Press <Fn><End> to disable (mute) or reenable the integrated speakers.

**REINSTALL THE SOUND (AUDIO) DRIVER** — See "Reinstalling Drivers and Utilities" on page 69.

### No sound from external speakers

 **NOTE:** The volume control in some MP3 players overrides the Windows volume setting. If you have been listening to MP3 songs, ensure that you did not turn the player volume down or off.

**ENSURE THAT THE SUBWOOFER AND THE SPEAKERS ARE TURNED ON** — See the setup diagram supplied with the speakers. If your speakers have volume controls, adjust the volume, bass, or treble to eliminate distortion.

**ADJUST THE WINDOWS VOLUME CONTROL** — Click or double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and that the sound is not muted.

**DISCONNECT HEADPHONES FROM THE HEADPHONE CONNECTOR** — Sound from the speakers is automatically disabled when headphones are connected to the computer's headphone connector.

**VERIFY SPEAKER CABLING** — Refer to the setup diagram supplied with the speakers.

**TEST THE ELECTRICAL OUTLET** — Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

**ENABLE DIGITAL MODE** — Your speakers do not work if the CD drive is operating in analog mode.

- 1 Click the **Start** button, click **Control Panel**, and then click **Sounds, Speech, and Audio Devices**.
- 2 Click **Sounds and Audio Devices**.
- 3 Click the **Hardware** tab.
- 4 Double-click the name of your CD drive.
- 5 Click the **Properties** tab.
- 6 Check the **Enable digital CD audio for this CD-ROM device** box.

**ELIMINATE POSSIBLE INTERFERENCE** — Turn off nearby fans, fluorescent lights, or halogen lamps to check for interference.

**REINSTALL THE AUDIO DRIVER** — See "Reinstalling Drivers and Utilities" on page 69.

**RUN THE DELL DIAGNOSTICS** — For instructions, see page 51.

## No sound from headphones

**CHECK THE HEADPHONE CABLE CONNECTION** — Ensure that the headphone cable is securely inserted into the headphone connector.

**ADJUST THE WINDOWS VOLUME CONTROL** — Click or double-click the speaker icon in the lower-right corner of your screen. Ensure that the volume is turned up and that the sound is not muted.

## Touch Pad or Mouse Problems

**CHECK THE TOUCH PAD SETTINGS** —

- 1 Click the **Start** button, click **Control Panel**, and then click **Printers and Other Hardware**.
- 2 Click **Mouse**.
- 3 Try adjusting the settings.

**CHECK THE EXTERNAL MOUSE CABLE** — Shut down the computer. Disconnect the mouse cable, check it for damage, and firmly reconnect the cable.

If you are using a mouse extension cable, disconnect it and connect the mouse directly to the computer.

**TO VERIFY THAT THE PROBLEM IS WITH THE MOUSE, CHECK THE TOUCH PAD —**

- 1 Shut down the computer.
- 2 Disconnect the mouse.
- 3 Turn on the computer.
- 4 At the Windows desktop, use the touch pad to move the cursor around, select an icon, and open it.

If the touch pad operates correctly, the mouse may be defective.

**REINSTALL THE TOUCH PAD DRIVER —** See "Reinstalling Drivers and Utilities" on page 69.

## Video and Display Problems



**CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.

### If the display is blank



**NOTE:** If you are using a program that requires a higher resolution than your computer supports, it is recommended that you attach an external monitor to your computer.

**CHECK THE BATTERY —** If you are using a battery to power your computer, the battery charge may be depleted. Connect the computer to an electrical outlet using the AC adapter, and turn on the computer.

**TEST THE ELECTRICAL OUTLET —** Ensure that the electrical outlet is working by testing it with another device, such as a lamp.

**CHECK THE AC ADAPTER —** Check the AC adapter cable connections. If the AC adapter has a light, ensure that the light is on.

**CONNECT THE COMPUTER DIRECTLY TO AN ELECTRICAL OUTLET —** Bypass power protection devices, power strips, and the extension cable to verify that the computer turns on.

**SWITCH THE VIDEO IMAGE —** If your computer is attached to an external monitor, press <Fn><F8> to switch the video image to the display.

## If the display is difficult to read

**ADJUST THE BRIGHTNESS** — Press <Fn> and the up-arrow key to increase the brightness and <Fn> and the down-arrow key to decrease the brightness.

**MOVE THE EXTERNAL SUBWOOFER AWAY FROM THE COMPUTER OR MONITOR** — If your external speaker system includes a subwoofer, ensure that the subwoofer is at least 60 cm (2 ft) away from the computer or external monitor.

**ELIMINATE POSSIBLE INTERFERENCE** — Turn off nearby fans, fluorescent lights, halogen lamps, or other appliances.

**ROTATE THE COMPUTER TO FACE A DIFFERENT DIRECTION** — Eliminate sunlight glare, which can cause poor picture quality.

### **ADJUST THE WINDOWS DISPLAY SETTINGS** —

- 1 Click the **Start** button and then click **Control Panel**.
- 2 Click **Appearance and Themes**.
- 3 Click the area you want to change or click the **Display** icon.
- 4 Try different settings for **Color quality** and **Screen resolution**.

**SEE "ERROR MESSAGES"** — If an error message appears, see page 56.

## If only part of the display is readable

### **CONNECT AN EXTERNAL MONITOR** —

- 1 Shut down your computer and connect an external monitor to the computer.
- 2 Turn on the computer and the monitor and adjust the monitor brightness and contrast controls.

If the external monitor works, the computer display or video controller may be defective. Contact Dell (see page 91).

## Drivers

### What Is a Driver?

A driver is a program that controls a device such as a printer, mouse, or keyboard. All devices require a driver program.

A driver acts like a translator between the device and any other programs that use the device. Each device has its own set of specialized commands that only its driver recognizes.

Dell ships your computer to you with required drivers already installed—no further installation or configuration is needed.



**NOTE:** Any third party product used with your Dell computer may require an updated driver from the third party manufacturer.



**NOTICE:** Ensure that you are installing software appropriate for your operating system.

Many drivers, such as the keyboard driver, come with your Microsoft® Windows® operating system. You may need to install drivers if you:

- Upgrade your operating system.
- Reinstall your operating system.
- Connect or install a new device.

## Identifying Drivers

If you experience a problem with any device, identify whether the driver is the source of your problem and, if necessary, update the driver.

- 1 Click the **Start** button and click **Control Panel**.
- 2 Under **Pick a Category**, click **Performance and Maintenance**.
- 3 Click **System**.
- 4 In the **System Properties** window, click the **Hardware** tab.
- 5 Click **Device Manager**.
- 6 Scroll down the list to see if any device has an exclamation point (a yellow circle with a [!]) on the device icon.

If an exclamation point is next to the device name, you may need to reinstall the driver or install a new driver, see the following section, "Reinstalling Drivers and Utilities."

## Reinstalling Drivers and Utilities

### Using Windows XP Device Driver Rollback

If a problem occurs on your computer after you install or update a driver, use Windows XP Device Driver Rollback to replace the driver with the previously installed version.

- 1 Click the **Start** button and click **Control Panel**.
- 2 Under **Pick a Category**, click **Performance and Maintenance**.
- 3 Click **System**.
- 4 In the **System Properties** window, click the **Hardware** tab.
- 5 Click **Device Manager**.

- 6 Right-click the device for which the new driver was installed and click **Properties**.
- 7 Click the **Drivers** tab.
- 8 Click **Roll Back Driver**.

If Device Driver Rollback does not resolve the problem, then use System Restore (see page 71) to return your computer to the operating state that existed before you installed the new driver.

### Manually Reinstalling Drivers

 **NOTICE:** The Dell Support website at [support.dell.com](http://support.dell.com) provides approved drivers for Dell™ computers. If you install drivers obtained from other sources, your computer might not work correctly.

- 1 After copying the driver files to your hard drive, click the **Start** button and right-click **My Computer**.
- 2 Click **Properties**.
- 3 Click the **Hardware** tab and click **Device Manager**.
- 4 Double-click the type of device for which you are installing the driver (for example, **Modems** or **Infrared devices**).
- 5 Double-click the name of the device for which you are installing the driver.
- 6 Click the **Driver** tab and click **Update Driver**.
- 7 Click **Install from a list or specific location (Advanced)** and click **Next**.
- 8 Click **Browse** and browse to the location to which you previously extracted the driver files.
- 9 When the name of the appropriate driver appears, click **Next**.
- 10 Click **Finish** and restart your computer.

## Resolving Software and Hardware Incompatibilities

If a device is either not detected during the operating system setup or is detected but incorrectly configured, you can use the Hardware Troubleshooter to resolve the incompatibility.

To resolve incompatibilities using the Hardware Troubleshooter:

- 1 Click the **Start** button and click **Help and Support**.
- 2 Type `hardware troubleshooter` in the **Search** field and click the arrow to start the search.
- 3 Click **Hardware Troubleshooter** in the **Search Results** list.
- 4 In the **Hardware Troubleshooter** list, click **I need to resolve a hardware conflict on my computer**, and click **Next**.



# Restoring Your Operating System

You can restore your operating system in the following ways:

- Microsoft Windows XP System Restore returns your computer to an earlier operating state without affecting data files.
- Dell PC Restore by Symantec restores your hard drive to the operating state it was in when you purchased the computer. Dell PC Restore permanently deletes all data on the hard drive and removes any applications installed after you received the computer.

## Using Microsoft Windows XP System Restore

The Microsoft Windows XP operating system provides System Restore to allow you to return your computer to an earlier operating state (without affecting data files) if changes to the hardware, software, or other system settings have left the computer in an undesirable operating state. See the Windows Help and Support Center for additional information on using System Restore. To access help, see "Windows Help and Support Center" on page 12.



**NOTICE:** Make regular backups of your data files. System Restore does not monitor your data files or recover them.



**NOTE:** The procedures in this document were written for the Windows default view, so they may not work if you set your Dell™ computer to the Windows Classic view.

## Creating a Restore Point

- 1 Click the **Start** button and click **Help and Support**.
- 2 Click **System Restore**.
- 3 Follow the instructions on the screen.

## Restoring the Computer to an Earlier Operating State

If problems occur after you install a device driver, use Device Driver Rollback (see page 69) to resolve the problem. If that is unsuccessful, then use System Restore.



**NOTICE:** Before you restore the computer to an earlier operating state, save and close any open files and exit any open programs. Do not alter, open, or delete any files or programs until the system restoration is complete.


- 1 Click the **Start** button, point to **All Programs**→**Accessories**→**System Tools**, and then click **System Restore**.
- 2 Ensure that **Restore my computer to an earlier time** is selected and click **Next**.
- 3 Click a calendar date to which you want to restore your computer.

The **Select a Restore Point** screen provides a calendar that allows you to see and select restore points. All calendar dates with available restore points appear in boldface type.

- 4 Select a restore point and click **Next**.  
If a calendar date has only one restore point, then that restore point is automatically selected. If two or more restore points are available, click the restore point that you prefer.
- 5 Click **Next**.  
The **Restoration Complete** screen appears after System Restore finishes collecting data.
- 6 When prompted, click **Yes** to restart the computer.
- 7 After the computer restarts, click **OK**.

To change the restore point, you can either repeat the steps using a different restore point, or you can undo the restoration.

### Undoing the Last System Restore

 **NOTICE:** Before you undo the last system restore, save and close all open files and exit any open programs. Do not alter, open, or delete any files or programs until the system restoration is complete.

- 1 Click the **Start** button, point to **All Programs**→**Accessories**→**System Tools**, and then click **System Restore**.
- 2 Click **Undo my last restoration** and click **Next**.


### Enabling System Restore

If you reinstall Windows XP with less than 200 MB of free hard-disk space available, System Restore is automatically disabled. To see if System Restore is enabled:

- 1 Click the **Start** button and click **Control Panel**.
- 2 Click **Performance and Maintenance**.
- 3 Click **System**.
- 4 Click the **System Restore** tab.
- 5 Ensure that **Turn off System Restore** is unchecked.

### Using Dell PC Restore by Symantec

Use Dell PC Restore by Symantec only as the last method to restore your operating system. PC Restore restores your hard drive to the operating state it was in when you purchased the computer. Any programs or files added since you received your computer—including data files—are permanently deleted from the hard drive. Data files include documents, spreadsheets, e-mail messages, digital photos, music files, and so on. If possible, back up all data before using PC Restore.

 **NOTICE:** Using PC Restore permanently deletes all data on the hard drive and removes any applications or drivers installed after you received your computer. If possible, back up the data before using PC Restore.


To use PC Restore:

- 1 Turn on the computer.

During the boot process, a blue bar with **www.dell.com** appears at the top of the screen.

- 2 Immediately upon seeing the blue bar, press <Ctrl><F11>.

If you do not press <Ctrl><F11> in time, let the computer finish restarting, and then restart the computer again.


 **NOTICE:** If you do not want to proceed with PC Restore, click **Reboot** in the following step.

- 3 On the next screen that appears, click **Restore**.

- 4 On the next screen, click **Confirm**.

The restore process takes approximately 6–10 minutes to complete.

- 5 When prompted, click **Finish** to reboot the computer.

 **NOTE:** Do not manually shut down the computer. Click **Finish** and let the computer completely reboot.

- 6 When prompted, click **Yes**.


The computer restarts. Because the computer is restored to its original operating state, the screens that appear, such as the End User License Agreement, are the same ones that appeared the first time the computer was turned on.

- 7 Click **Next**.

The **System Restore** screen appears and the computer restarts.

- 8 After the computer restarts, click **OK**.


## Removing PC Restore

 **NOTICE:** PC Restore enables you to restore your computer's operating system to the condition it was in when you purchased your computer. It is recommended that you *do not* remove PC Restore from your computer, even to gain additional hard drive space. If you remove PC Restore from the hard drive, you cannot ever recall it, and you will never be able to use PC Restore to return your computer's operating system to its original state.

- 1 Log on to the computer as a local administrator.

- 2 In Windows Explorer, go to `c:\dell\utilities\DSR`.

- 3 Double-click the filename **DSRIRRemv2.exe**.

 **NOTE:** If you do not log on as a local administrator, a message appears stating that you that you must do so. Click **Quit** and log on as a local administrator.

If the partition for PC Restore does not exist, a message appears stating that the partition was not found. Click **Quit**; there is no partition to delete.

- 4 Click **OK** to remove the partition.

- 5 Click **Yes** when a confirmation message appears.

The partition is deleted and the c:\ partition expands to include the newly available disk space. To check the available space, right-click the c:\drive in Windows Explorer and select **Properties**.

- 6 Click **Finish** to close the **PC Restore Removal** window.
- 7 Restart the computer.

# Adding and Replacing Parts

## Before You Begin

This chapter provides procedures for removing and installing the components in your computer. Unless otherwise noted, each procedure assumes that the following conditions exist:


- You have performed the steps in "Turning Off Your Computer" on page 75 and "Before Working Inside Your Computer" on page 76.
- You have read the safety information in your Dell™ *Product Information Guide*.
- A component can be replaced or, if purchased separately, installed by performing the removal procedure in reverse order.

## Recommended Tools

The procedures in this document may require the following tools:

- Small flat-blade screwdriver
- Phillips screwdriver
- Flash BIOS update program on removable media


## Turning Off Your Computer


 **NOTICE:** To avoid losing data, save and close any open files and exit any open programs before you turn off your computer.


- 1 Shut down the operating system:
  - a Save and close any open files, exit any open programs, click the **Start** button, and then click **Turn Off Computer**.
  - b In the **Turn off computer** window, click **Turn off**.  
The computer turns off after the operating system shutdown process finishes.
- 2 Ensure that the computer and any attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your operating system, press and hold the power button for 4 seconds.


## Before Working Inside Your Computer


Use the following safety guidelines to help protect your computer from potential damage and to help ensure your own personal safety.

 **CAUTION:** Before you begin any of the procedures in this section, follow the safety instructions in the *Product Information Guide*.


 **CAUTION:** Many repairs may only be done by a certified service technician. You should only perform troubleshooting and simple repairs as authorized in Dell's product documentation, or as directed by Dell's online or telephone service and support team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. Read and follow the safety instructions that came with the product.

 **NOTICE:** Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket. Hold a component such as a processor by its edges, not by its pins.


 **NOTICE:** When you disconnect a cable, pull on its connector or on its strain-relief loop, not on the cable itself. Some cables have a connector with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

 **NOTICE:** To avoid damaging the computer, perform the following steps before you begin working inside the computer.

- 1 Ensure that the work surface is flat and clean to prevent the computer cover from being scratched.
- 2 Turn off your computer.

 **NOTICE:** To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network device.

- 3 Disconnect any telephone or telecommunication lines from the computer.
- 4 Disconnect your computer and all attached devices from their electrical outlets, and then press the power button to ground the system board.

 **NOTICE:** To connect a network cable, first plug the cable into the network device and then plug it into the computer.

- 5 Remove any installed PC Cards from the PC Card slot.
- 6 Close the display and turn the computer upside down on a flat work surface.

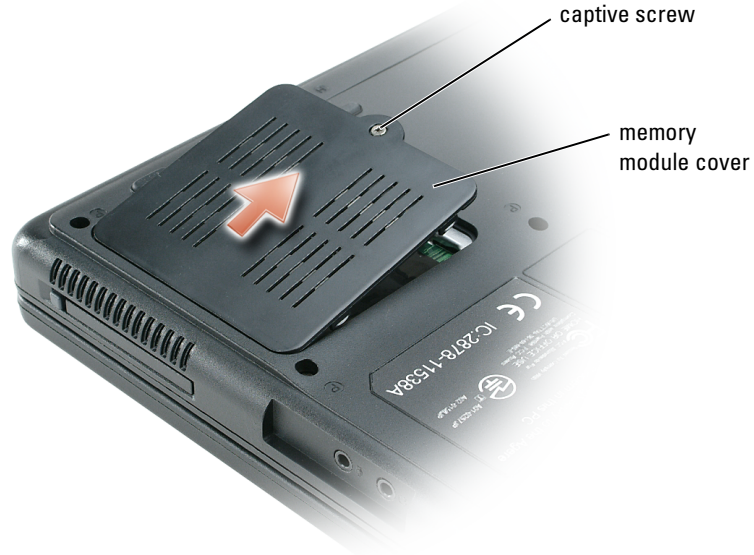
- ⓘ NOTICE:** To avoid damaging the system board, you must remove the main battery before you service the computer.
- 7 Slide and hold the battery-bay latch release on the bottom of the computer, and then remove the battery from the bay.
  - 8 Remove the hard drive (see page 79).



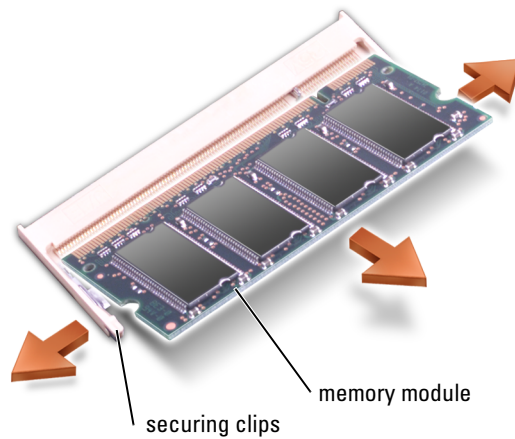
## Memory

You can increase your computer memory by installing memory modules on the system board. See page 82 for information on the memory supported by your computer. Install only memory modules that are intended for your computer.

- 1 Complete the instructions in "Before You Begin" on page 75.
- 2 Turn the computer over, loosen the captive screw in the memory module cover, and lift the cover away from the computer.

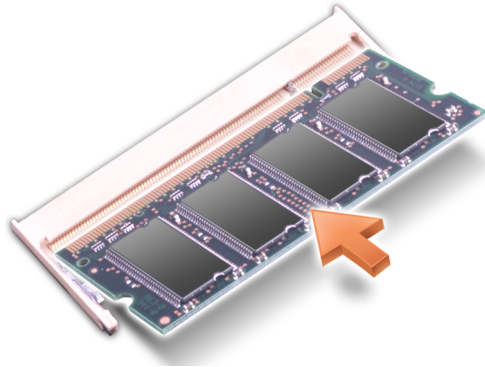


- 3** If you are replacing a memory module, remove the existing module:
  - a** Use your fingertips to carefully spread apart the securing clips on each end of the memory module connector until the module pops up.
  - b** Remove the module from the connector.





- 4 Ground yourself and install the new memory module:
  - a Align the notch in the module edge connector with the tab in the connector slot.
  - b Slide the module firmly into the slot at a 45-degree angle, and rotate the module down until it clicks into place. If you do not feel the click, remove the module and reinstall it.



- 5 Replace the cover.
  - ➡ **NOTICE:** If the memory module cover is difficult to close, remove the module and reinstall it. Forcing the cover to close may damage your computer.
- 6 Insert the battery into the battery bay, or connect the AC adapter to your computer and an electrical outlet.
- 7 Turn on the computer.

As the computer boots, it detects the additional memory and automatically updates the system configuration information.

To confirm the amount of memory installed in the computer, click the **Start** button, click **Help and Support**, and then click **Computer Information**.

## Hard Drive

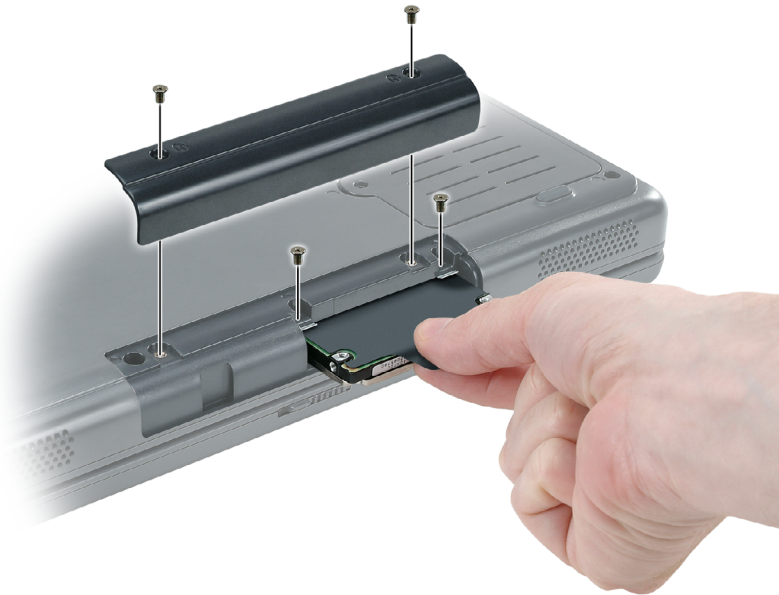
- 🔧 **NOTE:** You need the *Operating System* CD to install the Microsoft® Windows® operating system. You also need the *Drivers and Utilities* CD for your computer to install the drivers and utilities on the new hard drive.
- ⚠️ **CAUTION:** If you remove the hard drive from the computer when the drive is hot, **do not touch** the metal housing of the hard drive.
- ⚠️ **CAUTION:** Before working inside your computer, follow the safety instructions located in the *Product Information Guide*.
- ➡ **NOTICE:** To prevent data loss, turn off your computer before removing the hard drive. Do not remove the hard drive while the computer is on, in standby mode, or in hibernate mode.

**➔ NOTICE:** Hard drives are extremely fragile; even a slight bump can damage the drive.

**✍ NOTE:** Dell does not guarantee compatibility or provide support for hard drives from sources other than Dell.

To replace the hard drive in the hard drive bay:

- 1 Follow the procedures in "Before You Begin" on page 75.
- 2 Turn the computer over, and remove the hard drive cover screws.
- 3 Lift the hard drive cover and remove the screws used to secure the hard drive.



**➔ NOTICE:** When the hard drive is not in the computer, store it in protective antistatic packaging. See "Protecting Against Electrostatic Discharge" in the *Product Information Guide*.

- 4 Slide the hard drive out of the computer.
- 5 Remove the new drive from its packaging.  
Save the original packaging for storing or shipping the hard drive.

**➔ NOTICE:** Use firm and even pressure to slide the drive into place. If you use excessive force, you may damage the connector.

- 6 Slide the hard drive into the bay until it is fully seated.
- 7 Replace and tighten the screws.
- 8 Install the operating system for your computer with your *Operating System CD*.
- 9 Install the drivers and utilities for your computer. For instructions, see "Reinstalling Drivers and Utilities" on page 69.

# Appendix

## Specifications

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**Processor (Inspiron 1200)**

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Processor type	Intel® Celeron® M
L1 Trace Cache	32 KB (internal)
L1 Data Cache	32 KB (internal)
L2 cache	1 MB
External bus frequency	400 MHz

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**Processor (Inspiron 2200)**

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Processor type	Intel® Celeron® M or Intel® Pentium® M
L1 Trace Cache	32 KB (internal)
L1 Data Cache	32 KB (internal)
L2 cache	2 MB
External bus frequency	400 MHz

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**System Information**

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System chipset	Intel 910GML+ICH6-M
Data bus width	64 bits
DRAM bus width	64 bits
Processor address bus width	32 bits
Flash EPROM	1 MB
PCI bus	32 bits

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**PC Card**

---

CardBus controller	Texas Instruments PCI 1510 CardBus controller
PC Card connector	one (supports one Type I or Type II cards)
Cards supported	3.3 V and 5 V
PC Card connector size	68 pins
Data width (maximum)	PCMCIA 16 bits CardBus 32 bits

---

**Memory**

---

Integrated memory	256 MB DDR 1
Memory module connector	one SODIMM socket
Memory module capacity	256, 512, and 1 GB
Memory type	2.5-V SODIMM DDR
Minimum memory	256 MB
Maximum memory	1280 MB

---

**Ports and Connectors**

---

Audio	microphone connector, stereo headphone/speakers connector
Modem	RJ-11 port
Network adapter	RJ-45 port
USB	three 4-pin USB 2.0 connectors
Video	15-hole connector

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**Communications**

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Modem:	
Type	v.90, 56K MDC (modem daughter card)
Controller	soft modem
Interface	AC'97 internal bus
Network adapter	10/100 Ethernet LAN on system board

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**Video**

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Video type	Intel 910 GML integrated graphics
Video controller	Intel GMA900 (Graphics Media Accelerator)
Video memory	32 MB with 256 MB of system memory 64 MB if system memory is larger than 256 MB
LCD interface	LVDS (Low-Voltage Differential Signaling)

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**Audio**

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Audio controller	SigmaTel STAC9752AT
Stereo conversion	20-bit (analog-to-digital), 20-bit (digital-to-analog)
Interfaces:	
Internal	PCI bus
External	microphone-in connector and stereo headphones/speakers connector
Speaker	two 4-ohm speakers
Internal speaker amplifier	1-W channel into 4 ohms
Volume controls	key combinations, program menus

---

**Display (15 inch) (Inspiron i2200 only)**

---

Type (active-matrix TFT)	XGA
Dimensions:	
Height	228.1 mm (8.98 inches)
Width	304.1 mm (11.97 inches)
Diagonal	381 mm (15.0 inches)
Maximum resolutions:	
XGA	1024 x 768 at 262 K colors
Response time (typical)	
XGA	60-ms rise + fall (maximum)
Refresh rate	60 Hz

---

**Display (15 inch) (Inspiron i2200 only) (continued)**


---

## Viewing angles:

XGA Horizontal	$\pm 40^\circ$
XGA Vertical	$+10^\circ/-30^\circ$

## Pixel pitch:

XGA	0.297 mm
-----	----------

## Power Consumption (panel with backlight) (typical):

XGA	6.8 W (maximum)
-----	-----------------

## Controls

**NOTE:** Brightness can be controlled through key combinations.

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**Display (14.1 inch) (Inspiron 1200 or Inspiron 2200)**


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Type (active-matrix TFT)	XGA
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## Dimensions:

Height	214.3 mm max (8.4 inches)
Width	285.7 mm (11.3 inches)
Diagonal	357.1 mm (14.1 inches)

## Maximum resolutions:

XGA	1024 x 768 at 262 K colors
-----	----------------------------

## Response time (typical)

XGA	35-ms rise+fall (maximum)
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## Refresh rate

60 Hz

## Viewing angles:

XGA Horizontal	$\pm 40^\circ$
XGA Vertical	$+10^\circ/-30^\circ$

## Pixel pitch:

XGA	0.279 mm
-----	----------

## Power Consumption (panel with backlight) (typical):

XGA	6.5 W (maximum)
-----	-----------------

## Controls

**NOTE:** Brightness can be controlled through key combinations.

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**Keyboard**

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Number of keys	87 (U.S. and Canada); 88 (Europe); 87 (Japan)
Layout	QWERTY/AZERTY/Kanji

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**Touch Pad**

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X/Y position resolution (graphics table mode)	1000 cpi
Size:	
Width	59.0-mm (2.32-inch) sensor-active area
Height	43.2-mm (1.70-inch) rectangle

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**Battery**

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Type	8-cell "smart" lithium ion (65 WHr) 8-cell "smart" nickel-metal hydride (NiMH) (43 WHr)
Dimensions:	
Depth	145.5 mm (5.728 inches)
Height	19.2 mm (0.756 inch)
Width	78.15 mm (3.07 inches)
Weight	0.420 kg (0.88 lb) lithium ion 0.550 kg (1.21 lb) NiMH
Voltage	14.8 VDC (lithium ion) 9.6 VDC (NiMH)
Charge time (approximate)	3 hours
Operating time	Battery operating time varies depending on operating conditions and can be significantly reduced under certain power-intensive conditions  See "Using a Battery" on page 27 for more information on battery life and operating time.
Life span (approximate)	300 discharge/charge cycles
Temperature range:	
Operating	0° to 35°C (32° to 95°F)
Storage	-40° to 65°C (-40° to 149°F)

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**AC Adapter**


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Input voltage	100–240 VAC
Input current (maximum)	1.5 A
Input frequency	47–63 Hz
Output current	3.16 A (continuous)
Output power	60 W
Rated output voltage	19 VDC
Dimensions:	
Height	29.0 mm (1.14 inches)
Width	49.5 mm (1.95 inches)
Depth	114.5 mm (4.50 inches)
Weight (with cables)	0.27 kg (0.60 lb)
Temperature range:	
Operating	0° to 40°C (32° to 104°F)
Storage	–40° to 80°C (–40° to 176°F)

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**Physical**


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Height	37.2 mm (1.4 inches)
Width	330 mm (13 inches)
Depth	268 mm (10.6 inches)
Weight with battery (excluding optional equipment for i2200):	
With NiMH battery	2.9 kg (6.39 lb)
With lithium-ion battery	2.8 kg (6.17 lb)

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**Environmental**


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Temperature range:	
Operating	0° to 40°C (32° to 104°F)
Storage	–40° to 65°C (–40° to 149°F)
Relative humidity (maximum):	
Operating	10% to 90% (noncondensing)
Storage	5% to 95% (noncondensing)



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**Environmental (continued)**

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Maximum vibration (using a random-vibration spectrum that simulates user environment):

Operating	0.66 GRMS
Storage	1.3 GRMS

Maximum shock (measured with hard drive in head-parked position and a 2-ms half-sine pulse):


Operating	142 G
Storage	163 G

Altitude (maximum):

Operating	-15.2 to 3048 m (-50 to 10,000 ft)
Storage	-15.2 to 10,668 m (-50 to 35,000 ft)


## Using the System Setup Program

### Overview

 **NOTE:** Your operating system may automatically configure most of the options available in system setup, thus overriding options that you set through system setup. For more information on configuring features for your operating system, see the Windows Help and Support Center. To access help, see page 12.

The system setup screens display the current setup information and settings for your computer, such as:


- System configuration
- Boot order
- Boot (start-up) configuration and docking-device configuration settings
- Basic device-configuration settings
- System security and hard-drive password settings

 **NOTICE:** Unless you are an expert computer user or are directed to do so by Dell technical support, do not change the system setup settings. Certain changes might make your computer work incorrectly.

### Viewing the System Setup Screens

- 1 Turn on (or restart) your computer.
- 2 When the DELL™ logo appears, press <F2> immediately. If you wait too long and the Windows logo appears, continue to wait until you see the Windows desktop. Then shut down your computer and try again.

## System Setup Screens

 **NOTE:** For information about a specific item on a system setup screen, highlight the item and see the **Help** area on the screen.

On each screen, the system setup options are listed at the left. To the right of each option is the setting or value for that option. You can change settings that appear as white type on the screen. Options or values that you cannot change (because they are determined by the computer) appear less bright.


The upper-right corner of the screen displays help information for the currently highlighted option; the lower-right corner displays information about the computer. System-setup key functions are listed across the bottom of the screen.

## Commonly Used Options

Certain options require that you reboot the computer for new settings to take effect.

### Changing the Boot Sequence

The *boot sequence*, or *boot order*, tells the computer where to look to find the software needed to start the operating system. You can control the boot sequence and enable/disable devices using the **Boot Order** page of system setup.

 **NOTE:** To change the boot sequence on a one-time-only basis, see "Performing a One-Time Boot" on page 89.

The **Boot Order** page displays a general list of the bootable devices that may be installed in your computer, including but not limited to the following:

- USB Diskette Drive
- Hard Drive
- ATAPI CD-ROM Drive
- Network
- Diagnostics

 **NOTE:** You can only boot (start up) your computer from a CD, CD-RW, or DVD drive installed as a fixed drive.

During the boot routine, the computer starts at the top of the list and scans each enabled device for the operating system start-up files. When the computer finds the files, it stops searching and starts the operating system.

To control the boot devices, select (highlight) a device by pressing the down-arrow or up-arrow key and change its order in the list. To reorder a device in the list, highlight the device and then press <F5> or <F6> to move the highlighted device up or down.

Boot sequence changes take effect as soon as you save the changes and exit system setup.

## Performing a One-Time Boot

You can set a one-time-only boot sequence without entering system setup. (You can also use this procedure to boot the Dell Diagnostics on the diagnostics utility partition on your hard drive.)

- 1 Shut down the computer through the **Start** menu.
- 2 Connect the computer to an electrical outlet.
- 3 Turn on the computer. When the DELL logo appears, press <F12> immediately. If you wait too long and the Windows logo appears, continue to wait until you see the Windows desktop. Then shut down your computer and try again.
- 4 When the boot device list appears, highlight the device from which you want to boot and press <Enter>.

The computer boots to the selected device.

The next time you reboot the computer, the previous boot order is restored.

## Dell Technical Support Policy (U.S. Only)

Technician-assisted technical support requires the cooperation and participation of the customer in the troubleshooting process and provides for restoration of the operating system, software programs, and hardware drivers to the original default configuration as shipped from Dell, as well as the verification of appropriate functionality of the computer and all Dell-installed hardware. In addition to this technician-assisted technical support, online technical support is available at [support.dell.com](http://support.dell.com). Additional technical support options may be available for purchase.

Dell provides limited technical support for the computer and any "Dell-installed" software and peripherals<sup>1</sup>. Support for third-party software and peripherals is provided by the original manufacturer, including those purchased and/or installed through Dell Software and Peripherals, Readyware, and Custom Factory Integration<sup>2</sup>.

<sup>1</sup> Repair services are provided pursuant to the terms and conditions of your limited warranty and any optional support service contract purchased with the computer.

<sup>2</sup> All Dell-standard components included in a Custom Factory Integration (CFI) project are covered by the standard Dell limited warranty for your computer. However, Dell also extends a parts replacement program to cover all nonstandard, third-party hardware components integrated through CFI for the duration of the computer's service contract.

### Definition of "Dell-Installed" Software and Peripherals

Dell-installed software includes the operating system and some of the software programs that are installed on the computer during the manufacturing process (Microsoft® Office, Norton Antivirus, and so on).

Dell-installed peripherals include any internal expansion cards, or Dell-branded module bay or PC Card accessories. In addition, any Dell-branded monitors, keyboards, mice, speakers, microphones for telephonic modems, docking stations/port replicators, networking products, and all associated cabling are included.

## Definition of "Third-Party" Software and Peripherals

Third-party software and peripherals include any peripheral, accessory, or software program sold by Dell not under the Dell brand (printers, scanners, cameras, games, and so on). Support for all third-party software and peripherals is provided by the original manufacturer of the product.

## Macrovision Product Notice

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

## FCC Notices (U.S. Only)

Most Dell computers are classified by the Federal Communications Commission (FCC) as Class B digital devices. To determine which classification applies to your computer, examine all FCC registration labels located on the bottom, side, or back panel of your computer, on card-mounting brackets, and on the cards themselves. If any one of the labels carries a Class A rating, your entire computer is considered to be a Class A digital device. If *all* labels carry an FCC Class B rating as distinguished by either an FCC ID number or the FCC logo, (**FC**), your computer is considered to be a Class B digital device.

Once you have determined your computer's FCC classification, read the appropriate FCC notice. Note that FCC regulations provide that changes or modifications not expressly approved by Dell could void your authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

### Class A

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

## Class B

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

## FCC Identification Information

The following information is provided on the device or devices covered in this document in compliance with FCC regulations:

- Model number: PP10S

Company name:

Dell Inc.  
One Dell Way  
Round Rock, Texas 78682 USA  
512-338-4400

## Contacting Dell

To contact Dell electronically, you can access the following websites:

- [www.dell.com](http://www.dell.com)
- [support.dell.com](http://support.dell.com) (technical support)
- [premiersupport.dell.com](http://premiersupport.dell.com) (technical support for educational, government, healthcare, and medium/large business customers, including Premier, Platinum, and Gold customers)

For specific web addresses for your country, find the appropriate country section in the table below.



**NOTE:** Toll-free numbers are for use within the country for which they are listed.

When you need to contact Dell, use the electronic addresses, telephone numbers, and codes provided in the following table. If you need assistance in determining which codes to use, contact a local or an international operator.

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
Anguilla	General Support	toll-free: 800-335-0031
Antigua and Barbuda	General Support	1-800-805-5924
Argentina (Buenos Aires) International Access Code: 00 Country Code: 54 City Code: 11	Website: <a href="http://www.dell.com.ar">www.dell.com.ar</a> E-mail: <a href="mailto:us_latin_services@dell.com">us_latin_services@dell.com</a> E-mail for desktop and portable computers: <a href="mailto:la-techsupport@dell.com">la-techsupport@dell.com</a> E-mail for servers and EMC: <a href="mailto:la_enterprise@dell.com">la_enterprise@dell.com</a> Customer Care Tech Support Tech Support Services Sales	toll-free: 0-800-444-0730 toll-free: 0-800-444-0733 toll-free: 0-800-444-0724 0-810-444-3355
Aruba	General Support	toll-free: 800-1578
Australia (Sydney) International Access Code: 0011 Country Code: 61 City Code: 2	E-mail (Australia): <a href="mailto:au_tech_support@dell.com">au_tech_support@dell.com</a> E-mail (New Zealand): <a href="mailto:nz_tech_support@dell.com">nz_tech_support@dell.com</a> Home and Small Business Government and Business Preferred Accounts Division (PAD) Customer Care Technical Support (portables and desktops) Technical Support (servers and workstations) Corporate Sales Transaction Sales Fax	1-300-655-533 toll-free: 1-800-633-559 toll-free: 1-800-060-889 toll-free: 1-800-819-339 toll-free: 1-300-655-533 toll-free: 1-800-733-314 toll-free: 1-800-808-385 toll-free: 1-800-808-312 toll-free: 1-800-818-341

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
<b>Austria (Vienna)</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 900	E-mail: <a href="mailto:tech_support_central_europe@dell.com">tech_support_central_europe@dell.com</a>	
Country Code: 43	Home/Small Business Sales	0820 240 530 00
City Code: 1	Home/Small Business Fax	0820 240 530 49
	Home/Small Business Customer Care	0820 240 530 14
	Preferred Accounts/Corporate Customer Care	0820 240 530 16
	Home/Small Business Technical Support	0820 240 530 14
	Preferred Accounts/Corporate Technical Support	0660 8779
	Switchboard	0820 240 530 00
<b>Bahamas</b>	General Support	toll-free: 1-866-278-6818
<b>Barbados</b>	General Support	1-800-534-3066
<b>Belgium (Brussels)</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail for French-speaking Customers: <a href="mailto:support.euro.dell.com/be/fr/emaildell/">support.euro.dell.com/be/fr/emaildell/</a>	
Country Code: 32	Technical Support	02 481 92 88
City Code: 2	Technical Support Fax	02 481 92 95
	Customer Care	02 713 15 .65
	Corporate Sales	02 481 91 00
	Fax	02 481 92 99
	Switchboard	02 481 91 00
<b>Bermuda</b>	General Support	1-800-342-0671
<b>Bolivia</b>	General Support	toll-free: 800-10-0238
<b>Brazil</b>	Website: <a href="http://www.dell.com/br">www.dell.com/br</a>	
International Access Code: 00	Customer Support, Technical Support	0800 90 3355
Country Code: 55	Technical Support Fax	51 481 5470
City Code: 51	Customer Care Fax	51 481 5480
	Sales	0800 90 3390
<b>British Virgin Islands</b>	General Support	toll-free: 1-866-278-6820
<b>Brunei</b>	Customer Technical Support (Penang, Malaysia)	604 633 4966
Country Code: 673	Customer Service (Penang, Malaysia)	604 633 4949
	Transaction Sales (Penang, Malaysia)	604 633 4955

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
Canada (North York, Ontario) International Access Code: 011	Online Order Status: <a href="http://www.dell.ca/ostatus">www.dell.ca/ostatus</a> AutoTech (automated technical support) Customer Care (Home Sales/Small Business) Customer Care (med./large business, government) Technical Support (Home Sales/Small Business) Technical Support (med./large bus., government) Sales (Home Sales/Small Business) Sales (med./large bus., government) Spare Parts Sales & Extended Service Sales	toll-free: 1-800-247-9362 toll-free: 1-800-847-4096 toll-free: 1-800-326-9463 toll-free: 1-800-847-4096 toll-free: 1-800-387-5757 toll-free: 1-800-387-5752 toll-free: 1-800-387-5755 toll-free: 1-800-387-5755 1 866 440 3355
Cayman Islands	General Support	1-800-805-7541
Chile (Santiago) Country Code: 56 City Code: 2	Sales, Customer Support, and Technical Support	toll-free: 1230-020-4823



<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
China (Xiamen) Country Code: 86 City Code: 592	Technical Support website: <a href="http://support.dell.com.cn">support.dell.com.cn</a> Technical Support E-mail: <a href="mailto:cn_support@dell.com">cn_support@dell.com</a> Customer Care E-mail: <a href="mailto:customer_cn@dell.com">customer_cn@dell.com</a>	
	Technical Support Fax	818 1350
	Technical Support (Dell™ Dimension™ and Inspiron™)	toll-free: 800 858 2969
	Technical Support (OptiPlex™, Latitude™, and Dell Precision™)	toll-free: 800 858 0950
	Technical Support (servers and storage)	toll-free: 800 858 0960
	Technical Support (projectors, PDAs, printers, switches, routers, and so on)	toll-free: 800 858 2920
	Customer Care	toll-free: 800 858 2060
	Customer Care Fax	592 818 1308
	Home and Small Business	toll-free: 800 858 2222
	Preferred Accounts Division	toll-free: 800 858 2557
	Large Corporate Accounts GCP	toll-free: 800 858 2055
	Large Corporate Accounts Key Accounts	toll-free: 800 858 2628
	Large Corporate Accounts North	toll-free: 800 858 2999
	Large Corporate Accounts North Government and Education	toll-free: 800 858 2955
	Large Corporate Accounts East	toll-free: 800 858 2020
	Large Corporate Accounts East Government and Education	toll-free: 800 858 2669
	Large Corporate Accounts Queue Team	toll-free: 800 858 2572
	Large Corporate Accounts South	toll-free: 800 858 2355
	Large Corporate Accounts West	toll-free: 800 858 2811
	Large Corporate Accounts Spare Parts	toll-free: 800 858 2621
<b>Colombia</b>	General Support	980-9-15-3978
<b>Costa Rica</b>	General Support	0800-012-0435

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
<b>Czech Republic (Prague)</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail: <a href="mailto:czech_dell@dell.com">czech_dell@dell.com</a>	
Country Code: 420	Technical Support	22537 2727
	Customer Care	22537 2707
	Fax	22537 2714
	Tech Fax	22537 2728
	Switchboard	22537 2711
<b>Denmark (Copenhagen)</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail: <a href="mailto:support.euro.dell.com/dk/da/emaildell/">support.euro.dell.com/dk/da/emaildell/</a>	
Country Code: 45	Technical Support	7023 0182
	Customer Care (Relational)	7023 0184
	Home/Small Business Customer Care	3287 5505
	Switchboard (Relational)	3287 1200
	Switchboard Fax (Relational)	3287 1201
	Switchboard (Home/Small Business)	3287 5000
	Switchboard Fax (Home/Small Business)	3287 5001
<b>Dominica</b>	General Support	toll-free: 1-866-278-6821
<b>Dominican Republic</b>	General Support	1-800-148-0530
<b>Ecuador</b>	General Support	toll-free: 999-119
<b>El Salvador</b>	General Support	01-899-753-0777
<b>Finland (Helsinki)</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 990	E-mail: <a href="mailto:support.euro.dell.com/fi/fi/emaildell/">support.euro.dell.com/fi/fi/emaildell/</a>	
Country Code: 358	Technical Support	09 253 313 60
City Code: 9	Customer Care	09 253 313 38
	Fax	09 253 313 99
	Switchboard	09 253 313 00

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
France (Paris) (Montpellier) International Access Code: 00 Country Code: 33 City Codes: (1) (4)	Website: support.euro.dell.com E-mail: support.euro.dell.com/fr/fr/emaildell/ <b>Home and Small Business</b> Technical Support Customer Care Switchboard Switchboard (calls from outside of France) Sales Fax Fax (calls from outside of France) <b>Corporate</b> Technical Support Customer Care Switchboard Sales Fax	    0825 387 270 0825 823 833 0825 004 700 04 99 75 40 00 0825 004 700 0825 004 701 04 99 75 40 01  0825 004 719 0825 338 339 01 55 94 71 00 01 55 94 71 00 01 55 94 71 01
Germany (Langen) International Access Code: 00 Country Code: 49 City Code: 6103	Website: support.euro.dell.com E-mail: tech_support_central_europe@dell.com Technical Support Home/Small Business Customer Care Global Segment Customer Care Preferred Accounts Customer Care Large Accounts Customer Care Public Accounts Customer Care Switchboard	  06103 766-7200 0180-5-224400 06103 766-9570 06103 766-9420 06103 766-9560 06103 766-9555 06103 766-7000

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
<b>Greece</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail: <a href="mailto:support.euro.dell.com/gr/en/emaildell/">support.euro.dell.com/gr/en/emaildell/</a>	
Country Code: 30	Technical Support	00800-44 14 95 18
	Gold Service Technical Support	00800-44 14 00 83
	Switchboard	2108129810
	Gold Service Switchboard	2108129811
	Sales	2108129800
	Fax	2108129812
<b>Grenada</b>	General Support	toll-free: 1-866-540-3355
<b>Guatemala</b>	General Support	1-800-999-0136
<b>Guyana</b>	General Support	toll-free: 1-877-270-4609
<b>Hong Kong</b>	Website: <a href="http://support.ap.dell.com">support.ap.dell.com</a>	
International Access Code: 001	Technical Support E-mail: <a href="mailto:apsupport@dell.com">apsupport@dell.com</a>	
Country Code: 852	Technical Support (Dimension and Inspiron)	2969 3188
	Technical Support (OptiPlex, Latitude, and Dell Precision)	2969 3191
	Technical Support (PowerApp™, PowerEdge™, PowerConnect™, and PowerVault™)	2969 3196
	Customer Care	3416 0910
	Large Corporate Accounts	3416 0907
	Global Customer Programs	3416 0908
	Medium Business Division	3416 0912
	Home and Small Business Division	2969 3105
<b>India</b>	Technical Support	1600 33 8045
	Sales (Large Corporate Accounts)	1600 33 8044
	Sales (Home and Small Business)	1600 33 8046

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
Ireland (Cherrywood)	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 16	E-mail: <a href="mailto:dell_direct_support@dell.com">dell_direct_support@dell.com</a>	
Country Code: 353	Technical Support	1850 543 543
City Code: 1	U.K. Technical Support (dial within U.K. only)	0870 908 0800
	Home User Customer Care	01 204 4014
	Small Business Customer Care	01 204 4014
	U.K. Customer Care (dial within U.K. only)	0870 906 0010
	Corporate Customer Care	1850 200 982
	Corporate Customer Care (dial within U.K. only)	0870 907 4499
	Ireland Sales	01 204 4444
	U.K. Sales (dial within U.K. only)	0870 907 4000
	Fax/Sales Fax	01 204 0103
	Switchboard	01 204 4444
Italy (Milan)	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail: <a href="mailto:support.euro.dell.com/it/it/emaildell/">support.euro.dell.com/it/it/emaildell/</a>	
Country Code: 39	<b>Home and Small Business</b>	
City Code: 02	Technical Support	02 577 826 90
	Customer Care	02 696 821 14
	Fax	02 696 821 13
	Switchboard	02 696 821 12
	<b>Corporate</b>	
	Technical Support	02 577 826 90
	Customer Care	02 577 825 55
	Fax	02 575 035 30
	Switchboard	02 577 821
Jamaica	General Support (dial from within Jamaica only)	1-800-682-3639

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
Japan (Kawasaki)	Website: support.jp.dell.com	
International Access Code: 001	Technical Support (servers)	toll-free: 0120-198-498
Country Code: 81	Technical Support outside of Japan (servers)	81-44-556-4162
City Code: 44	Technical Support (Dimension and Inspiron)	toll-free: 0120-198-226
	Technical Support outside of Japan (Dimension and Inspiron)	81-44-520-1435
	Technical Support (Dell Precision, OptiPlex, and Latitude)	toll-free:0120-198-433
	Technical Support outside of Japan (Dell Precision, OptiPlex, and Latitude)	81-44-556-3894
	Technical Support (PDAs, projectors, printers, routers)	toll-free: 0120-981-690
	Technical Support outside of Japan (PDAs, projectors, printers, routers)	81-44-556-3468
	Faxbox Service	044-556-3490
	24-Hour Automated Order Service	044-556-3801
	Customer Care	044-556-4240
	Business Sales Division (up to 400 employees)	044-556-1465
	Preferred Accounts Division Sales (over 400 employees)	044-556-3433
	Large Corporate Accounts Sales (over 3500 employees)	044-556-3430
	Public Sales (government agencies, educational institutions, and medical institutions)	044-556-1469
	Global Segment Japan	044-556-3469
	Individual User	044-556-1760
	Switchboard	044-556-4300
Korea (Seoul)	Technical Support	toll-free: 080-200-3800
International Access Code: 001	Sales	toll-free: 080-200-3600
Country Code: 82	Customer Service (Penang, Malaysia)	604 633 4949
City Code: 2	Fax	2194-6202
	Switchboard	2194-6000
	Technical Support (Electronics and Accessories)	toll-free: 080-200-3801

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
Latin America	Customer Technical Support (Austin, Texas, U.S.A.)	512 728-4093
	Customer Service (Austin, Texas, U.S.A.)	512 728-3619
	Fax (Technical Support and Customer Service) (Austin, Texas, U.S.A.)	512 728-3883
	Sales (Austin, Texas, U.S.A.)	512 728-4397
	Sales Fax (Austin, Texas, U.S.A.)	512 728-4600 or 512 728-3772
<b>Luxembourg</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail: <a href="mailto:tech_be@dell.com">tech_be@dell.com</a>	
Country Code: 352	Technical Support (Brussels, Belgium)	3420808075
	Home/Small Business Sales (Brussels, Belgium)	toll-free: 080016884
	Corporate Sales (Brussels, Belgium)	02 481 91 00
	Customer Care (Brussels, Belgium)	02 481 91 19
	Fax (Brussels, Belgium)	02 481 92 99
	Switchboard (Brussels, Belgium)	02 481 91 00
<b>Macao</b>	Technical Support	toll-free: 0800 105
Country Code: 853	Customer Service (Xiamen, China)	34 160 910
	Transaction Sales (Xiamen, China)	29 693 115
<b>Malaysia (Penang)</b>	Website: <a href="http://support.ap.dell.com">support.ap.dell.com</a>	toll-free: 1 800 88 0193
International Access Code: 00	Technical Support (Dell Precision, OptiPlex, and Latitude)	toll-free: 1 800 88 1306
Country Code: 60	Technical Support (Dimension, Inspiron, and Electronics and Accessories)	
City Code: 4	Technical Support (PowerApp, PowerEdge, PowerConnect, and PowerVault)	toll-free: 1800 88 1386
	Customer Service (Penang, Malaysia)	04 633 4949
	Transaction Sales	toll-free: 1 800 888 202
	Corporate Sales	toll-free: 1 800 888 213

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
Mexico	Customer Technical Support	001-877-384-8979
International Access Code: 00		or 001-877-269-3383
Country Code: 52	Sales	50-81-8800
		or 01-800-888-3355
	Customer Service	001-877-384-8979
		or 001-877-269-3383
	Main	50-81-8800
		or 01-800-888-3355
Montserrat	General Support	toll-free: 1-866-278-6822
Netherlands Antilles	General Support	001-800-882-1519
Netherlands (Amsterdam)	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	Technical Support	020 674 45 00
Country Code: 31	Technical Support Fax	020 674 47 66
City Code: 20	Home/Small Business Customer Care	020 674 42 00
	Relational Customer Care	020 674 4325
	Home/Small Business Sales	020 674 55 00
	Relational Sales	020 674 50 00
	Home/Small Business Sales Fax	020 674 47 75
	Relational Sales Fax	020 674 47 50
	Switchboard	020 674 50 00
	Switchboard Fax	020 674 47 50
New Zealand	E-mail (New Zealand): <a href="mailto:nz_tech_support@dell.com">nz_tech_support@dell.com</a>	
International Access Code: 00	E-mail (Australia): <a href="mailto:au_tech_support@dell.com">au_tech_support@dell.com</a>	
Country Code: 64	Technical Support (for desktop and portable computers)	toll-free: 0800 446 255
	Technical Support (for servers and workstations)	toll-free: 0800 443 563
	Home and Small Business	0800 446 255
	Government and Business	0800 444 617
	Sales	0800 441 567
	Fax	0800 441 566
Nicaragua	General Support	001-800-220-1006



<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
<b>Norway (Lysaker)</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail: <a href="mailto:support.euro.dell.com/no/no/emaildell/">support.euro.dell.com/no/no/emaildell/</a>	
Country Code: 47	Technical Support	671 16882
	Relational Customer Care	671 17575
	Home/Small Business Customer Care	23162298
	Switchboard	671 16800
	Fax Switchboard	671 16865
<b>Panama</b>	General Support	001-800-507-0962
<b>Peru</b>	General Support	0800-50-669
<b>Poland (Warsaw)</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 011	E-mail: <a href="mailto:pl_support_tech@dell.com">pl_support_tech@dell.com</a>	
Country Code: 48	Customer Service Phone	57 95 700
City Code: 22	Customer Care	57 95 999
	Sales	57 95 999
	Customer Service Fax	57 95 806
	Reception Desk Fax	57 95 998
	Switchboard	57 95 999
<b>Portugal</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail: <a href="mailto:support.euro.dell.com/pt/en/emaildell/">support.euro.dell.com/pt/en/emaildell/</a>	
Country Code: 351	Technical Support	707200149
	Customer Care	800 300 413
	Sales	800 300 410 or 800 300 411 or 800 300 412 or 21 422 07 10
	Fax	21 424 01 12
<b>Puerto Rico</b>	General Support	1-800-805-7545
<b>St. Kitts and Nevis</b>	General Support	toll-free: 1-877-441-4731
<b>St. Lucia</b>	General Support	1-800-882-1521
<b>St. Vincent and the Grenadines</b>	General Support	toll-free: 1-877-270-4609

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
<b>Singapore (Singapore)</b>	Website: <a href="http://support.ap.dell.com">support.ap.dell.com</a>	
International Access Code: 005	Technical Support (Dimension, Inspiron, and Electronics and Accessories)	toll-free: 1 800 394 7430
Country Code: 65	Technical Support (OptiPlex, Latitude, and Dell Precision)	toll-free: 1 800 394 7488
	Technical Support (PowerApp, PowerEdge, PowerConnect, and PowerVault)	toll-free: 1 800 394 7478
	Customer Service (Penang, Malaysia)	604 633 4949
	Transaction Sales	toll-free: 1 800 394 7412
	Corporate Sales	toll-free: 1 800 394 7419
<b>Slovakia (Prague)</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail: <a href="mailto:czech_dell@dell.com">czech_dell@dell.com</a>	
Country Code: 421	Technical Support	02 5441 5727
	Customer Care	420 22537 2707
	Fax	02 5441 8328
	Tech Fax	02 5441 8328
	Switchboard (Sales)	02 5441 7585
<b>South Africa (Johannesburg)</b>	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 09/091	E-mail: <a href="mailto:dell_za_support@dell.com">dell_za_support@dell.com</a>	
Country Code: 27	Gold Queue	011 709 7713
City Code: 11	Technical Support	011 709 7710
	Customer Care	011 709 7707
	Sales	011 709 7700
	Fax	011 706 0495
	Switchboard	011 709 7700
<b>Southeast Asian and Pacific Countries</b>	Customer Technical Support, Customer Service, and Sales (Penang, Malaysia)	604 633 4810

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
Spain (Madrid)	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail: <a href="mailto:support.euro.dell.com/es/es/emaildell/">support.euro.dell.com/es/es/emaildell/</a>	
Country Code: 34	<b>Home and Small Business</b>	
City Code: 91	Technical Support	902 100 130
	Customer Care	902 118 540
	Sales	902 118 541
	Switchboard	902 118 541
	Fax	902 118 539
	<b>Corporate</b>	
	Technical Support	902 100 130
	Customer Care	902 115 236
	Switchboard	91 722 92 00
	Fax	91 722 95 83
Sweden (Upplands Vasby)	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail: <a href="mailto:support.euro.dell.com/se/sv/emaildell/">support.euro.dell.com/se/sv/emaildell/</a>	
Country Code: 46	Technical Support	08 590 05 199
City Code: 8	Relational Customer Care	08 590 05 642
	Home/Small Business Customer Care	08 587 70 527
	Employee Purchase Program (EPP) Support	20 140 14 44
	Technical Support Fax	08 590 05 594
	Sales	08 590 05 185
Switzerland (Geneva)	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	E-mail: <a href="mailto:Tech_support_central_Europe@dell.com">Tech_support_central_Europe@dell.com</a>	
Country Code: 41	E-mail for French-speaking HSB and Corporate Customers: <a href="mailto:support.euro.dell.com/ch/fr/emaildell/">support.euro.dell.com/ch/fr/emaildell/</a>	
City Code: 22	Technical Support (Home and Small Business)	0844 811 411
	Technical Support (Corporate)	0844 822 844
	Customer Care (Home and Small Business)	0848 802 202
	Customer Care (Corporate)	0848 821 721
	Fax	022 799 01 90
	Switchboard	022 799 01 01

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
<b>Taiwan</b>	Website: <a href="http://support.ap.dell.com">support.ap.dell.com</a>	
International Access Code: 002	E-mail: <a href="mailto:ap_support@dell.com">ap_support@dell.com</a>	
Country Code: 886	Technical Support (OptiPlex, Latitude, Inspiron, Dimension, and Electronics and Accessories)	toll-free: 00801 86 1011
	Technical Support (PowerApp, PowerEdge, PowerConnect, and PowerVault)	toll-free: 00801 60 1256
	Transaction Sales	toll-free: 00801 65 1228
	Corporate Sales	toll-free: 00801 651 227
<b>Thailand</b>	Website: <a href="http://support.ap.dell.com">support.ap.dell.com</a>	
International Access Code: 001	Technical Support (OptiPlex, Latitude, and Dell Precision)	toll-free: 1800 0060 07
Country Code: 66	Technical Support (PowerApp, PowerEdge, PowerConnect, and PowerVault)	toll-free: 1800 0600 09
	Customer Service (Penang, Malaysia)	604 633 4949
	Corporate Sales	toll-free: 1800 006 009
	Transaction Sales	toll-free: 1800 006 006
<b>Trinidad/Tobago</b>	General Support	1-800-805-8035
<b>Turks and Caicos Islands</b>	General Support	toll-free: 1-866-540-3355

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
U.K. (Bracknell)	Website: <a href="http://support.euro.dell.com">support.euro.dell.com</a>	
International Access Code: 00	Customer Care website: <a href="http://support.euro.dell.com/uk/en/ECare/Form/Home.asp">support.euro.dell.com/uk/en/ECare/Form/Home.asp</a>	
Country Code: 44		
City Code: 1344	E-mail: <a href="mailto:dell_direct_support@dell.com">dell_direct_support@dell.com</a>	
	Technical Support (Corporate/Preferred Accounts/PAD [1000+ employees])	0870 908 0500
	Technical Support (direct and general)	0870 908 0800
	Global Accounts Customer Care	01344 373 186
	Home and Small Business Customer Care	0870 906 0010
	Corporate Customer Care	01344 373 185
	Preferred Accounts (500–5000 employees) Customer Care	0870 906 0010
	Central Government Customer Care	01344 373 193
	Local Government & Education Customer Care	01344 373 199
	Health Customer Care	01344 373 194
	Home and Small Business Sales	0870 907 4000
	Corporate/Public Sector Sales	01344 860 456
	Home and Small Business Fax	0870 907 4006
Uruguay	General Support	toll-free: 000-413-598-2521

<b>Country (City) International Access Code Country Code City Code</b>	<b>Department Name or Service Area, Website and E-Mail Address</b>	<b>Area Codes, Local Numbers, and Toll-Free Numbers</b>
U.S.A. (Austin, Texas)	Automated Order-Status Service	toll-free: 1-800-433-9014
International Access Code: 011 Country Code: 1	AutoTech (portable and desktop computers)	toll-free: 1-800-247-9362
	<b>Consumer</b> (Home and Home Office)	
	Technical Support	toll-free: 1-800-624-9896
	Customer Service	toll-free: 1-800-624-9897
	DellNet™ Service and Support	toll-free: 1-877-Dellnet (1-877-335-5638)
	Employee Purchase Program (EPP) Customers	toll-free: 1-800-695-8133
	Financial Services website: <a href="http://www.dellfinancialservices.com">www.dellfinancialservices.com</a>	
	Financial Services (lease/loans)	toll-free: 1-877-577-3355
	Financial Services (Dell Preferred Accounts [DPA])	toll-free: 1-800-283-2210
	<b>Business</b>	
	Customer Service and Technical Support	toll-free: 1-800-822-8965
	Employee Purchase Program (EPP) Customers	toll-free: 1-800-695-8133
	Printers and Projectors Technical Support	toll-free: 1-877-459-7298
	<b>Public</b> (government, education, and healthcare)	
	Customer Service and Technical Support	toll-free: 1-800-456-3355
	Employee Purchase Program (EPP) Customers	toll-free: 1-800-234-1490
	Dell Sales	toll-free: 1-800-289-3355 or toll-free: 1-800-879-3355
	Dell Outlet Store (Dell refurbished computers)	toll-free: 1-888-798-7561
	Software and Peripherals Sales	toll-free: 1-800-671-3355
	Spare Parts Sales	toll-free: 1-800-357-3355
	Extended Service and Warranty Sales	toll-free: 1-800-247-4618
	Fax	toll-free: 1-800-727-8320
	Dell Services for the Deaf, Hard-of-Hearing, or Speech-Impaired	toll-free: 1-877-DELLTY (1-877-335-5889)
U.S. Virgin Islands	General Support	1-877-673-3355
Venezuela	General Support	8001-3605

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