Product Name: TPC-T011-34
Model: TPC-T011-34

Setup Instructions

Quick setup

1

2

Turn on the wireless keyboard and mouse. They automatically connect to the computer after you turn it on.

3

Your computer is protected by a free subscription to McAfee LiveSafe™ service for a limited time from the first time you use the computer. You will have the option to purchase McAfee LiveSafe service upon expiration of the subscription. McAfee LiveSafe service helps protect your identity, your data, and your devices with a single subscription.*

Computer color, features, feature locations, and accessories may vary.

* Select products only.

Quick tour
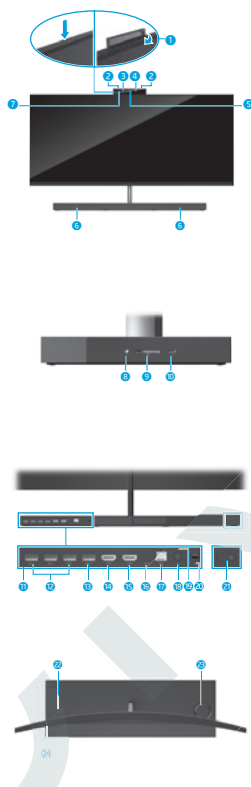
Front
❶ Pop-up cameras and lights
❷ Internal microphones (2)
❸ Infrared camera
❹ Infrared camera light
❺ Camera light
❻ Speakers
❼ Camera

Right
❽ Audio-out (headphone)/Audio-in (microphone) combo jack
❾ Memory card reader
❿ USB Type-C connector

Back
⓫ Power light
⓬ USB ports (3)
⓭ USB charging port*
⓮ HDMI-out port
⓯ HDMI-in port
⓰ HDMI display mode button (switches display modes to show HDMI-in content on the screen)**
⓱ RJ-45 (network) jack
⓲ Power connector
⓳ AC adapter light
⓴ Security cable slot
㉑ Power button

Base
㉒ Wireless charging area for Qi- and PMA-enabled devices, such as phones and tablets. Place the device face up on the area to charge.*

㉓ Touch control

Change speaker volume.

Tap to play or pause the audio or video.

Swipe right to play the next track of audio or video.

Swipe left to play the previous track of audio or video.

㉔ Wireless charging light (located directly beneath the display).

| Light	Status
Off	Off
Solid white	Charge complete
Blinking white	Firmware update
Solid amber	Charging
Blinking amber	Error

* Select products only. This feature charges a device when the computer is on.
** Does not require the operating system to be running.

Find more information

Windows® products To learn more about Windows and to access help topics, select the Start button 🔳 , and then select the Get started app.

To access the user guides, select the Start button 🔳 , select All apps (required on some products), select HP Help and Support, and then select HP Documentation.

– or –

To access the user guides, select the Start button 🔳, select All apps (required on some products), select HP, and then select HP Documentation.

Linux products Double-click the HP Documents icon on the desktop.

FreeDOS products On the Boot Menu, select HP Documents.

You do not need to connect to the Internet to access the user guides. To view the user guides on the Web, go to http://www.hp.com/support. Select Find your product, and then follow the on-screen instructions. A *User Guides* disc is included with some products.

Contact support

To resolve a hardware or software problem, go to http://www.hp.com/support. Use this site to get more information about your product, including links to discussion forums and instructions on troubleshooting. You can also find information on how to contact HP and open a support case.

Go wireless

Select the network icon in the right corner of the taskbar, and then connect to one of the available networks.

To set up a WLAN and connect to the Internet, you need a broadband modem (either DSL or cable) (purchased separately), high-speed Internet service purchased from an Internet service provider, and a wireless router (purchased separately).

Regulatory Model Number and Simplified Declaration of Conformity

The Regulatory Model Number (RMN) for this equipment is TPC-T011-34. The RMN is located on the bottom of the base.

Hereby, HP declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. To view the Declaration of Conformity for this equipment, go to www.hp.eu/certificates and search using this equipment's RMN.

Software terms

By installing, copying, downloading, or otherwise using any software product preinstalled on this computer, you agree to be bound by the terms of the HP End User License Agreement (EULA). If you do not accept these license terms, your sole remedy is to return the entire unused product (hardware and software) within 14 days for a full refund subject to the refund policy of your seller.

For any further information or to request a full refund of the price of the computer, please contact your seller.

Limited Warranty

You can find your HP Limited Warranty located with the user guides on your product and/or on the CD or DVD provided in the box. In some countries or regions, HP may provide a printed warranty in the box. For countries or regions where the warranty is not provided in printed format, you can request a copy from http://www.hp.com/go/orderdocuments. For products purchased in Asia Pacific, you can write to HP at POD, PO Box 161, Kitchener Road Post Office, Singapore 912006. Include your product name, and your name, phone number, and postal address.

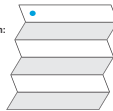Replace this box with PI statement as per spec.

911314-001

Navigating the Windows Start screen

The Windows Start screen provides a central location where you can access your information and email, browse the Web, stream videos, view photos, and access your social media websites. Depending on your computer model, you can use a keyboard and mouse, or a touch screen to navigate the Windows Start screen.
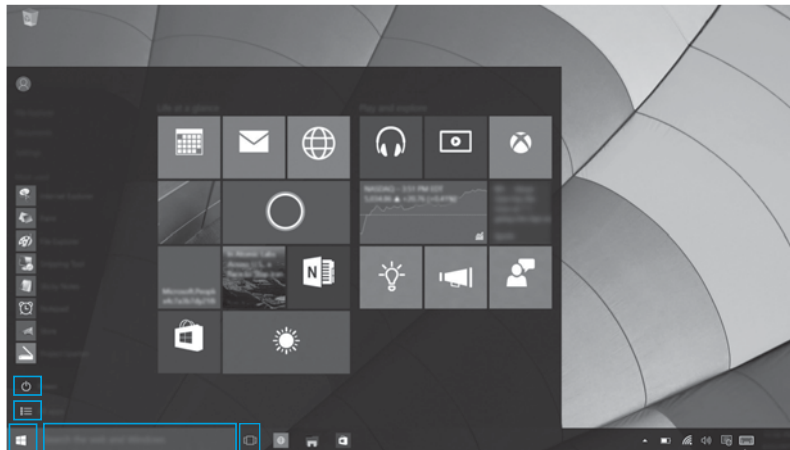
Shut down your computer

Select the Start button 🔳 , select the Power icon ⏻, and then select Shut down.

List your apps

Select the Start button 🔳 , and then select All apps (required on some products).

Display the Start menu

Select the Start button 🔳 in the lower-left corner of the taskbar.

Search

In the taskbar search box, begin typing the name of an app, setting, file, or Internet topic.

Switch between open apps

Select the Task view icon in the taskbar.

The features and appearance of the Windows screen may vary.

Touch gestures for touch screen

Use these common touch gestures with a touch screen (select products only).

Tap or double-tap to select

Two-finger pinch zoom

One-finger slide

Some computers, apps, and files do not support all touch gestures.

Locate system information

The product number, serial number, and warranty period are located on the bottom of the base.

Feedback on this document

To help us improve this document, please send any suggestions, comments, or errors to doc.feedback@hp.com. Include the document part number (located near the bar code) when submitting your feedback.

Product description

This product is an All-in-One desktop computer, desktop computer, thin client computer, or retail system and might feature a thin-panel display, TouchPad, processor, RAM, hard drive or solid-state drive and internal power supply, and external AC adapter. Depending on your computer model, the products have a rating of 100–240 V ac, 200–240 V ac, 220–240 V ac, or 100–127/200–240 V ac; 50–60 Hz or 50/60 Hz, 1.5 A, 1.8 A, 3 A, 3.6 A, 4 A, 5.5 A, 6 A, 8 A, 6/3 A, 8 - 4 A, or 12 - 8 A. The AC adapter has a rating of 100–240 V ac, 50–60 Hz, 0.5 A, 0.6 A, 0.8 A, 1 A, 1.2 A, 1.4 A, 1.5 A, 1.6 A, 1.7 A, 2 A, 2.2 A, 2.25 A, 2.4 A, 2.5 A, 2.7 A, 2.9 A, 3.3 A, 3.5 A, or 4 A. If you have a wireless keyboard, mouse, and RF remote control, they have a rating of 1.5 V dc, 3 V dc, 3.2 V dc, or 5 V dc; 5 mA, 10 mA, 20 mA, 25 mA, 30 mA, 40 mA, 50 mA, 60 mA, 80 mA, 300 mA, or 100 mA.

To access the latest user guide, go to http://www.hp.com/support, and select your country. Select Find your product, and then follow the on-screen instructions.

⚠ **WARNING:** To reduce the risk of electric shock or damage to the equipment:
• Plug the power cord into an AC outlet that is easily accessible at all times.
• Disconnect power from the computer by unplugging the power cord from the AC outlet.
• If provided with a 3-pin attachment plug on the power cord, plug the cord into a grounded (earthed) 3-pin outlet. Do not disable the power cord grounding pin, for example, by attaching a 2-pin adapter. The grounding pin is an important safety feature.

For more safety and regulatory information, and for battery disposal information, refer to the *Regulatory, Safety and Environmental Notices* provided with your user guides. To locate the user guides for your computer, see the "Find more information" section of this poster.

⚠ **WARNING:** To reduce the risk of serious injury, read the *Safety & Comfort Guide* provided with your user guides. It describes proper workstation setup, and proper posture, health, and work habits for computer users. The *Safety & Comfort Guide* also provides important electrical and mechanical safety information. The *Safety & Comfort Guide* is also available on the Web at http://www.hp.com/ergo.

⚠ **WARNING:** To reduce the possibility of heat-related injuries or of overheating the computer, do not place the computer directly on your lap or obstruct the computer air vents. Use the computer only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or rugs or clothing, to block airflow. Also, do not allow the AC adapter to contact the skin or a soft surface, such as pillows or rugs or clothing, during operation. The computer and the AC adapter comply with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC 60950-1 and its latest version or amendment).

User Guide

Product notice

This guide describes features that are common to most models. Some features may not be available on your computer.

Not all features are available in all editions of Windows. This computer may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows functionality. Go to http://www.microsoft.com for details.

To access the latest user guide, go to http://www.hp.com/support, and select your country. Select **Drivers & Downloads**, and then follow the on-screen instructions.

Software terms

By installing, copying, downloading, or otherwise using any software product preinstalled on this computer, you agree to be bound by the terms of the HP End User License Agreement (EULA). If you do not accept these license terms, your sole remedy is to return the entire unused product (hardware and software) within 14 days for a full refund subject to the refund policy of your seller.

For any further information or to request a full refund of the price of the computer, please contact your seller.

Table of contents

1 Getting information

Tasks	Instructions
● Set up your computer	*Setup Instructions* or *Quick Setup* poster – or – See Setting up your computer on page 3.
● Connect to the Internet	See Connecting to the Internet (select products only) on page 4.
● Recover factory settings	See Backing up, restoring, and recovering on page 15.
● See how-to videos about using the features of your computer	Go to http://www.hp.com/supportvideos (English only).
● Learn how to use the Windows® operating system ● Find Windows password information ● Find links to driver updates ● Read frequently asked questions	Get started app: Select the **Start** button, and then select the **Get started** app.
● Troubleshoot the most common computer hardware and software issues	See Troubleshooting on page 9.
● Find electronic user guides and specifications for your computer model ● Order parts and find additional troubleshooting help	Go to http://welcome.hp.com/country/us/en/wwcontact_us.html.
● Upgrade or replace components of your computer	Go to http://welcome.hp.com/country/us/en/wwcontact_us.html.

● Find computer warranty information	*HP Worldwide Limited Warranty and Technical Support* guide:
	
	1. Type support in the taskbar search box, and then select the **HP Support Assistant** app.
	
	   – or –
	
	   Click the question mark icon in the taskbar.
	
	2. Select **My PC**, and then select **Warranty and services**.
	
	– or –
	
	Go to http://www.hp.com/go/orderdocuments.

● Get up-to-date information and help from the Windows community	Go to http://www.hp.com/support/consumer-forum.
● Connect to a TV (select products only)	Go to http://welcome.hp.com/country/us/en/wwcontact_us.html.

● Maintain your computer	HP Support Assistant maintains your computer performance and resolves problems quickly by using automated updates, diagnostic tools, and guided assistance.
	
	▲ Type support in the taskbar search box, and then select the **HP Support Assistant** app.
	
	   – or –
	
	   Click the question mark icon in the taskbar.

Tasks	Instructions
	– or –
	See Maintenance on page 21.
● Find safety and regulatory notices	*Regulatory, Safety and Environmental Notices*:
	To access this document:
	1. Type `support` in the taskbar search box, and then select the **HP Support Assistant** app.
	– or –
	Click the question mark icon in the taskbar.
	2. Select **My PC**, select the **Specifications** tab, and then select **User Guides**.
	– or –
	Go to http://welcome.hp.com/country/us/en/wwcontact_us.html.
● Find ergonomic information	*Safety & Comfort Guide*:
	1. Select **My PC**, select the **Specifications** tab, and then select **User Guides**.
	Type `support` in the taskbar search box, and then select the **HP Support Assistant** app.
	– or –
	Click the question mark icon in the taskbar.
	2. Select **My PC**, select the **Specifications** tab, and then select **User Guides**.
	– or –
	Go to http://www.hp.com/ergo.

2 Setting up your computer

> **⚠ WARNING!**   To reduce the risk of electrical shock or damage to your equipment:
>
> - Place the computer in a location away from water, dust, moisture, and soot. These environmental factors can increase the temperature inside your computer or cause fire or electrocution.
>
> - Do not disable the power cord grounding pin. The grounding pin is an important safety feature.
>
> - Plug the power cord into an AC outlet that is easily accessible at all times.
>
> - Disconnect power from the equipment by unplugging the power cord from the AC outlet. To prevent direct exposure to the laser beam, do not try to open the enclosure of the CD or DVD drive.
>
> - The power supply is preset for the country or region in which you purchased your computer. If you move, check the voltage requirements for your new location before plugging the computer into an AC outlet.

To reduce the risk of serious injury read the *Safety & Comfort Guide*. To access this guide, go to http://www.hp.com/ergo.

1. Place the computer so that all ventilation openings are unobstructed and cabling is not in a walkway or where it can be stepped on or damaged by placing furniture on it.

2. When connecting all power cords from the monitor, computer, and accessories to an uninterruptible power supply (UPS), it is recommended that you use a power surge protection detection device. If the computer has a television tuner, or a modem or telephone connection, protect the computer by using surge protection with these signal inputs as well. Connect the television cable or the telephone line cord to the surge protection device, and then connect the device to the computer.

3. Download and install operating system updates.

    a. Find out what operating system and version your computer is currently running.

        Select the **Start** button, select **Settings**, select **System**, and then click **About**.

    b. Open your internet browser, and then go to http://welcome.hp.com/country/us/en/wwcontact_us.html.

    c. If necessary, click your country and language, click **Support**, and then click **Download drivers**.

    d. Enter your computer model name and number in the **Find by product field**, and then click **Go**.

    e. If necessary, select your computer model from **Product search results**.

    f. Select your computer operating system.

    g. Click **Download** next to each update you wish to download.

    h. Follow the on-screen instructions to install each downloaded update.

4. Look in the computer box for additional printed details or updates.

After you complete the initial computer setup, you might want to install additional hardware devices or software. Check the operating system, memory, and other requirements listed for these items before purchasing them for your computer. Follow the software manufacturer's directions to install the new software.

NOTE: Use only licensed original software. Installing copied software could result in an unstable installation, infect the computer with a virus, or be illegal.

NOTE: A security solution is designed as a deterrent, but it might not be able to prevent theft, mishandling, or software attacks.

Connecting to the Internet (select products only)

To connect to a wireless network:

NOTE: To set up a wireless local area network (WLAN) and connect to the Internet, you need a broadband modem (either DSL or cable) (purchased separately), high-speed Internet service purchased from an Internet service provider, and a wireless router (purchased separately).

1. Be sure that the WLAN device is on.

2. Select the network status icon in the taskbar, and then connect to one of the available networks.

    If the WLAN is a security-enabled WLAN, you are prompted to enter a security code. Enter the code, and then select **Next** to complete the connection.

    NOTE: If no WLANs are listed, you may be out of range of a wireless router or access point.

    NOTE: If you do not see the WLAN you want to connect to, right-click the network status icon in the taskbar, and then select **Open Network and Sharing Center**. Select **Set up a new connection or network**. A list of options is displayed, allowing you to manually search for and connect to a network or to create a new network connection.

3. Follow the on-screen instructions to complete the connection.

After the connection is made, select the network status icon in the notification area, at the far right of the taskbar, to verify the name and status of the connection.

For more information about wireless technology, see the information and Website links provided in the Get started app. Select the **Start** button, and then select the **Get started** app.

To connect to a wired network:

1. Plug an 8-pin, RJ-45 (network) cable into the network jack on the computer.

2. Plug the other end of the network cable into a network wall jack or router.

    NOTE: If the network cable contains noise suppression circuitry, which prevents interference from TV and radio reception, orient the circuitry end of the cable toward the computer.

If you have issues connecting to the Internet, see Internet access on page 12.

3 Navigating the screen

You can navigate the computer screen in the following ways:

● Using touch gestures (select products only)

● Using the keyboard and mouse

Select computer models have special action keys or hot key functions on the keyboard to perform routine tasks.

Using touch gestures

You can customize the touch gestures by changing settings, button configurations, click speed, and pointer options.

Type control panel in the taskbar search box, and then select **Control Panel**. Select **Hardware and Sound**. Under **Devices and Printers**, select **Mouse**.

NOTE: Touch gestures are not supported in all apps.

Using the keyboard and mouse

The keyboard and mouse allow you to type, select items, scroll and to perform the same functions as you do using touch gestures. The keyboard also allows you to use action keys and hot keys to perform specific functions.

TIP: The Windows key ⚙ on the keyboard allows you to quickly return to the Start screen from an open app or the Windows desktop. Press the key again to return to the previous screen.

NOTE: Depending on the country or region, the keys and keyboard functions of your keyboard may be different from those discussed in this section.

Using the action keys or hot keys

You can quickly access information or perform functions by using certain keys and key combinations.

● Action keys—Perform an assigned function. The icons on the function keys at the top of the keyboard illustrate the assigned function for that key.

   To use an action key function, press and hold the key.

● Hot keys—A combination of the fn key and the esc key, the spacebar, or the appropriate action key.

   To use a hot key, briefly press the fn key, and then briefly press the second key of the combination.

Depending on the computer model, your keyboard may support the following keys.

Icon	Description
	Lists open apps.

Icon	Description
▣	Snaps open apps.
▦→	Switches between open apps.
▭	Shows the available commands in an open app.
▭	Shows or hides the desktop.
🔍	Opens the Search charm.
⟲	Opens the Share charm.
▱	Opens the Devices charm.
⚙	Opens the Settings charm.
⏮	Plays the previous track of an audio CD or the previous section of a DVD or a BD.
▶❚❚	Begins, pauses, or resumes playback of an audio CD, a DVD, or a BD.
▶▶❙	Plays the next track of an audio CD or the next section of a DVD or a BD.
■	Stops audio or video playback of an audio CD, a DVD, or a BD.
🖶	Opens the Print Options window.
📋	Pastes the contents of the Clipboard.
🌙	Initiates Sleep, which saves your information in system memory. The display and other system components turn off and power is conserved. To exit Sleep, briefly press the power button. **CAUTION:** To reduce the risk of information loss, save your work before initiating Sleep.
🔇	Mutes or restores speaker sound.

Icon	Description
◀−	Decreases speaker volume incrementally as long as you hold down the key.
◀+	Increases speaker volume incrementally as long as you hold down the key.
☰	Displays options for a selected object.

4   Protecting your computer

Your computer includes features that help protect the integrity of your system and its data from unauthorized access. Review these features to ensure proper use.

Computer security features

Computer risk	Computer feature
Unauthorized use of the computer or user account	User password A *password* is a group of characters that you choose. These characters must be entered to authorize access to your computer information.
Unauthorized access to Setup Utility, BIOS settings, and other system identification information	Administrator password
Computer viruses	Antivirus software The free trial antivirus software that is preinstalled on your computer can detect most viruses, remove them, and, in most cases, repair damage caused by viruses. For protection against new viruses beyond the trial period, purchase an extended service.
Unauthorized access to data and ongoing threats to the computer	Firewall software ● Windows includes firewall software preinstalled on the computer. ● The antivirus software, which is preinstalled on the computer, includes firewall software. Windows critical security updates Updates to the Windows operating system

5 Troubleshooting

If you have problems using any peripheral devices such as a monitor, or a printer, with your computer, for more extensive troubleshooting refer to the documentation provided by the product manufacturer. The following tables present some issues you might encounter while installing, starting up, or using your computer and suggest possible solutions.

For more information or for additional troubleshooting options, go to http://welcome.hp.com/country/us/en/wwcontact_us.html, and then search for your computer model.

Computer does not start

Symptom	Possible solution
Error message: hard drive error	1. Restart the computer. a. Press ctrl+alt+delete. b. Select the **Power** icon in the lower-right corner of the screen, and then select **Restart**. – or – Press and hold the power button on the computer for 5 or more seconds to turn off the computer, and then press the button to turn on the computer. 2. If Windows opens, immediately back up all important data to a backup hard drive. 3. Contact support (regardless of whether Windows started or not).
Computer will not turn on or start	Be sure that the cables connecting the computer to the AC outlet are plugged in properly. The green power supply light on the computer should be on. If it is not, try a different AC outlet. If you are still having trouble, contact support.
	Be sure that the operating voltage of the electrical outlet is appropriate for the electrical voltage of the computer.
	Test the AC outlet by plugging a different electrical device into it.
	If possible, remove any outlet filters and stabilizers, then insert the power plug directly into the electrical outlet.
	Disconnect all peripheral devices, then press and hold the power button down for at least 15 seconds. Press the power button to turn on the computer.
	If the display (monitor) is blank, the monitor might not be properly connected. Connect the monitor to the computer, plug the power cord into an AC outlet, and then turn the monitor on. See Display (monitor) (select products only) on page 10.
Computer is not responding	1. Press ctrl+alt+delete. 2. Select **Task Manager**. 3. Select any programs that are not responding, and then click **End task**. If closing programs does not resolve the problem, restart the computer. 1. Press ctrl+alt+delete. 2. Select the **Power** icon in the lower-right corner of the screen, and then select **Restart**. – or –

Symptom	Possible solution
	Press and hold the power button on the computer for 5 or more seconds to turn off the computer, and then press the power button to turn on the computer.
Error message: Invalid system disk or Non-System disk or Disk error	When drive activity stops, remove the optical disc inside the optical drive, and then press the spacebar on the keyboard.

Power

Symptom	Possible solution
Computer does not turn off when the power button is pressed	Press and hold the power button until the computer turns off. Then turn the computer on again.
Computer shuts down automatically	• The computer might be in an exceedingly hot environment. Let it cool down. • Be sure that computer air vents are not blocked. See Cleaning your computer on page 22. **NOTE:** If your computer has an internal fan, be sure that the internal fan is running.

Display (monitor) (select products only)

Symptom	Possible solution
Screen is blank, and monitor power light is not lit	Reconnect the power cable to the back of the monitor and to the AC outlet.
	Press the power button on the monitor.
Screen is blank	Press the space bar on the keyboard or move the mouse to redisplay the screen image.
	Press the Sleep button (select products only), or esc, to resume from Sleep mode.
	Press the power button to turn on the computer.
	Inspect the monitor cable for bent pins. • If any of the pins are bent, replace the monitor cable. • If no pins are bent, reconnect the monitor cable to the computer.
Images on the screen are too large or too small, or the images are fuzzy	Adjust the monitor resolution setting in Windows. **1.** Right-click an empty area of the desktop, and then click **Screen resolution**. **2.** Select a different resolution from the drop-down menu. **3.** Click **Apply**, and then click **Keep changes**.

NOTE: In addition to the information listed here, also refer to the documentation that came with your monitor.

Keyboard and mouse (with cable)

Symptom	Possible solution
Keyboard commands and typing are not recognized by the computer	Use the mouse to turn off the computer. Disconnect and reconnect the keyboard to the back of your computer, and then restart your computer.
Mouse (with cable) does not work or is not detected	Disconnect and reconnect the mouse cable to your computer.
	If the mouse is still not detected, turn off the computer, disconnect and reconnect the mouse cable, and then restart the computer.
Cursor does not respond to the arrow keys on the number keypad	Press num lock on the keyboard to turn off num lock, so that the arrow keys on the number keypad can be used.
Cursor does not respond to mouse movement	1. Press alt+tab to navigate to an open program. 2. Press ctrl+s to save your changes in the selected program (ctrl+s is the keyboard shortcut for the Save command on most—not all—programs). 3. Repeat step 1 and step 2 to save changes in all open programs. 4. Press the power button to turn off the computer. 5. After the shutdown is complete, disconnect and reconnect the mouse cable to the back of your computer, and then restart your computer.

Keyboard and mouse (wireless)

Symptom	Possible solution
Wireless keyboard or mouse does not work or is not detected	• Be sure that you are using the wireless keyboard or wireless mouse within range of the transceiver, approximately 10 meters (32 feet) for normal use, and within 30 cm (12 inches) during initial setup or for re-synchronization. • Be sure that the mouse is not in Suspend mode, which occurs after 20 minutes of inactivity. Click the left mouse button to reactivate the mouse. • Replace the batteries in the keyboard and/or mouse.

Speakers and sound

Symptom	Possible solution
Volume is very low or unsatisfactory	Be sure that you connected the speakers to the audio-out (black) jack on the back of the computer. (Additional audio jacks are used for multiple-channel speakers.) Detached non-powered speakers (speakers without a separate power source, such as batteries or a power cord) do not produce satisfactory sound. Replace the non-powered speakers with powered speakers.
No sound is produced	1. Type control panel in the taskbar search box, and then select **Control Panel**. Select **System and Security**. 2. Under **Security and Maintenance**, select **Troubleshoot common computer problems**, and then select **Troubleshoot audio playback**.
	Be sure that you connected powered speakers and that they are turned on.
	Turn off your computer, and then disconnect and reconnect the speakers. Be sure that the speakers are connected to an audio jack, not a microphone or headphone jack.

Symptom	Possible solution
	To resume from Sleep mode, press the Sleep button (select products only), or press esc.
	Unplug headphones if they are connected to your computer (or speaker system).

Internet access

Symptom	Possible solution
Cannot connect to the Internet	1. Type `control panel` in the taskbar search box, and then select **Control Panel**. 2. Under **Network and Sharing Center**, select **Connect to a network**.
	Verify that you are using the proper cables for your Internet connection type. Your computer might have a dial-up modem and an Ethernet network adapter (also called a network interface card, or NIC). A modem uses a standard telephone cable, whereas the network adapter uses a network cable, to connect to a local area network (LAN). Do not connect a telephone cable to the network adapter, and do not connect a network cable to a telephone line; doing so might damage the network adapter.
	Run the wireless setup wizard. 1. Type `control panel` in the taskbar search box, and then select **Control Panel**. Select **Network and Internet**, and then select **Network and Sharing Center**. 2. In the **Network and Sharing Center** window, select **Set up a new connection or network** to open the wizard, and then follow the on-screen instructions.
	If your system has an external antenna, try moving the antenna to a better position. If the antenna is internal, try moving the computer.
	Try to connect again later, or contact your ISP for assistance.
Cannot connect to the Internet but there is no error message	1. Right-click the network status icon in the notification area, at the far right of the taskbar. 2. Select **Troubleshoot problems**.
No network connection icon in the notification area	1. Type `repair` in the taskbar search box, and then Select **Identify and repair network problems**. 2. Follow the on-screen instructions.

Software troubleshooting

Symptom	Possible solution
To resolve software problems, try these methods:	- Turn the computer off completely, and then turn it on again. - Update the drivers. See "Updating device drivers," in the next entry. - Restore your computer to a configuration that was in use before the software was installed. See "Microsoft System Restore," in this table. - Reinstall the software program or hardware driver. See "Software program and hardware driver reinstallation," in this table. - Erase and reformat the hard drive, and then reinstall the operating system, programs, and drivers. This process erases all the data files that you have created. See Backing up, restoring, and recovering on page 15.
Software programs are slow to respond	- Close unnecessary software programs. - Run virus scans and other system tools when the computer is not in use. Stop startup applications (such as messaging software and multimedia applications) from loading. 1. Type `msconfig` in the taskbar search box, and then select **msconfig**. **NOTE:** If you are prompted for an administrator password or confirmation, type the password or provide confirmation. 2. From the **General** tab, select **Selective startup**. 3. Click the **Startup** tab, and then click **Open Task Manager**. 4. Select the startup items that you want to prevent from loading, and then click **Disable**. **NOTE:** If you are unsure about an item, do not disable it. 5. If prompted, click **Restart** to restart the computer. **NOTE:** To enable a program to load at startup, restart the computer and reverse these steps. Disable nonessential graphics capabilities. 1. Type `file explorer` in the taskbar search box, and then select **File Explorer**. 2. Click the **Computer** menu, and then select **Properties**. 3. Click **Advanced system settings**. **NOTE:** If you are prompted for an administrator password or confirmation, type the password or provide confirmation. 4. Under Performance, click **Settings**. 5. From the **Visual Effects** tab, select **Adjust for best performance**, and then click **OK**.
Updating device drivers	Complete the following procedure to update a driver, or to revert to an earlier version of the driver if the new one does not solve your problem. 1. Type `device manager` in the taskbar search box, and then select **Device Manager**. 2. Select the arrow to expand the list of the type of device you want to update or roll back (for example, DVD/CD-ROM drives). 3. Double-click the specific item (for example, HP DVD Writer 640b). 4. Select the **Driver** tab. 5. To update a driver, select **Update Driver**, and then follow the on-screen instructions. – or – To revert to an earlier version of a driver, select **Roll Back Driver**, and then follow the on-screen instructions.

Symptom	Possible solution
Microsoft System Restore	If you have a problem that might be caused by software that you have installed on your computer, use System Restore to return the computer to a previous restore point. You can also set restore points manually.
	IMPORTANT: Always use this System Restore procedure before you use the System Recovery program.
	For more information and steps, see the Get started app.
	▲ Select the **Start** button, and then select the **Get started** app.
Software program and hardware driver reinstallation	If any of your factory-installed software programs or hardware drivers are damaged, you can reinstall them by using HP Recovery Manager (select products only).
	NOTE: Do not use HP Recovery Manager to reinstall software programs provided on CDs or DVDs included in the computer box. Reinstall these programs directly from the CDs or DVDs.
	Before you uninstall a program, be sure that you have a way to reinstall it. Confirm that it is still available from the original source (for example, discs or the Internet). Or, confirm that the program is in the list of programs you can reinstall from HP Recovery Manager (see the steps directly below).
	NOTE: Some features might not be available on systems that are shipped without a version of Microsoft Windows.
	To check the list of installable programs or to reinstall a program in HP Recovery Manager:
	▲ Type `recovery` in the taskbar search box, select **HP Recovery Manager**, select **Reinstall drivers and/or applications**, and then follow the on-screen instructions.
	For information and steps to uninstall a program, see the Get started app.
	▲ Select the **Start** button, and then select the **Get started** app.

6 Backing up, restoring, and recovering

This chapter provides information about the following processes. The information in the chapter is standard procedure for most products.

- Creating recovery media and backups

- Restoring and recovering your system

For additional information, refer to the HP support assistant app.

▲ Type `support` in the taskbar search box, and then select the **HP Support Assistant** app.

– or –

Click the question mark icon in the taskbar.

IMPORTANT: If you will be performing recovery procedures on a tablet, the tablet battery must be at least 70% charged before you start the recovery process.

IMPORTANT: For a tablet with a detachable keyboard, connect the keyboard to the keyboard dock before beginning any recovery process.

Creating recovery media and backups

The following methods of creating recovery media and backups are available on select products only. Choose the available method according to your computer model.

- Use HP Recovery Manager to create HP Recovery media after you successfully set up the computer. This step creates a backup of the HP Recovery partition on the computer. The backup can be used to reinstall the original operating system in cases where the hard drive is corrupted or has been replaced. For information on creating recovery media, see Creating HP Recovery media (select products only) on page 15. For information on the recovery options that are available using the recovery media, see Using Windows tools on page 16.

- Use Windows tools to create system restore points and create backups of personal information.

  For more information, see Recovering using HP Recovery Manager on page 17.

  NOTE: If storage is 32 GB or less, Microsoft System Restore is disabled by default.

Creating HP Recovery media (select products only)

If possible, check for the presence of the Recovery partition and the Windows partition. From the **Start** menu, select **File Explorer**, and then select **My computer**.

- If your computer does not list the Windows partition and the Recovery partition, you can obtain recovery media for your system from support. See the *Worldwide Telephone Numbers* booklet included with the computer. You can also find contact information on the HP website. Go to http://www.hp.com/support, select your country or region, and follow the on-screen instructions.

You can use Windows tools to create system restore points and create backups of personal information, see .

●   If your computer does list the Recovery partition and the Windows partition, you can use HP Recovery Manager to create recovery media after you successfully set up the computer. HP Recovery media can be used to perform system recovery if the hard drive becomes corrupted. System recovery reinstalls the original operating system and software programs that were installed at the factory and then configures the settings for the programs. HP Recovery media can also be used to customize the system or restore the factory image if you replace the hard drive.

     ◦   Only one set of recovery media can be created. Handle these recovery tools carefully, and keep them in a safe place.

     ◦   HP Recovery Manager examines the computer and determines the required storage capacity for the media that will be required.

     ◦   To create recovery discs, your computer must have an optical drive with DVD writer capability, and you must use only high-quality blank DVD-R, DVD+R, DVD-R DL, or DVD+R DL discs. Do not use rewritable discs such as CD±RW, DVD±RW, double-layer DVD±RW, or BD-RE (rewritable Blu-ray) discs; they are not compatible with HP Recovery Manager software. Or, instead, you can use a high-quality blank USB flash drive.

     ◦   If your computer does not include an integrated optical drive with DVD writer capability, but you would like to create DVD recovery media, you can use an external optical drive (purchased separately) to create recovery discs. If you use an external optical drive, it must be connected directly to a USB port on the computer; the drive cannot be connected to a USB port on an external device, such as a USB hub. If you cannot create DVD media yourself, you can obtain recovery discs for your computer from HP. See the *Worldwide Telephone Numbers* booklet included with the computer. You can also find contact information on the HP website. Go to http://www.hp.com/support, select your country or region, and follow the on-screen instructions.

     ◦   Be sure that the computer is connected to AC power before you begin creating the recovery media.

     ◦   The creation process can take an hour or more. Do not interrupt the creation process.

     ◦   If necessary, you can exit the program before you have finished creating all of the recovery DVDs. HP Recovery Manager will finish burning the current DVD. The next time you start HP Recovery Manager, you will be prompted to continue.

To create HP Recovery media:

IMPORTANT: For a tablet with a detachable keyboard, connect the keyboard to the keyboard dock before beginning these steps.

1.   Type `recovery` in the taskbar search box, and then select **HP Recovery Manager**.

2.   Select **Create recovery media**, and then follow the on-screen instructions.

If you ever need to recover the system, see .

Using Windows tools

You can create recovery media, system restore points, and backups of personal information using Windows tools.

NOTE: If storage is 32 GB or less, Microsoft System Restore is disabled by default.

For more information and steps, see the Get started app.

▲   Select the **Start** button, and then select the **Get started** app.

Restore and recovery

There are several options for recovering your system. Choose the method that best matches your situation and level of expertise:

IMPORTANT: Not all methods are available on all products.

- Windows offers several options for restoring from backup, refreshing the computer, and resetting the computer to its original state. For more information see the Get started app.

  ▲ Select the **Start** button, and then select the **Get started** app.

- If you need to correct a problem with a preinstalled application or driver, use the Reinstall drivers and/or applications option (select products only) of HP Recovery Manager to reinstall the individual application or driver.

  ▲ Type `recovery` in the taskbar search box, select **HP Recovery Manager**, select **Reinstall drivers and/or applications**, and then follow the on-screen instructions.

- If you want to recover the Windows partition to original factory content, you can choose the System Recovery option from the HP Recovery partition (select products only) or use the HP Recovery media. For more information, see Recovering using HP Recovery Manager on page 17. If you have not already created recovery media, see Creating HP Recovery media (select products only) on page 15.

- On select products, if you want to recover the computer's original factory partition and content, or if you have replaced the hard drive, you can use the Factory Reset option of HP Recovery media. For more information, see Recovering using HP Recovery Manager on page 17.

- On select products, if you want to remove the recovery partition to reclaim hard drive space, HP Recovery Manager offers the Remove Recovery Partition option.

  For more information, see Removing the HP Recovery partition (select products only) on page 20.

Recovering using HP Recovery Manager

HP Recovery Manager software allows you to recover the computer to its original factory state by using the HP Recovery media that you either created or that you obtained from HP, or by using the HP Recovery partition (select products only). If you have not already created recovery media, see Creating HP Recovery media (select products only) on page 15.

What you need to know before you get started

- HP Recovery Manager recovers only software that was installed at the factory. For software not provided with this computer, you must either download the software from the manufacturer's website or reinstall the software from the media provided by the manufacturer.

  IMPORTANT: Recovery through HP Recovery Manager should be used as a final attempt to correct computer issues.

- HP Recovery media must be used if the computer hard drive fails. If you have not already created recovery media, see Creating HP Recovery media (select products only) on page 15.

- To use the Factory Reset option (select products only), you must use HP Recovery media. If you have not already created recovery media, see Creating HP Recovery media (select products only) on page 15.

- If your computer does not allow the creation of HP Recovery media or if the HP Recovery media does not work, you can obtain recovery media for your system from support. See the *Worldwide Telephone Numbers* booklet included with the computer. You can also find contact information from the HP

website. Go to http://www.hp.com/support, select your country or region, and follow the on-screen instructions.

IMPORTANT: HP Recovery Manager does not automatically provide backups of your personal data. Before beginning recovery, back up any personal data you want to retain.

Using HP Recovery media, you can choose from one of the following recovery options:

NOTE: Only the options available for your computer display when you start the recovery process.

- System Recovery—Reinstalls the original operating system, and then configures the settings for the programs that were installed at the factory.

- Factory Reset—Restores the computer to its original factory state by deleting all information from the hard drive and re-creating the partitions. Then it reinstalls the operating system and the software that was installed at the factory.

The HP Recovery partition (select products only) allows System Recovery only.

Using the HP Recovery partition (select products only)

The HP Recovery partition allows you to perform a system recovery without the need for recovery discs or a recovery USB flash drive. This type of recovery can be used only if the hard drive is still working.

To start HP Recovery Manager from the HP Recovery partition:

IMPORTANT: For a tablet with a detachable keyboard, connect the keyboard to the keyboard dock before beginning these steps (select products only).

1. Type `recovery` in the taskbar search box, select **Recovery Manager**, and then select **HP Recovery Environment**.

   - or-

   For computers or tablets with keyboards attached, press f11 while the computer boots, or press and hold f11 as you press the power button.

   For tablets without keyboards:

   Turn on or restart the tablet, and then quickly hold down the volume down button; then select f11.

   - or -

   Turn on or restart the tablet, and then quickly hold down the Windows button; then select f11.

2. Select **Troubleshoot** from the boot options menu.

3. Select **Recovery Manager**, and then follow the on-screen instructions.

Using HP Recovery media to recover

You can use HP Recovery media to recover the original system. This method can be used if your system does not have an HP Recovery partition or if the hard drive is not working properly.

1. If possible, back up all personal files.

2. Insert the HP Recovery media, and then restart the computer.

   NOTE: If the computer does not automatically restart in HP Recovery Manager, change the computer boot order. See .

3. Follow the on-screen instructions.

Changing the computer boot order

If your computer does not restart in HP Recovery Manager, you can change the computer boot order, which is the order of devices listed in BIOS where the computer looks for startup information. You can change the selection to an optical drive or a USB flash drive.

To change the boot order:

IMPORTANT: For a tablet with a detachable keyboard, connect the keyboard to the keyboard dock before beginning these steps.

1. Insert the HP Recovery media.

2. Access BIOS:

    For computers or tablets with keyboards attached:

    ▲ Turn on or restart the computer or tablet, quickly press esc, and then press f9 for boot options.

    For tablets without keyboards:

    ▲ Turn on or restart the tablet, and then quickly hold down the volume down button; then select **f9**.

       - or -

       Turn on or restart the tablet, and then quickly hold down the Windows button; then select **f9**.

3. Select the optical drive or USB flash drive from which you want to boot.

4. Follow the on-screen instructions.

Removing the HP Recovery partition (select products only)

HP Recovery Manager software allows you to remove the HP Recovery partition to free up hard drive space.

IMPORTANT: After you remove the HP Recovery partition, you will not be able to perform System Recovery or create HP recovery media from the HP Recovery partition. So before you remove the Recovery partition, create HP Recovery media; see Creating HP Recovery media (select products only) on page 15.

NOTE: The Remove Recovery Partition option is only available on products that support this function.

Follow these steps to remove the HP Recovery partition:

1. Type `recovery` in the taskbar search box, and then select **HP Recovery Manager**.

2. Select **Remove Recovery Partition**, and then follow the on-screen instructions.

7 Maintenance

It is important that you perform simple maintenance of your computer to be sure that it works at peak performance.

Schedules and tasks

Follow these instructions at the recommended intervals for proper maintenance.

Weekly	Software cleanup	Use Disk Cleanup or safe third-party cleaning tools to remove junk files and temporary files that accumulate and slow down your system. Also, check for programs you no longer need and uninstall them. To run Disk Cleanup: **1.** Type `disk` in the taskbar search box, and then select **Free up disk space by deleting unnecessary files** or **Uninstall apps to free up disk space**. **2.** Follow the on-screen instructions.
	Defragmenting and optimizing	Use Disk Defragmenter to defragment and optimize your hard drive to keep your hard disk in good condition and improve system performance. Frequently performing this task does not harm your system. To run Disk Defragmenter: **1.** Connect the computer to AC power. **2.** Type `defragment` in the taskbar search box, and then select **Defragment and optimize your drives**. **3.** Follow the on-screen instructions.
	Virus scan	Perform a full virus scan every week to catch viruses that might have slipped through unnoticed. Most antivirus products have a scheduling feature to keep track of this automatically.
Monthly	Hardware cleaning	Thoroughly clean the outside of your computer.
	Software updates	Use **Windows Update** to fix operating system bugs and improve performance. Also, be sure to check for driver updates for your hardware and new versions of your favorite programs.
	Windows Update	Run **Windows Update** to install updates.
Yearly	System Recovery	In time, your system might still slow down, depending on the computer usage. Use **System Recovery** to wipe your Windows operating system installation clean, restoring it to the original configuration when you first started your system. **Make a backup of important data files before proceeding with a System Recovery.** See Backing up, restoring, and recovering on page 15 for further details.
As needed	Backing up your data	Use CD or DVD recording software that is installed on your computer to create (or "burn") backup discs of important information, including personal files, e-mail messages, and Website bookmarks. You can also move data to an external hard drive.

Cleaning your computer

Use the following products to safely clean your computer:

- Dimethyl benzyl ammonium chloride 0.3 percent maximum concentration (for example, disposable wipes, which come in a variety of brands)

- Alcohol-free glass-cleaning fluid

- Water with mild soap solution

- Dry microfiber cleaning cloth or a chamois (static-free cloth without oil)

- Static-free cloth wipes

⚠ **CAUTION:** Avoid strong cleaning solvents that can permanently damage your computer. If you are not sure that a cleaning product is safe for your computer, check the product contents to make sure that ingredients such as alcohol, acetone, ammonium chloride, methylene chloride, and hydrocarbons are not included in the product.

Fibrous materials, such as paper towels, can scratch the computer. Over time, dirt particles and cleaning agents can get trapped in the scratches.

Cleaning procedures

Follow the procedures in this section to safely clean your computer.

⚠ **WARNING!** To prevent electric shock or damage to components, do not attempt to clean your computer while it is turned on.

- Turn off the computer.

- Disconnect AC power.

- Disconnect all powered external devices.

⚠ **CAUTION:** To prevent damage to internal components, do not spray cleaning agents or liquids directly on any computer surface. Liquids dripped on the surface can permanently damage internal components.

Cleaning the display

⚠ **CAUTION:** Do not spray or place the cleaner directly on the screen.

Gently wipe the sides and the surface of the display using a soft, lint-free cloth moistened with an alcohol-free glass cleaner.

Cleaning the computer vents

Air vents keep the computer cool. Keep these vents clean by using a small, battery-powered vacuum cleaner. (A battery-powered vacuum cleaner eliminates the risk of electric shock.)

1. Vacuum the vents on the computer case.

2. Remove any debris that has accumulated in and around the computer connectors (for example, the Ethernet and USB connectors).

Cleaning the keyboard or mouse

⚠ **WARNING!**   To reduce the risk of electric shock or damage to internal components, do not use a vacuum cleaner attachment to clean the keyboard. A vacuum cleaner can deposit household debris on the keyboard surface.

⚠ **CAUTION:**   To prevent damage to internal components, do not allow liquids to drip between the keys.

- To clean the keyboard or mouse, use a soft microfiber cloth or a chamois moistened with one of the cleaning solutions listed previously or use an acceptable disposable wipe.

- To prevent keys from sticking and to remove dust, lint, and particles from the keyboard, use a can of compressed air with a straw extension.

If you have a roller-ball mouse, clean the ball and rollers inside.

1. Turn the mouse upside down, and rotate the ball-cover ring counterclockwise to remove the ring and release the roller ball.

2. Rinse the roller ball with soap and warm water.

3. Clean the rollers inside the mouse with a cotton swab dampened with isopropyl (rubbing) alcohol.

4. After the roller ball and rollers are completely dry, replace the ball and ball-cover ring.

8 Using HP PC Hardware Diagnostics (UEFI)

HP PC Hardware Diagnostics is a Unified Extensible Firmware Interface (UEFI) that allows you to run diagnostic tests to determine whether the computer hardware is functioning properly. The tool runs outside the operating system so that it can isolate hardware failures from issues that are caused by the operating system or other software components.

NOTE: To start BIOS on a convertible computer, your computer must be in notebook mode and you must use the keyboard attached to your tablet. The on-screen keyboard, which displays in tablet mode, cannot access BIOS.

To start HP PC Hardware Diagnostics UEFI:

1. Start BIOS:

    ●   Computers or tablets with keyboards:

        ▲   Turn on or restart the computer, quickly press esc.

    ●   Tablets without keyboards:

        ▲   Turn on or restart the tablet, and then quickly hold down the volume down button.

            - or -

            Turn on or restart the tablet, and then quickly hold down the Windows button.

2. Press or tap f2.

    The BIOS searches three places for the diagnostic tools, in the following order:

    a. Connected USB drive

        NOTE: To download the HP PC Hardware Diagnostics (UEFI) tool to a USB drive, see Downloading HP PC Hardware Diagnostics (UEFI) to a USB device on page 24.

    b. Hard drive

    c. BIOS

3. When the diagnostic tool opens, select the type of diagnostic test you want to run, and then follow the on-screen instructions. On a tablet, press the volume down button to stop a diagnostic test.

    NOTE: If you need to stop a diagnostic test on computers or tablets with a keyboard, press esc.

Downloading HP PC Hardware Diagnostics (UEFI) to a USB device

There are two options to download HP PC Hardware Diagnostics to a USB device:

Download the latest UEFI version:

1. Go to http://www.hp.com/go/techcenter/pcdiags. The HP PC Diagnostics home page is displayed.

2. In the HP PC Hardware Diagnostics section, click the **Download** link, and then select **Run**.

Download any version of UEFI for a specific product:

1. Go to http://www.hp.com/support, and then select your country. The HP Support page is displayed.

2. Click **Drivers & Downloads**.

3. In the text box, enter the product name, and then click **Go**.

    – or –

    Click **Find Now** to let HP automatically detect your product.

4. Select your computer, and then select your operating system.

5. In the **Diagnostic** section, follow the on-screen instructions to select and download the UEFI version you want.

9 Specifications

Operating specifications

NOTE: To determine the exact electrical ratings of your computer, refer to the computer ratings label, located on the outside of the computer.

Factor	Metric	U.S.
Operating temperature	5°C to 35°C	41°F to 95°F
Storage temperature	-20°C to 60°C	−22°F to 149°F
Operating humidity	15% to 80% @ 26°C	15% to 80% @ 78°F
Operating altitude	0 m to 2000 m	0 ft to 6561 ft
Storage altitude	0 m to 4572 m	0 ft to 15000 ft

10 Electrostatic Discharge

Electrostatic discharge is the release of static electricity when two objects come into contact—for example, the shock you receive when you walk across the carpet and touch a metal door knob.

A discharge of static electricity from fingers or other electrostatic conductors may damage electronic components.

To prevent damage to the computer, damage to a drive, or loss of information, observe these precautions:

- If removal or installation instructions direct you to unplug the computer, first be sure that it is properly grounded.

- Keep components in their electrostatic-safe containers until you are ready to install them.

- Avoid touching pins, leads, and circuitry. Handle electronic components as little as possible.

- Use nonmagnetic tools.

- Before handling components, discharge static electricity by touching an unpainted metal surface.

- If you remove a component, place it in an electrostatic-safe container.

11 Accessibility

HP designs, produces, and markets products and services that can be used by everyone, including people with disabilities, either on a stand-alone basis or with appropriate assistive devices.

Supported assistive technologies

HP products support a wide variety of operating system assistive technologies and can be configured to work with additional assistive technologies. Use the Search feature on your device to locate more information about assistive features.

NOTE: For additional information about a particular assistive technology product, contact customer support for that product.

Contacting support

We are constantly refining the accessibility of our products and services and welcome feedback from users. If you have an issue with a product or would like to tell us about accessibility features that have helped you, please contact us at +1 (888) 259-5707, Monday through Friday, 6 a.m. to 9 p.m. North American Mountain Time. If you are deaf or hard-of-hearing and use TRS/VRS/WebCapTel, contact us if you require technical support or have accessibility questions by calling +1 (877) 656-7058, Monday through Friday, 6 a.m. to 9 p.m. North American Mountain Time.

NOTE: Support is in English only.

12 Support information

How to get help

HP support can help you get the most from your computer. You will find what you need with tools located on your computer and with information available on the Web, by phone, or through your local retailer.

Before contacting HP support, it's important to have the following information handy:

- Model number
- Product number
- Serial number
- Software build number
- Operating system
- Purchase date

Please take a moment to write down your product information for future reference.

The first four items on the list (model number, product number, serial number, and software build number) can be viewed by using HP Support Information. Type `support` in the taskbar search box, and then select **HP Support Information**.

Don't forget to register at http://www.hp.com/apac/register.

Where to get help

- Use the Get started app for help with hardware and software questions. Select the **Start** button, and then select the **Get started** app.
- Use HP Support Assistant. Type `support` in the taskbar search box, and then select the **HP Support Assistant** app.

  – or –

  Click the question mark icon in the taskbar.

  HP Support Assistant provides useful troubleshooting and diagnostics information and includes the following:

  ◦ Online chat with an HP technician

  ◦ Support telephone numbers

  ◦ HP service center locations

- For help online, go to http://welcome.hp.com/country/us/en/wwcontact_us.html.

Telephone assistance to get you up and running is covered for thirty (30) days from the time you purchase your computer. After thirty (30) days, there may be a charge, but the helpful support is still available.

Customer support for repairs

If your computer needs to be repaired, or to have parts replaced, you have two choices:

- You can easily replace many of your computer parts that are considered consumer replaceable. This is the fastest method of repair, because many times we can send the part directly to your home or business in a few days. (This option may not be available in all countries or regions.)

- If a repair is necessary, HP support will make arrangements to repair your computer.

These services are covered during the warranty period.

There are some limitations and exclusions to the warranty (as well as some important details), which are described in the *HP Worldwide Limited Warranty and Technical Support* guide.

Before upgrading your hardware

If you intend to upgrade any of your hardware, do it only after you set up your new computer. For instructions on setting up your computer, see the *Setup Instructions* or *Quick Setup* poster or Setting up your computer on page 3. If you have any problems setting up your system and turning it on, immediately contact HP support using the procedures given earlier in this chapter. This must be done first before attempting to upgrade your system.

By breaking the security seal on the back of the computer, you confirm that the computer was working properly before you attempted to upgrade your system. After the security seal has been broken, your computer is then, to the extent allowed by local law, covered under the terms and conditions listed in the *HP Worldwide Limited Warranty and Technical Support* guide.

Index

Operating Specifications

Electrical ratings:	Refer to your computer's ratings label located on the outside of the computer to determine exact electrical rating.
Operating temperature:	5° to 35° C
Storage temperature:	–30° to 65° C
Operating humidity:	15 to 80% @ 26° C
Operating altitude:	0–2000 m
Storage altitude:	0–4572 m

Betriebsdaten

Netzanschluss:	Die genauen Spannungs- und Stromwerte sind dem Typenschild Ihres Computers auf dessen Rückseite zu entnehmen.
Betriebstemperatur:	5° bis 35° C
Lagertemperatur:	–30° bis 65° C
Luftfeuchtigkeit (Betrieb):	15 bis 80 % bei 26° C
Höhe über Meeresspiegel (Betrieb):	0–2.000 m
Höhe über Meeresspiegel (Lagerung):	0–4.572 m

Fiche technique

Capacités électriques :	Reportez-vous à l'étiquette signalétique de votre ordinateur, à l'extérieur de celui-ci, pour connaître la puissance nominale exacte.
Température de fonctionnement :	5 ° à 35 °C
Température de stockage :	–30 ° à 65 °C
Humidité de fonctionnement :	15 à 80 % à 26 °C
Altitude de fonctionnement :	0-2 000 m
Altitude de stockage :	0-4 572 m

Especificaciones de funcionamiento

Rangos eléctricos:	Consulte la etiqueta de rangos que se encuentra en la parte trasera de su equipo para determinar el rango eléctrico exacto.
Temperatura de funcionamiento:	5° a 35° C
Temperatura de almacenamiento:	–30° a 65° C
Humedad de funcionamiento:	entre 15 y 80% a 26° C
Altitud de funcionamiento:	0 a 2000 m
Altitud de almacenamiento:	0 a 4572 m

Bedrijfsspecificaties

Elektrische gegevens:	Raadpleeg het label met de specificaties van uw computer op de computerbehuizing voor de exacte elektrische specificaties.
Bedrijfstemperatuur:	5° à 35° C
Opslagtemperatuur:	–30° à 65° C
Vochtigheid tijdens bedrijf:	15% à 80% bij 26° C
Toegestane hoogte voor bedrijf:	0–2.000 m
Toegestane hoogte voor opslag:	0–4.572 m

Especificações de Operação

Valores elétricos nominais:	Veja a etiqueta de especificações nominais de seu computador, localizada na parte externa do mesmo, para determinar as especificações elétricas exatas.
Temperatura de operação:	5° a 35°C
Temperatura de armazenamento:	–30° a 65° C
Umidade em operação:	15 a 80% @ 26°C
Altitude de operação:	0 a 2.000 m
Altitude de armazenamento:	0 a 4.572 m

Especificações de Funcionamento

Classificações eléctricas:	Consulte o rótulo de especificações do seu computador visível no exterior do mesmo para determinar as classificações eléctricas precisas.
Temperatura de funcionamento:	5° a 35° C
Temperatura de armazenamento:	–30° a 65° C
Humidade de funcionamento:	15 a 80% @ 26° C
Altitude de funcionamento:	0–2000 m
Altitude de armazenamento:	0–4572 m

Specifiche operative

Specifiche elettriche:	Vedere l'etichetta con le specifiche elettriche, apposta sul computer, per determinare le specifiche elettriche esatte del computer.
Temperatura operativa:	da 5° a 35 °C
Temperatura di magazzinaggio:	da –30° a 65° C
Umidità operativa:	dal 15 all'80% a 26°C
Altitudine operativa:	da 0 a 2000 m
Altitudine in magazzinaggio:	da 0 a 4572 m

Driftsspecifikationer

Elektriske data:	På computerens typemærkat, som sidder uden på computeren, kan du finde oplysninger om de nøjagtige elektriske data.
Driftstemperatur:	5 ° til 35 °C
Opbevarings-temperatur:	-30 ° til 65 °C
Luftfugtighed, driftsmiljø:	15 til 80 % ved 26° C
Driftshøjde:	0-2.000 m
Opbevaringshøjde:	0-4.572 m

Driftsspesifikasjoner

Elektriske spesifikasjoner:	Du finner de nøyaktige elektriske spesifikasjonene på etiketten på utsiden av datamaskinen.
Driftstemperatur:	5 til 35 °C
Lagringstemperatur:	–30 til 65 °C
Driftsfuktighet:	15 til 80 % ved 26 °C
Driftshøyde:	0–2 000 m
Lagringshøyde:	0–4 572 m

Specifikationer

Elektriska märkdata:	Exakta elektriska märkdata finns på etiketten på datorns utsida.
Driftstemperatur:	5 till 35 °C
Förvaringstemperatur:	–30 till 65 °C
Relativ luftfuktighet under drift:	15 till 80 % vid 26°C
Höjd över havet under drift:	0–2 000 m
Höjd över havet under förvaring:	0–4 572 m

Käyttöä koskevat tekniset tiedot

Tehot:	Tietokoneen kuoressa oleva arvokilpi osoittaa tarkat sähkötehot.
Käyttölämpötila:	5° – 35° C
Varastointilämpötila:	–30° – 65 °C
Käyttökosteus:	15 – 80 % 26 °C:ssa
Käyttökorkeus:	0–2 000 m
Varastointikorkeus:	0–4 572 m

Parametry podczas pracy

Parametry elektryczne:	Szczegółowe parametry zasilania znajdują się na tabliczce znamionowej produktu umieszczonej na zewnętrznej części komputera.
Temperatura pracy:	od 5° do 35°C
Temperatura przechowywania:	od –30° do 65°C
Wilgotność podczas pracy:	od 15% do 80% przy 26°C
Wysokość bezwzględna podczas pracy:	0–2 000 m
Wysokość bezwzględna podczas przechowywania:	0–4 572 m

Експлуатаційні характеристики

Електричні параметри:	Щоб визначити точні електричні параметри комп'ютера, перегляньте наклейку на корпусі комп'ютера.
Робоча температура:	від 5° до 35°C
Температура зберігання:	від – 30° до 65°C
Робоча вологість:	від 15 до 80% при 26°C
Експлуатаційна висота над рівнем моря:	від 0 до 2 000 м
Зберігання на висоті:	від 0 до 4 572 м

Эксплуатационные характеристики

Электрические параметры:	Для определения точных электрических характеристик обратитесь к этикетке с рабочими параметрами вашего компьютера, расположенной на внешней стороне корпуса компьютера.
Рабочая температура:	от 5° до 35° C
Температура хранения:	от –30° до 65° C
Рабочая влажность:	от 15 до 80% при 26° C
Рабочая высота над уровнем моря:	0 – 2000 м
Высота хранения над уровнем моря:	0 – 4572 м

Provozní specifikace

Napájení:	Přesné jmenovité hodnoty napájení naleznete na štítku umístěném na vnější straně počítače.
Provozní teplota:	5 až 35 °C
Skladovací teplota:	–30 až 65 °C
Provozní vlhkost:	15 až 80 % při 26 °C
Provozní nadmořská výška:	0 – 2 000 m
Skladovací nadmořská výška:	0 – 4 572 m

Prevádzkové špecifikácie

Napájanie:	Presné menovité hodnoty napájania nájdete na štítku umiestnenom na vonkajšej strane počítača.
Prevádzková teplota:	5 až 35 °C
Skladovacia teplota:	–30 až 65 °C
Prevádzková vlhkosť:	15 až 80 % pri 26 °C
Prevádzková nadmorská výška:	0–2000 m
Skladovacia nadmorská výška:	0–4572 m

Üzemeltetési előírások

Elektromos jellemzők:	A pontos elektromos jellemzők megállapításához tekintse meg a számítógép külsején található besorolási címkét.
Üzemi hőmérséklet:	5–35 °C
Tárolási hőmérséklet:	-30–65 °C
Működtetési páratartalom:	15–80% 26 °C-on
Működtetési magasság:	0–2000 m
Tárolási magasság:	0–4572 m

Specificaţii de operare

Clasificări electrice:	Consultaţi eticheta cu clasificări a computerului dumneavoastră aflată în partea exterioară a computerului pentru a determina clasificarea exactă.
Temperatura de operare:	între 5° şi 35° C
Temperatura de depozitare:	între -30° şi 65° C
Umiditatea de operare:	între 15 şi 80% la 26° C
Altitudinea de operare:	0–2000 m
Altitudinea de depozitare:	0–4.572 m

Работни спецификации

Електрически характеристики:	Вижте етикета с номиналните характеристики на компютъра, който се намира върху външната страна на компютъра, за да определите точните електрически характеристики.
Температура при работа:	5° до 35° С
Температура при съхранение:	–30° до 65° С
Влажност при работа:	15 до 80% при 26° С
Надморска височина при работа:	0–2000 м
Надморска височина при съхранение:	0–4572 м

Προδιαγραφές λειτουργίας

Τιμές τάσης:	Ανατρέξτε στην ετικέτα ονομαστικών τιμών ισχύος του υπολογιστή σας που βρίσκεται στο εξωτερικό μέρος του υπολογιστή, για να καθορίσετε την ακριβή ονομαστική ηλεκτρική ισχύ.
Θερμοκρασία λειτουργίας:	5° έως 35° С
Θερμοκρασία αποθήκευσης:	-30° έως 65° С
Υγρασία λειτουργίας:	15 έως 80% @ 26° С
Υψόμετρο λειτουργίας:	0–2.000 m
Υψόμετρο αποθήκευσης:	0–4.572 m

İşletim Özellikleri

Elektrik değerleri:	Elektrik değerlerini tam olarak belirlemek için bilgisayarınızın dış tarafındaki bilgisayar değerleri etiketine bakın.
İşletim sıcaklığı:	5° – 35°C
Depolama sıcaklığı:	–30° – 65°C
İşletim nemi:	%15 – 80 @ 26°C
İşletim yüksekliği:	0–2.000 m
Depolama yüksekliği:	0–4.572 m

Spesifikasi Operasi

Ukuran listrik:	Lihat label ukuran listrik komputer yang terletak di bagian belakang komputer untuk memastikan ukuran listrik.
Temperatur Operasi:	5° hingga 35° C
Temperatur penyimpanan:	–30° hingga 65° C
Kelembaban operasi:	15 hingga 80% @ 26° C
Ketinggian operasi:	0–2000 m
Ketinggian penyimpanan:	0–4572 m

動作仕様

定格電源：	正確な定格電源については、コンピューターに貼付されている定格ラベルを参照してください。
温度（動作時）：	5〜35℃
温度（非動作時）：	-30〜65℃
動作保証湿度：	15〜80%（26℃ の場合）
標高（動作時）：	0〜2000 m
標高（非動作時）：	0〜4572 m

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מפרט הפעלה

דירוג חשמלי:	עיין בתווית הדירוג של המחשב שלך, הנמצאת על המחשב, כדי לקבוע את הדירוג החשמלי המדויק.
טמפרטורת הפעלה:	5°C עד 35°C
טמפרטורת אחסון:	30°C– עד 65°C
לחות הפעלה:	15 עד 80% ב-26°C
גובה הפעלה:	0 עד 2000 מטר
גובה אחסון:	0 עד 4572 מטר

مواصفات التشغيل

المواصفات الكهربائية المقننة:	راجع تسمية المواصفات المقننة للكمبيوتر الموجودة على السطح الخارجي لجهاز الكمبيوتر لتحديد المواصفات الكهربائية المقننة بدقة.
درجة حرارة التشغيل:	من 5 إلى ٣٥ درجة مئوية
درجة حرارة التخزين:	من -٣٠° إلى ٦٥°م
نسبة رطوبة التشغيل:	من ١٥ إلى ٨٠٪ عند درجة حرارة ٢٦°م
مستوى ارتفاع التشغيل:	٢٠٠٠-٠ م
مستوى ارتفاع التخزين:	٤٥٧٢-٠ م

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作業規格

電氣額定值：	請參考電腦外部的電腦額定值標籤，以得知正確的電氣額定值。
作業溫度：	攝氏 5 度到 35 度
儲存溫度：	攝氏 –30 度到 65 度
作業溼度：	攝氏 26 度時，15% 到 80%
作業高度：	0 到 2000 公尺
儲存高度：	0 到 4572 公尺

操作规范

额定电源：	请参考位于电脑外壳上的额定电源标签，以便确定精确的额定电源数据。
操作温度：	5° C 到 35° C
储存温度：	–30° C 到 65° C
操作湿度：	26° C 时为 15% 到 80%
操作海拔高度：	0–2000 米
储存海拔高度：	0–4572 米

작동 사양

전기 정격:	정확한 전기 정격을 확인하려면 사용 중인 컴퓨터 바깥쪽에 있는 전기 정격 레이블을 참조하십시오.
작동 온도:	5 ° ~ 35 ° C
보관 온도:	–30 ° ~ 65 ° C
작동 습도:	26 ° C 에서 15 ~ 80%
작동 고도:	0 ~ 2000 m
보관 고도:	0 ~ 4572 m

Експлоатационни характеристики

Разчетни електрически параметри	Направете справка с етикета за параметрите на вашия компютър, разположен от външната страна на компютъра, за да определите точните електрически параметри.
Работна температура:	5° до 35° C
Температура на съхранение:	-30° до 65° C
Работна влажност:	15 до 80% @ 26° C
Работна надм. височина:	0–2.000 м
Надм. височина на съхранение:	0–4.572 м

Radne specifikacije

Podaci o napajanju:	Provjerite oznaku s tehničkim podacima na vanjskoj strani vašeg računala kako biste odredili točne podatke o napajanju.
Radna temperatura:	5° do 35° C
Temperatura okoline:	-30° do 65° C
Prihvatljiva vlažnost zraka:	15 do 80% pri 26° C
Radna nadmorska visina:	0–2.000 m
Nadmorska visina za pohranjivanje:	0–4.572 m

Kasutusandmed

Elektriandmed	Täpsed elektriandmed leiate oma arvuti korpusel asuvalt elektriandmete sildilt.
Kasutustem-peratuur	5 kuni 35 °C
Hoiustamistem-peratuur	-30 kuni 65 °C
Kasutusniiskus	15 kuni 80% temperatuuril 26 °C
Kasutuskõrgus	0–2.000 m
Hoiustamiskõrgus	0–4.572 m

Ekspluatācijas specifikācijas

Elektriskie parametri:	Lai noteiktu precīzus datora parametrus, skatiet sava datora parametru plāksnīti, kas novietota datora ārpusē.
Ekspluatācijas temperatūra:	5° līdz 35° C
Uzglabāšanas temperatūra:	-30° līdz 35° C
Ekspluatācijas mitrums:	15 līdz 80% @ 26° C
Ekspluatācijas augstums:	0–2.000 m
Uzglabāšanas augstums:	0–4.572 m

Eksploatavimo specifikacijos

Vardiniai elektros parametrai:	Tikslius vardinius elektros parametrus žr. savo kompiuterio vardinių parametrų etiketėje, kuri yra jo išorėje.
Eksploatavimo temperatūra:	nuo 5° iki 35° C
Laikymo temperatūra:	nuo -30° iki 65° C
Eksploatavimo drėgmė:	nuo 15 iki 80 % esant 26° C
Eksploatavimo aukštis:	0–2.000 m
Sandėliavimo aukštis:	0–4.572 m

Specifikacije radnih uslova

Nominalne vrednosti napona:	Pogledajte oznaku za nominalnu vrednost napona koja se nalazi na kućištu računara da biste utvrdili tačan nominalni napon.
Radna temperatura:	5° do 35° C
Temperatura za skladištenje:	–30° do 65° C
Operativna vlažnost:	15 do 80% na 26° C
Operativna visina:	0–2.000 m
Visina za skladištenje:	0–4.572 m

Tehnični podatki

Podatki o električnih lastnostih:	Nazivne vrednosti računalnika poiščite na nalepki na ohišju računalnika in preverite električne lastnosti.
Temperatura pri delovanju:	5 do 35 °C
Temperatura skladiščenja:	–30 do 65 °C
Vlažnost zraka pri delovanju:	15 do 80 % pri 26 °C
Nadmorska višina pri delovanju:	0–2.000 m
Nadmorska višina pri skladiščenju:	0–4.572 m

Пайдалану сипаттамалары

Электр параметрлері:	Электр сипаттамаларын дәл анықтау үшін компьютер корпусының сыртқы жағында орналасқан компьютердің жұмыс параметрлері бар жапсырманы қараңыз.
Жұмыс температурасы:	5° - 35° C
Сақтау температурасы:	–30° - 65° C
Жұмыс ылғалдылығы:	26° C кезінде 15 - 80%
Теңіз деңгейінен жұмыс биіктігі:	0–2000 м
Теңіз деңгейінен сақтау биіктігі:	0–4572 м

Printed in

Regulatory, Safety, and Environmental Notices

User Guide

About This Guide

This guide provides regulatory, safety and environmental information that is compliant with U.S., Canadian, and international regulations for notebook computers, desktops, thin clients and personal workstations.

WARNING! Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

NOTE: Text set off in this manner provides important supplemental information.

Table of contents

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1 Regulatory notices for notebook computers

This chapter provides country- and region-specific non-wireless and wireless regulatory notices and compliance information for the computer product. Some of these notices may not apply to your product.

One or more integrated wireless devices may be installed. In some environments, the use of wireless devices may be restricted. Such restrictions may apply onboard airplanes, in hospitals, near explosives, in hazardous locations, and so on. If you are uncertain of the policy that applies to the use of this product, ask for authorization to use it before you turn it on.

Accessing regulatory labels

Regulatory labels, which provide country or regional regulatory information (for example, FCC ID), may be physically located on the bottom of the computer, inside the battery bay (select models only), under the removable service door (select models only), on the back of the display, or on the wireless or modem module.

Some products may also provide electronic regulatory labels (e-labels) that can be accessed through the system BIOS.

NOTE: Electronic labels are not available on all products.

NOTE: Devices not for sale or use in the United States may not contain a FCC ID.

To view electronic regulatory labels:

1. Turn on or restart the computer, and then press esc while the "Press the ESC key for Startup Menu" message is displayed at the bottom of the screen.

2. Press f10 to enter Computer Setup.

3. Use a pointing device or the arrow keys to select **Advanced**, select **Electronic Labels**, and then press enter.

4. To view an electronic label, use a pointing device or the arrow keys to select one of the listed items, and then press **OK**.

   NOTE: The list of available electronic label items varies depending on the computer model and installed devices.

5. To exit Computer Setup menus without saving your changes:

   Select the **Exit** icon in the lower-right corner of the screen, and then follow the on-screen instructions.

   – or –

   Use the arrow keys to select **Main**, select **Ignore Changes and Exit**, and then press enter.

Federal Communications Commission notice

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 instructions, may cause harmful interference to 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, the user is 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 receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

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

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

For questions regarding this product, write to:

HP Inc.

1501 Page Mill Road

Palo Alto, CA 94304

or call HP at 650-857-1501.

To identify this product, refer to the part, series, or model number found on the product.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by HP may void the user's authority to operate the equipment.

Cables

To maintain compliance with FCC Rules and Regulations, connections to this device must be made with shielded cables having metallic RFI/EMI connector hoods.

Products with wireless LAN devices or HP Mobile Broadband Modules

This device must not be co-located or operating in conjunction with any other antenna or transmitter.

⚠ **WARNING!**   **Exposure to Radio Frequency Radiation** The radiated output power of this device is below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact is minimized during normal operation of tablet PCs and notebook computers.

During normal operation of tablet PCs and notebook computers with displays equal to or less than 30.5 cm (12 inches): To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennas should not be less than 2.5 cm (1 inch). To identify the location of the wireless antennas, refer to the computer user guides included with your computer.

During normal operation of notebook computers with displays greater than 30.5 cm (12 inches): To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennas should not be less than 20 cm (8 inches), including when the computer display is closed. To identify the location of the wireless antennas, refer to the computer user guides included with your computer.

Brazil notice

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

Este equipamento atende aos limites de Taxa de Absorção Específica referente à exposição a campos elétricos, magnéticos e eletromagnéticos de radiofreqüências adotados pela ANATEL.

Ao operar o dispositivo a uma distância muito próxima do seu corpo, utilize um acessório de armazenamento não metálico para posicionar o dispositivo a uma distância mínima de 1,5 cm do corpo.

Canada notices

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations, CAN ICES-3(B)/NMB-3(B). If this device has WLAN or Bluetooth capability, the device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

⚠ **WARNING!** Exposure to Radio Frequency Radiation: The radiated output power of this device is below the Industry Canada radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact is minimized during normal operation.

During normal operation of tablet PCs and notebook computers with displays equal to or less than 30.5 cm (12 inches): To avoid the possibility of exceeding the Industry Canada radio frequency exposure limits, human proximity to the antennas should not be less than 2.5 cm (1 inch). To identify the location of the wireless antennas, refer to the computer user guides included with your computer.

During normal operation of notebook computers with displays greater than 30.5 cm (12 inches): To avoid the possibility of exceeding the Industry Canada radio frequency exposure limits, human proximity to the antennas should not be less than 20 cm (8 inches), including when the computer display is closed. To identify the location of the wireless antennas, refer to the computer user guides included with your computer.

⚠ **CAUTION:** When using IEEE 802.11a wireless LAN, this product is restricted to indoor use, due to its operation in the 5.15- to 5.25-GHz frequency range. Industry Canada requires this product to be used indoors for the frequency range of 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High-power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65- to 5.85-GHz bands. These radar stations can cause interference with and/or damage to this device.

The antennas for this device are not replaceable. Any attempt at user access will damage your computer.

European Union regulatory notices

Declaration of Conformity

$C\epsilon$

Products bearing the CE marking comply with one or more of the following EU Directives as may be applicable:

R&TTE Directive 1999/5/EC (replaced in 2017 by RED 2014/53/EU) ; Low Voltage Directive 2006/95/EC (replaced in April 2016 by 2014/35/EU); EMC Directive 2004/108/EC (replaced in April 2016 by 2014/30/EU); Ecodesign Directive 2009/125/EC; RoHS Directive 2011/65/EU

Compliance with these directives is assessed using applicable European Harmonised Standards.

The full Declaration of Conformity can be found at the following web site: http://www.hp.eu/certificates (Search with the product model name or its Regulatory Model Number (RMN), which may be found on the regulatory label.)

The point of contact for regulatory matters is HP Deutschland GmbH, HQ-TRE, 71025, Boeblingen, Germany.

Products with radio functionality (EMF)

This product incorporates a radio transmitting and receiving device. For notebook computers in normal use, a separation distance of 20 cm ensures that radio frequency exposure levels comply with EU requirements. Products designed to be operated at closer proximities, such as tablet computers, comply with applicable EU requirements in typical operating positions. Products can be operated without maintaining a separation distance unless otherwise indicated in instructions specific to the product.

Restrictions for products with radio functionality

When operating in the frequency band 5150 to 5350 MHz, this product is restricted to indoor use only.

European telephone network declaration (Modem/Fax)

The product herewith complies with the requirements of the applicable Directive and carries the CE marking accordingly. However, due to differences between the individual PSTNs provided in different countries/ regions, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point. In the event of problems, you should contact your equipment supplier in the first instance.

Ergonomics notice

Germany (English text)

When a mobile computer is used at the office workstation for display work tasks where the Visual Display Unit (VDU) Directive 90/270/EEC is applicable, an adequate external keyboard is required. Depending on the application and task, an adequate external monitor may also be necessary to attain working conditions comparable to a workstation setup.

Ref: EK1-ITB 2000 (voluntary GS certification)

Mobile computers bearing the "GS" approval mark meet the applicable ergonomic requirements. Without external keyboards, they are suitable only for short-time use of VDU tasks.

During mobile use with disadvantageous illumination conditions (e.g. direct sun light) reflections may occur, which result in reduced readability.

Germany (Deutscher text)

Wird ein mobiler Computer für Bildschirmarbeitsaufgaben verwendet, wo die Richtlinie 90/270/EEG (Bildschirmarbeitsrichtlinie) anzuwenden ist, wird eine geeignete externe Tastatur notwendig. Abhängig von der Anwendung und der Aufgabe kann ein geeigneter externer Monitor erforderlich sein, um vergleichbare Arbeitsbedingungen zu einem stationären Arbeitsplatz zu erreichen.

Ref: EK1-ITB 2000 (freiwillige GS Zertifizierung)

Mobile Computer, welche das "GS" Zeichen tragen, entsprechen den ergonomischen Anforderungen und sind nur für kurzzeitige Benutzung von Bildschirmarbeitsaufgaben geeignet.

Bei mobiler Nutzung mit ungünstigen Lichtverhältnissen (z.B. direkte Sonneneinstrahlung) kann es zu Reflexionen und damit zu Einschränkungen der Lesbarkeit der dargestellten Zeichen kommen.

Australia and New Zealand notice

This equipment incorporates a radio transmitting and receiving device. In normal use, a separation distance of 20 cm ensures that radio frequency exposure levels comply with the Australian and New Zealand Standards.

China WWAN notice

重要信息：用户自己进行操作系统安全升级或更新，要执行授权的操作系统进行升级或更新。
当不能保证操作系统安全的升级或更新时，可能导致服务安全问题。

Japan notice

この装置は，クラスB情報技術装置です。この装置は，家庭環境で使用
することを目的としていますが，この装置がラジオやテレビジョン受信機に
近接して使用されると，受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。　　　　VCCI-B

5 GHz帯を使用する特定無線設備（802.11a相当）は屋内使用に限られて
います。この機器を屋外で使用することは電波法で禁じられています。

無線機能搭載製品での電波利用に関する安全性の確保

- タブレット PC または 12 インチまでのディスプレイを搭載したノートブック コンピューターを使用
するときは、通常、人体から製品のアンテナまでの距離を 2.5 cm 以上確保してください

- 12 インチを超えるディスプレイを搭載したノートブック コンピューターを使用するときは、通常、
人体から製品のアンテナまでは 20 cm を超える距離を確保してください。

Wireless LAN, Wireless WAN, and Bluetooth® certification markings

この機器は、技術基準適合証明または工事設計認証を受けた無線設備を搭載しています
This product contains certified radio equipment.

Mexico notice

Declaración para México

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada. The regulatory model number for this product is on the regulatory label.

If your product is provided with wireless accessories such as a keyboard or mouse and you need to identify the model of the accessory, refer to the label included on that accessory. The regulatory model number for this product is on the regulatory label.

Russia regulatory notices

Производитель и дата производства

EAC

HP Inc.

Адрес: 1501 Page Mill Road, Palo Alto, California 94304, U.S.

Дата производства зашифрована в 10-значном серийном номере, расположенном на наклейке со служебной информацией изделия.

4-я, 5-я и 6-я цифры обозначают год и неделю производства. 4-я цифра обозначает год, например «3» обозначает, что изделие произведено в «2013» году. 5-я

и 6-я цифры обозначают номер недели в году производства, например «12» обозначает «12-ю» неделю.

Өндіруші және өндіру мерзімі

HP Inc.

Мекенжайы: 1501 Page Mill Road, Palo Alto, California 94304, U.S.

Өнімнің жасалу мерзімін табу үшін өнімнің қызмет көрсету жапсырмасындағы 10 таңбадан тұратын сериялық нөмірін қараңыз. 4-ші, 5-ші және 6-шы сандар

өнімнің жасалған жылы мен аптасын көрсетеді. 4-ші сан жылын көрсетеді, мысалы «3» саны «2013» дегенді білдіреді. 5-ші және 6-шы сандары берілген

жылдың қай аптасында жасалғанын көрсетеді, мысалы, «12» саны «12-ші» апта дегенді білдіреді.

Местные представители:

Россия: ЗАО "Хьюлетт-Паккард А.О.", Российская Федерация, 125171, г. Москва, Ленинградское шоссе, 16А, стр.3, Телефон/факс: +7 495 797 35 00

Казахстан: Филиал компании "ЭйчПи Глобал Трэйдинг Би.Ви.", Республика Казахстан, 050040, г. Алматы, Бостандыкский район, проспект Аль-Фараби, 77/7,

Телефон/факс:

+ 7 727 355 35 52

Жергілікті өкілдіктері:

Ресей: ЗАО "Хьюлетт-Паккард А.О.", Ресей Федерациясы, 125171, Мәскеу, Ленинград

шоссесі, 16А блок 3, Телефон/факс: +7 495 797 35 00

Қазақстан: "ЭйчПи Глобал Трэйдинг Би.Ви." компаниясынын Қазақстандағы филиалы, Қазақстан Республикасы, 050040, Алматы к., Бостандык ауданы, Әл-

Фараби даңғылы,

77/7, Телефон/факс: +7 727 355 35 52

Singapore wireless notice

Turn off any WWAN devices while you are onboard aircraft. The use of these devices onboard aircraft is illegal, may be dangerous to the operation of the aircraft, and may disrupt the cellular network. Failure to observe this instruction may lead to suspension or denial of cellular services to the offender, or legal action, or both.

Users are reminded to restrict the use of radio equipment in fuel depots, chemical plants, and where blasting operations are in progress.

As with other mobile radio transmitting equipment, users are advised that for satisfactory operation of the equipment and for the safety of personnel, no part of the human body should be allowed to come too close to the antennas during operation of the equipment.

This device has been designed to comply with applicable requirements for exposure to radio waves, based on scientific guidelines that include margins intended to assure the safety of all people, regardless of health and age. These radio wave exposure guidelines employ a unit of measurement known as the specific absorption rate (SAR). Tests for SAR are conducted using standardized methods, with the phone transmitting at its highest certified power level in all used frequency bands. The SAR data information is based on CENELEC's standards EN50360 and EN50361, which use the limit of 2 watts per kilogram, averaged over 10 grams of tissue.

South Korea notices

B 급 기기 (가정용 방송통신기자재)

이 기기는 가정용(B 급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

무선적용제품

해당 무선설비가 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없음 (무선모듈 제품이 설치되어 있는 경우).

몸 가까이에서 장치를 작동할 경우 , 비금속 저장 액세서리를 사용하여 장치와 몸 사이에 2.5cm 이상의 거리를 유지하십시오 .

Thailand WWAN wireless notice

This telecom equipment has complied with NTC regulations.

เครื่องโทรคมนาคมและอุปกรณ์นี้ มีความสอดคล้องตามข้อกำหนดของ กทช.

Taiwan NCC notices

Wireless LAN 802.11a devices

在5.25G ~5.35G頻帶內操作之無線
資訊傳輸設備僅適於室內使用

Wireless LAN 802.11 devices/Bluetooth devices/Short range devices

低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、
商號或使用者均不得擅自變更頻率、加大功率或變更原
設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通
信；經發現有干擾現象時，應立即停用，並改善至無干
擾時方得繼續使用。
前項合法通信，指依電信規定作業之無線電信。低功率
射頻電機須忍受合法通信或工業、科學及醫療用電波輻
射性電機設備之干擾。

Airline travel notice

Use of electronic equipment onboard commercial aircraft is at the discretion of the airline.

User-replaceable battery notices

When a battery has reached the end of its useful life, do not dispose of the battery in general household waste. Follow the local laws and regulations in your area for computer battery disposal.

HP encourages customers to recycle used electronic hardware, HP original print cartridges, and rechargeable batteries. For more information about recycling programs, refer to the HP Web site at http://www.hp.com/recycle.

For information about removing a user-replaceable battery, refer to the user guide included with the product.

Factory-sealed battery notices

The battery[ies] in this product cannot be easily replaced by users themselves. Removing or replacing the battery could affect your warranty coverage. If a battery is no longer holding a charge, contact support.

When a battery has reached the end of its useful life, do not dispose of the battery in general household waste. Follow the local laws and regulations in your area for battery disposal.

Laser compliance

⚠ **WARNING!** Use of controls or adjustments, or performance of procedures other than those specified in the laser product installation guide, may result in hazardous radiation exposure. To reduce the risk of exposure to hazardous radiation:

- Do not try to open the module enclosure. There are no user-serviceable components inside.

- Do not operate controls, make adjustments, or perform procedures to the laser device other than those specified in the laser product installation guide.

- Allow only authorized service providers to repair the unit.

This product may be provided with an optical storage device (for example, a CD or DVD drive) and/or a fiber optic transceiver. Each of these devices that contain a laser is classified as a Class 1 Laser Product in accordance with IEC/EN 60825-1 and meets the requirements for safety of that standard.

Each laser product complies with US FDA regulations of 21 CFR 1040.10 and 1040.11 or complies with those regulations except for deviations pursuant to Laser Notice No. 50 dated June 24, 2007.

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CLASS 1 LASER PRODUCT
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Modem notices

WARNING!   To reduce the risk of fire, electric shock, and injury to persons when using this device, always follow basic safety precautions, including the following:

- Do not use this product near water—for example, near a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool.

- Avoid using this product during an electrical storm. There is a remote risk of electric shock from lightning.

- Do not use this product to report a gas leak while in the vicinity of the leak.

- Always disconnect the modem cable before opening the equipment enclosure or touching an uninsulated modem cable, jack, or internal component.

- If this product was not provided with a telephone line cord, use only No. 26 AWG or larger telecommunication line cord.

- Do not plug a modem or telephone cable into the RJ-45 (network) jack.

SAVE THESE INSTRUCTIONS.

Telecommunications device approvals

The telecommunications device in the computer is approved for connection to the telephone network in the countries and regions whose approval markings are indicated on the product label located on the bottom of the computer or on the modem.

Refer to the user guide included with the product to ensure that the product is configured for the country or region in which the product is located. Selecting a country or region other than the one in which it is located may cause the modem to be configured in a way that violates the telecommunication regulations/laws of that country or region. In addition, the modem may not function properly if the correct country or region selection is not made. If, when you select a country or region, a message appears that states that the country or region is not supported, this means that the modem has not been approved for use in this country or region and thus should not be used.

U.S. modem statements

This equipment complies with Part 68 of the FCC Rules and the requirements adopted by the ACTA. On the bottom of the computer or on the modem is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. Provide this information to the telephone company if you are requested to do so.

Applicable certification jack USOC = RJ11C. A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all locations, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

If this HP equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But, if advance notice isn't practical, the telephone company will notify you as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes to its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted telephone service.

If trouble is experienced with this equipment, call technical support. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved. You should perform repairs only to the equipment specifically discussed in the "Troubleshooting" section of the user guide, if one is provided.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission, or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure that the installation of this HP equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including a fax machine, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page, or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or other individual sending the message, and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges).

In order to program this information into your fax machine, you should complete the steps outlined in the faxing software instructions.

U.S. modem declarations

Refer to the following modem vendor declarations for the modem device installed in your computer:

agere systems

Brad Grande
Technical Manager

1110 American Parkway NE
Lehigh Valley Central Campus
Allentown, PA 18109
Phone: 610-712-7853
bgrande@agere.com

Supplier's Declaration of Conformity

Reference Number: Delphi D40 (revision AM5)
Place of Issue: Allentown, PA, USA
Date of Issue: 30th November 2006

Agere Systems Inc. at 1110 American Parkway NE, Lehigh Valley Central Campus, Allentown, PA 18109
in the United States of America, hereby certifies that the Modem, bearing labelling identification
number US: AGSMD01BDELPHI complies with the Federal Communications Commission's
("FCC") Rules and Regulations 47 CFR Part 68, and the Administrative Council on Terminal
Attachments ("ACTA")-adopted technical criteria TIA/EIA/IS-968, 968-A, 968-A-1, 968-A-2 and
968-A-3 Telecommunications – Telephone Terminal Equipment –Technical Requirements for
Connection of Terminal Equipment To the Telephone Network.

Brad Grand
Technical Manager

Canada modem statements

This equipment meets the applicable Industry Canada technical specifications.

The Ringer Equivalence Number, REN, is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices, subject only to the requirement that the sum of the RENs of all devices does not exceed 5. The REN for this terminal equipment is 1.0.

Japan modem statements

If the computer does not have the Japanese certification mark on the bottom of the computer, refer to the appropriate certification marking below.

The Japanese certification mark for the V.92 56K Data/Fax Modem is below:

New Zealand modem statements

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment is not capable, under all operating conditions, of correct operation at the higher speeds for which it is designed. Telecom will accept no responsibility should difficulties arise in such circumstances.

If this device is equipped with pulse dialing, note that there is no guarantee that Telecom lines will always continue to support pulse dialing.

Use of pulse dialing, when this equipment is connected to the same line as other equipment, may give rise to bell tinkle or noise and may also cause a false answer condition. Should such problems occur, the user should *not* contact the Telecom Faults Service.

Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom's Specifications:

a. There shall be no more than 10 call attempts to the same number within any 30-minute period for any single manual call initiation.

b. The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next attempt.

c. Where automatic calls are made to different numbers, the equipment shall be set to go on-hook for a period of not less than 5 seconds between the end of one attempt and the beginning of the next attempt.

d. The equipment shall be set to ensure that calls are answered between 3 and 30 seconds of receipt of ringing (So set between 2 and 10).

Voice support

All persons using this device for recording telephone conversations shall comply with New Zealand law. This requires that at least one party to the conversation is aware that it is being recorded. In addition, the Principles enumerated in the Privacy Act 1993 shall be complied with in respect to the nature of the personal information collected, the purpose for its collection, how it is to be used, and what is disclosed to any other party.

This equipment shall not be set to make automatic calls to the Telecom '111' Emergency Service.

Power cord notice

If you were not provided with a power cord for the computer or for an external power accessory intended for use with the computer, you should purchase a power cord that is approved for use in your country or region.

The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product. In addition, the diameter of the wire must be a minimum of **0.75 mm²/** 18AWG, and the length of the cord must be between **1.0 m** (3.2 ft) and **2 m** (6.56 ft). If you have questions about the type of power cord to use, contact your authorized service provider.

A power cord should be routed so that it is not likely to be walked on or pinched by items placed upon it or against it. Particular attention should be paid to the plug, electrical outlet, and the point where the cord exits from the product.

Japan power cord notice

製品には、同梱された電源コードをお使い下さい。
同梱された電源コードは、他の製品では使用出来ません。

DC plug of external HP power supply

Macrovision Corporation 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.

2   Regulatory notices for desktops, thin clients and personal workstations

Modem notices

⚠ **WARNING!**   To reduce the risk of fire, electric shock, and injury to persons when using this device, always follow basic safety precautions, including the following:

- Do not use this product near water—for example, near a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool.

- Avoid using this product during an electrical storm. There is a remote risk of electric shock from lightning.

- Do not use this product to report a gas leak while in the vicinity of the leak.

- Always disconnect the modem cable before opening the equipment enclosure or touching an uninsulated modem cable, jack, or internal component.

- If this product was not provided with a telephone line cord, use only No. 26 AWG or larger telecommunication line cord.

- Do not plug a modem or telephone cable into the RJ-45 (Ethernet network) jack.

SAVE THESE INSTRUCTIONS.

Telecommunications device approvals

The telecommunications device in the computer is approved for connection to the telephone network in the countries and regions whose approval markings are indicated on the product label located on the bottom of the computer or on the modem.

Refer to the user guide included with the product to ensure that the product is configured for the country or region in which the product is located. Selecting a country or region other than the one in which it is located may cause the modem to be configured in a way that violates the telecommunication regulations/laws of that country or region. In addition, the modem may not function properly if the correct country or region selection is not made. If, when you select a country or region, a message appears that states that the country or region is not supported, this means that the modem has not been approved for use in this country or region and thus should not be used.

U.S. modem statements

This equipment complies with Part 68 of the FCC Rules and the requirements adopted by the ACTA. On the bottom of the computer or on the modem is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. Provide this information to the telephone company if you are requested to do so.

Applicable certification jack USOC = RJ11C. A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all locations, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

If this HP equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But, if advance notice isn't practical, the telephone company will notify you as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes to its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted telephone service.

If trouble is experienced with this equipment, call technical support. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved. You should perform repairs only to the equipment specifically discussed in the "Troubleshooting" section of the user guide, if one is provided.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission, or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure that the installation of this HP equipment does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device, including a fax machine, to send any message unless such message clearly contains in a margin at the top or bottom of each transmitted page, or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or other individual sending the message, and the telephone number of the sending machine or such business, other entity, or individual. (The telephone number provided may not be a 900 number or any other number for which charges exceed local or long-distance transmission charges).

In order to program this information into your fax machine, you should complete the steps outlined in the faxing software instructions.

Canadian modem statements

This equipment meets the applicable Industry Canada technical specifications.

The Ringer Equivalence Number, REN, is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices, subject only to the requirement that the sum of the RENs of all devices does not exceed 5. The REN for this terminal equipment is 1.0.

Japanese modem statements

If the computer does not have the Japanese certification mark on the bottom of the computer, refer to the appropriate certification marking below.

The Japanese certification mark for the LSI Corporation PCI-SV92EX Soft modem is below:

A070107003 T

New Zealand modem statements

The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

This equipment is not capable, under all operating conditions, of correct operation at the higher speeds for which it is designed. Telecom will accept no responsibility should difficulties arise in such circumstances.

If this device is equipped with pulse dialing, note that there is no guarantee that Telecom lines will always continue to support pulse dialing.

Use of pulse dialing, when this equipment is connected to the same line as other equipment, may give rise to bell tinkle or noise and may also cause a false answer condition. Should such problems occur, the user should *not* contact the Telecom Faults Service.

Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set to operate within the following limits for compliance with Telecom's Specifications:

a. There shall be no more than 10 call attempts to the same number within any 30-minute period for any single manual call initiation.

b. The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next attempt.

c. Where automatic calls are made to different numbers, the equipment shall be set to go on-hook for a period of not less than 5 seconds between the end of one attempt and the beginning of the next attempt.

d. The equipment shall be set to ensure that calls are answered between 3 and 30 seconds of receipt of ringing (So set between 2 and 10).

Voice support

All persons using this device for recording telephone conversations shall comply with New Zealand law. This requires that at least one party to the conversation is aware that it is being recorded. In addition, the Principles enumerated in the Privacy Act 1993 shall be complied with in respect to the nature of the personal information collected, the purpose for its collection, how it is to be used, and what is disclosed to any other party.

This equipment shall not be set to make automatic calls to the Telecom '111' Emergency Service.

Electromagnetic compatibility notices

This guide provides country- and region-specific nonwireless and wireless regulatory notices and compliance information for the computer product. Some of these notices may not apply to your product.

One or more integrated wireless devices may be installed. In some environments, the use of wireless devices may be restricted. Such restrictions may apply onboard airplanes, in hospitals, near explosives, in hazardous

locations, and so on. If you are uncertain of the policy that applies to the use of this product, ask for authorization to use it before you turn it on.

Federal Communications Commission notice

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 instructions, may cause harmful interference to 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, the user is 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 or television technician for help.

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

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesired operation.

For questions regarding this product, write to:

HP Inc.

1501 Page Mill Road

Palo Alto, CA 94304

or call HP at 650-857-1501.

To identify this product, refer to the part, series, or model number found on the product.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by HP Inc. may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods in order to maintain compliance with FCC Rules and Regulations.

Products with wireless LAN devices

This product may be equipped with a wireless LAN device. This device must not be co-located or operating in conjunction with any other antenna or transmitter.

WARNING! **Exposure to Radio Frequency Radiation** The radiated output power of this device is below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact is minimized during normal operation.

During normal operation: To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennae should not be less than 20 cm (8 inches). To identify the location of the wireless antennae, refer to the documentation included with the computer.

Australia telecom statement

The computer must be connected to the Telecommunication Network through a line cord that meets the requirements of AS/CA S008.

WARNING! Modems without integral RJ11 connector that are shipped with this computer should not be installed in any other device.

This equipment incorporates a radio transmitting and receiving device. In normal use, a separation distance of 20 cm ensures that radio frequency exposure levels comply with the Australian and New Zealand Standards.

Brazil notice

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

⚠ **CAUTION:** A alimentação de energia é predefinida para 220/230Vv. Se você possuir tomada elétrica de 110/115Vv, por favor, altere a chave na parte traseira do seu computador para a tensão correta.

Canadian notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations, CAN ICES-3(B)/NMB-3(B). If this device has WLAN or Bluetooth capability, this device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

⚠ **WARNING! Exposure to Radio Frequency Radiation** The radiated output power of this device is below the Industry Canada radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact is minimized during normal operation.

During normal operation: To avoid the possibility of exceeding the Industry Canada radio frequency exposure limits, human proximity to the antennae should not be less than 20 cm (8 inches). To identify the location of the wireless antennae, refer to the documentation included with the computer.

⚠ **CAUTION:** When using IEEE 802.11a wireless LAN, this product is restricted to indoor use, due to its operation in the 5.15- to 5.25-GHz frequency range. Industry Canada requires this product to be used indoors for the frequency range of 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel mobile satellite systems. High-power radar is allocated as the primary user of the 5.25- to 5.35-GHz and 5.65- to 5.85-GHz bands. These radar stations can cause interference with and/or damage to this device.

The antenna for this device is not replaceable. Any attempt at user modification may damage your computer.

European Union regulatory notices

Declaration of Conformity

CE

Products bearing the CE marking comply with one or more of the following EU Directives as may be applicable:

R&TTE Directive 1999/5/EC (replaced in 2017 by RED 2014/53/EU) ; Low Voltage Directive 2006/95/EC (replaced in April 2016 by 2014/35/EU); EMC Directive 2004/108/EC (replaced in April 2016 by 2014/30/EU); Ecodesign Directive 2009/125/EC; RoHS Directive 2011/65/EU

Compliance with these directives is assessed using applicable European Harmonised Standards.

The full Declaration of Conformity can be found at the following web site: http://www.hp.eu/certificates (Search with the product model name or its Regulatory Model Number (RMN), which may be found on the regulatory label.)

The point of contact for regulatory matters is HP Deutschland GmbH, HQ-TRE, 71025, Boeblingen, Germany.

Products with radio functionality (EMF)

This product may incorporate a radio transmitting and receiving device. For desktop computers in normal use, a separation distance of 20 cm ensures that radio frequency exposure levels comply with EU requirements.

Restrictions for products with radio functionality

When operating in the frequency band 5150 to 5350 MHz, this product is restricted to indoor use only.

European telephone network declaration (Modem/Fax)

The product herewith complies with the requirements of the applicable Directive and carries the CE marking accordingly. However, due to differences between the individual PSTNs provided in different countries/regions, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point. In the event of problems, you should contact your equipment supplier in the first instance.

This equipment has been designed to work with analogue DTMF Networks. This equipment may have internetworking difficulties in PSTN networks that only support Pulse Dialing. Please consult with your network operator for further assistance.

Ergonomics notice

Germany (English text)

A computer system comprising HP brand products meets the applicable ergonomic requirements if all affected constituent products bear the "GS" approval mark, for example Business Desktop PC, keyboard, PC-mouse and monitor.

Germany (Deutscher text)

Ein aus HP Produkten bestehendes Computersystem erfüllt die anwendbaren ergonomischen Anforderungen, wenn alle verwendeten Komponenten das „GS" Zeichen tragen, wie z. B. Business Desktop PC, Tastatur, PC-Maus und Bildschirm.

Japan notice

この装置は，クラスB情報技術装置です。この装置は，家庭環境で使用することを目的としていますが，この装置がラジオやテレビジョン受信機に近接して使用されると，受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。　　　　VCCI-B

5 GHz帯を使用する特定無線設備（802.11a相当）は屋内使用に限られています。この機器を屋外で使用することは電波法で禁じられています。

Wireless LAN and Bluetooth certification markings

この機器は、技術基準適合証明または工事設計認証を受けた無線設備を搭載しています
If this device contains radio equipment, it is certified radio equipment.

Mexico notice

Declaración para México

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

If your product is provided with wireless accessories such as a keyboard or mouse and you need to identify the model of the accessory, refer to the label included on that accessory.

Russia regulatory notices

Производитель и дата производства

EAC

HP Inc.

Адрес: 1501 Page Mill Road, Palo Alto, California 94304, U.S.

Дата производства зашифрована в 10-значном серийном номере, расположенном на наклейке со служебной информацией изделия.

4-я, 5-я и 6-я цифры обозначают год и неделю производства. 4-я цифра обозначает год, например «3» обозначает, что изделие произведено в «2013» году. 5-я

и 6-я цифры обозначают номер недели в году производства, например «12» обозначает «12-ю» неделю.

Өндіруші және өндіру мерзімі

HP Inc.

Мекенжайы: 1501 Page Mill Road, Palo Alto, California 94304, U.S.

Өнімнің жасалу мерзімін табу үшін өнімнің қызмет көрсету жапсырмасындағы 10 таңбадан тұратын сериялық нөмірін қараңыз. 4-ші, 5-ші және 6-шы сандар

өнімнің жасалған жылы мен аптасын көрсетеді. 4-ші сан жылын көрсетеді, мысалы «3» саны «2013» дегенді білдіреді. 5-ші және 6-шы сандары берілген

жылдың қай аптасында жасалғанын көрсетеді, мысалы, «12» саны «12-ші» апта дегенді білдіреді.

Местные представители:

Россия: ЗАО "Хьюлетт-Паккард А.О.", Российская Федерация, 125171, г. Москва, Ленинградское шоссе, 16А, стр.3, Телефон/факс: +7 495 797 35 00

Казахстан: Филиал компании "ЭйчПи Глобал Трэйдинг Би.Ви.", Республика Казахстан, 050040, г. Алматы, Бостандыкский район, проспект Аль-Фараби, 77/7,

Телефон/факс:

+ 7 727 355 35 52

Жергілікті өкілдіктері:

Ресей: ЗАО "Хьюлетт-Паккард А.О.", Ресей Федерациясы, 125171, Мәскеу, Ленинград

шоссесі, 16А блок 3, Телефон/факс: +7 495 797 35 00

Қазақстан: "ЭйчПи Глобал Трэйдинг Би.Ви." компаниясынын Қазақстандағы филиалы, Қазақстан Республикасы, 050040, Алматы к., Бостандык ауданы, Әл-

Фараби даңғылы,

77/7, Телефон/факс: +7 727 355 35 52

South Korea notices

B 급 기기 (가정용 방송통신기자재)

이 기기는 가정용(B 급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

무선적용제품

해당 무선설비가 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없음 (무선모듈 제품이 설치되어 있는 경우).

몸 가까이에서 장치를 작동할 경우, 비금속 저장 액세서리를 사용하여 장치와 몸 사이에 2.5cm 이상의 거리를 유지하십시오.

Taiwan NCC notices

Wireless LAN 802.11a devices

在5.25G ~5.35G頻帶內操作之無線
資訊傳輸設備僅適於室內使用

Wireless LAN 802.11 devices/Bluetooth devices/Short range devices

低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、
商號或使用者均不得擅自變更頻率、加大功率或變更原
設計之特性及功能。
第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通
信；經發現有干擾現象時，應立即停用，並改善至無干
擾時方得繼續使用。
前項合法通信，指依電信規定作業之無線電信。低功率
射頻電機須忍受合法通信或工業、科學及醫療用電波輻
射性電機設備之干擾。

3 Safety notices for notebook computers

⚠️ **WARNING!**   To reduce the risk of serious injury, read the *Safety & Comfort Guide.* It describes proper workstation setup, posture, and health and work habits for computer users, and provides important electrical and mechanical safety information. This guide is located on the Web at http://www.hp.com/ergo and on the Documentation CD that is included with the product.

Heat-related safety warning notice

⚠️ **WARNING!**   To reduce the possibility of heat-related injuries or of overheating the computer, do not place the computer directly on your lap or obstruct the computer air vents. Use the computer only on a hard, flat surface. Do not allow another hard surface, such as an adjoining optional printer, or a soft surface, such as pillows or rugs or clothing, to block airflow. Also, do not allow the AC adapter to contact the skin or a soft surface, such as pillows or rugs or clothing, during operation. The computer and the AC adapter comply with the user-accessible surface temperature limits defined by the International Standard for Safety of Information Technology Equipment (IEC/EN 60950).

Potential safety conditions notice

If you notice any of the following conditions (or if you have other safety concerns), do not use the computer: crackling, hissing, or popping sound, or a strong odor or smoke coming from the computer. It is normal for these conditions to appear when an internal electronic component fails in a safe and controlled manner. However, these conditions may also indicate a potential safety issue. Do not assume it is a safe failure. Turn off the computer, disconnect it from its power source, and contact technical support for assistance.

User-replaceable battery notices

⚠️ **WARNING!**   Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

⚠️ **WARNING!**   To reduce the risk of fire or burns, do not disassemble, crush, or puncture; do not short external contacts; do not dispose of in fire or water.

⚠️ **WARNING!**   Keep the battery away from children.

⚠️ **WARNING!**   To reduce potential safety issues, only the battery provided with the computer, a replacement battery provided by HP, or a compatible battery purchased as an accessory from HP should be used with the computer.

Headset and earphone volume level notice

⚠️ **WARNING!**   To prevent possible hearing damage, do not listen at high volume levels for long periods.

Power cord notices

⚠ **WARNING!** To reduce the risk of electric shock or damage to the equipment:

- Plug the power cord into an AC outlet that is easily accessible at all times.

- Disconnect power from the computer by unplugging the power cord from the AC outlet.

- If provided with a 3-pin attachment plug on the power cord, plug the cord into a grounded (earthed) 3-pin outlet. Do not disable the power cord grounding pin, for example, by attaching a 2-pin adapter. The grounding pin is an important safety feature.

⚠ **WARNING!** To reduce potential safety issues, only the AC adapter provided with the computer, a replacement AC adapter provided by HP, or an AC adapter purchased as an accessory from HP should be used with the computer.

Brazil notice

Este equipamento deve ser conectado obrigatoriamente em tomada de rede de energia elétrica que possua aterramento (três pinos), conforme a norma nbr abnt 5410,visando a segurança dos usuários contra choques elétricos.

Cleaning the keyboard

⚠ **WARNING!** To reduce the risk of electric shock or damage to internal components, do not use a vacuum cleaner attachment to clean the keyboard. A vacuum cleaner can deposit household debris on the keyboard surface. Clean the keyboard regularly to prevent keys from sticking and to remove dust, lint, and particles that can become trapped beneath the keys. A can of compressed air with a straw extension can be used to blow air around and under the keys to loosen and remove debris.

Travel notice

⚠ **WARNING!** To reduce the risk of electric shock, fire, or damage to the equipment, do not attempt to power the computer with a voltage converter kit sold for appliances.

China safety notices

China: Altitude notice

Altitude warning for products not certified for use in >5000 m

Icon	Description
⚠ (≤2100m)	仅适用于海拔 2000m 以下地区安全使用 – or – 仅适用于海拔 2000 米以下地区安全使用

China: Tropical warning notice

Tropical warning for products not certified for use in tropical regions.

Icon	Description
	仅适用于非热带气候条件下安全使用

Norway and Sweden: Cable grounding notice for products with a TV tuner

⚠ **CAUTION:** To reduce potential safety issues, use a galvanic isolator when connecting to a cable distribution system.

使用過度恐傷害視力

注意事項:

(1) 使用 30 分鐘請休息 10 分鐘。

(2) 2 歲以下幼兒不看螢幕，2 歲以上每天看螢幕不要超過 1 小時。

4 Safety notices for desktops, thin clients and personal workstations

Important safety information

⚠ **WARNING!**   To reduce the risk of serious injury, read the *Safety & Comfort Guide.* It describes proper workstation setup, posture, and health and work habits for computer users, and provides important electrical and mechanical safety information. This guide is located on the Web at http://www.hp.com/ergo and on the Documentation CD that is included with the product.

To reduce the risk of electric shock or damage to the equipment:

- Plug the power cord into an AC outlet that is easily accessible at all times.

- Disconnect power from the computer by unplugging the power cord from the AC outlet.

- If provided with a 3-pin attachment plug on the power cord, plug the cord into a grounded (earthed) 3-pin outlet. Do not disable the power cord grounding pin, for example, by attaching a 2-pin adapter. The grounding pin is an important safety feature.

The computer may be heavy; be sure to use ergonomically correct lifting procedures when moving it.

Install the computer near an AC outlet. The AC power cord is your computer's main AC disconnecting device and must be easily accessible at all times. For your safety, the power cord provided with your computer has a grounded plug. Always use the power cord with a properly grounded wall outlet, to avoid the risk of electrical shock.

To reduce the possibility of an electric shock from the telephone network, plug your computer into the AC outlet before connecting it to the telephone line. Also, disconnect the telephone line before unplugging your computer from the AC power outlet.

Always disconnect the modem cord from the telephone system before installing or removing your computer cover.

Do not operate the computer with the cover removed.

For your safety, always unplug the computer from its power source and from any telecommunications systems (such as telephone lines), networks, or modems before performing any service procedures. Failure to do so may result in personal injury or equipment damage. Hazardous voltage levels are inside the power supply and modem of this product.

⚠ **CAUTION:**   If your computer is provided with a voltage select switch for use in a 115 or 230 V power system, the voltage select switch has been pre-set to the correct voltage setting for use in the particular country/ region where it was initially sold. Changing the voltage select switch to the incorrect position can damage your computer and void any implied warranty.

This product has not been evaluated for connection to an "IT" power system (an AC distribution system with no direct connection to earth, according to IEC/EN 60950).

Installation conditions

See installation instructions before connecting this equipment to the input supply.

WARNING! The equipment must be provided with a proper AC protective earth (PE) ground connection.

Energized and moving parts may be inside the computer. Disconnect power to the equipment before removing the enclosure. Replace and secure the enclosure before re-energizing the equipment.

Battery replacement notice

WARNING! The product may contain an internal lithium manganese dioxide, vanadium pentoxide, or alkaline battery or battery pack. There is risk of fire and burns if the battery pack is not handled properly. To reduce the risk of personal injury:

- Do not attempt to recharge the battery.

- Do not expose to temperatures higher than 60° C (140° F).

- Do not disassemble, crush, puncture, short external contacts, or dispose of in fire or water.

- Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

- Replace only with the HP spare designated for this product.

For information about removing a battery, refer to your computer documentation.

Icon	Description
	Batteries, battery packs, and accumulators should not be disposed of together with the general household waste. In order to forward them to recycling or proper disposal, please use the public collection system or return them to HP, an authorized HP partner, or their agents.

Icon	Description
	The Taiwan EPA requires dry battery manufacturing or importing firms, in accordance with Article 15 of the Waste Disposal Act, to indicate the recovery marks on the batteries used in sales, giveaways, or promotions. Contact a qualified Taiwanese recycler for proper battery disposal.

Headset and earphone volume level notice

WARNING! To prevent possible hearing damage, do not listen at high volume levels for long periods.

Laser safety

For products equipped with optical drives or fiber optic transceivers.

This product may be provided with an optical storage device (i.e., CD or DVD drive) and/or fiber optic transceiver. These contain lasers and are classified as Class 1 Laser Products in accordance with the standard IEC/EN 60825-1 and comply with its requirements.

Each laser product complies with US FDA Regulations of 21 CFR 1040.10 and 1040.11 or complies with those regulations except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

> ⚠ **WARNING!** Use of controls or adjustments or performance of procedures other than those specified herein or in the laser product's installation guide may result in hazardous radiation exposure. To reduce the risk of exposure to hazardous radiation:
>
> - Do not try to open the module enclosure. There are no user-serviceable components inside.
>
> - Do not operate controls, make adjustments, or perform procedures to the laser device other than those specified herein.
>
> - Allow only HP Authorized Service technicians to repair the unit.

Power supply and power cord set requirements

Power supply class I grounding requirements

For protection from fault currents, the equipment shall be connected to a grounding terminal. Plug the system power cord into an AC outlet that provides a ground connection. Substitute cords may not provide adequate fault protection. Only use the power cord supplied with this product or an HP Inc. authorized replacement.

Brazil notice

Este equipamento deve ser conectado obrigatoriamente em tomada de rede de energia elétrica que possua aterramento (três pinos), conforme a norma nbr abnt 5410,visando a segurança dos usuários contra choques elétricos.

Denmark

Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.

Finland

Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan.

Norway

Apparatet må tilkoples jordet stikkontakt.

Sweden

Apparaten skall anslutas till jordat uttag.

Power supply requirements

The power supplies on some products have external power switches. The voltage select switch feature on the product permits it to operate from any line voltage between 100-127 or 200-240 volts AC. Power supplies on those products that do not have external power switches are equipped with internal circuits that sense the incoming voltage and automatically switch to the proper voltage.

For safety reasons, use only the AC adapter provided with the unit or an authorized replacement adapter from HP Inc. Replacement part numbers may be found at http://www.hp.com/cgi-bin/hpsupport/index.pl.

For use in Norway

This product is also designed for an IT power system with phase-to-phase voltage 230V.

Power cord set requirements

The power cord set received with the product meets the requirements for use in the country where the equipment was originally purchased. Use only the power cord provided with the unit or an authorized replacement power cord from HP Inc. or an approved HP Inc. source. Replacement part numbers may be found at http://www.hp.com/cgi-bin/hpsupport/index.pl.

Power cord sets for use in other countries must meet the requirements of the country where you use the product. For more information on power cord set requirements, contact your authorized HP dealer, reseller, or service provider.

⚠ WARNING! Do not use power cords from other products.

Mismatched power cords may result in a shock and fire hazard.

The requirements listed below are applicable to all countries:

1. The power cord must be approved by an acceptable accredited agency responsible for evaluation in the country where the power cord set will be installed.

2. The length of the power cord must be between 1.8 m (6 feet) and 3.6 m (12 feet). For a power cord 2.0 m (6.56 feet) or less, the diameter of the wire must be a minimum of 0.75 mm^2 or 18AWG. If the power cord is longer than 2.0 m (6.56 feet), the diameter of the wire must be a minimum of 1.0 mm^2 or 16AWG.

The power cord should be routed so that it is not likely to be walked on or pinched by items placed upon it or against it. Particular attention should be paid to the plug, electrical outlet, and the point where the cord exits from the product.

⚠ WARNING! Do not operate this product with a damaged power cord set. If the power cord set is damaged in any manner, replace it immediately. Damaged cords may result in user exposure to hazards.

Japan power cord requirements

For use in Japan, use only the power cord received with this product.

⚠ CAUTION: Do not use the power cord received with this product on any other products.

Pinch hazard

⚠ WARNING! Observe pinch hazard areas. Keep fingers away from closing parts.

TV antenna connectors protection

External television antenna grounding

If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is electrically grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper electrical grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Lightning protection

For added protection of any product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug the product from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product from lightning and power line surges.
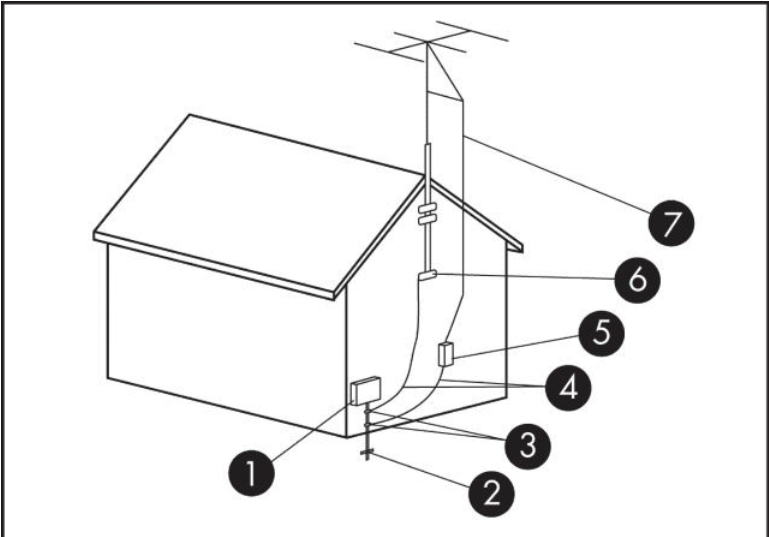
Table 4-1 Antenna Grounding

Reference	Grounding Component
1	Electric Service Equipment
2	Power Service Grounding Electrode System (NEC Art 250, Part III)
3	Ground Clamps
4	Grounding Conductors (NEC Section 810.21)
5	Antenna Discharge Unit (NEC Section 810.20)
6	Ground Clamp
7	Antenna Lead-in Wire

Note to CATV system installer

This reminder is provided to call the CATV systems installer's attention to section 820.93 of the National Electric Code, which provides guidelines for proper grounding and in particular, specify that the Coaxial cable shield shall be connected to grounding system of the building, as close to the point of cable entry as practical.

China safety notices

<div align="center">

HP 工作站使用安全手册

</div>

使用须知

　　欢迎使用惠普工作站，为了您及仪器的安全，请您务必注意如下事项：

1. 仪器要和地线相接，要使用有正确接地插头的电源线，使用中国国家规定的 220V 电源。
2. 避免高温和尘土多的地方，否则易引起仪器内部部件的损坏。
3. 避免接近高温，避免接近直接热源，如直射太阳光、暖气等其它发热体。
4. 不要有异物或液体落入机内，以免部件短路。
5. 不要将磁体放置于仪器附近。

警告

为防止火灾或触电事故，请不要将该机放置于淋雨或潮湿处

如果您按照以上步骤操作时遇到了困难，或想了解其它产品性能，请在以下网页上寻找相关信息：http://www.hp.com.cn

或联系我们

中国惠普有限公司
地址：北京朝阳区建国路 112 号中国惠普大厦
电话：010-65643888

China: Altitude notice

Altitude warning for products not certified for use in >5000 m

Icon	Description
	仅适用于海拔 2000m 以下地区安全使用 – or – 仅适用于海拔 2000 米以下地区安全使用

China: Tropical warning notice

Tropical warning for products not certified for use in tropical regions.

Icon	Description
	仅适用于非热带气候条件下安全使用

Germany acoustics notice

Sound pressure level (LpA) is far below 70dB(A) (operator position, normal operation, according to ISO 7779) Product noise emission data can be found in the product related "IT ECO Declarations" at Internet address: http://www.hp.com/go/ted

Schalldruckpegel (LpA) ist weit unterhalb 70 dB(A) (Benutzerposition, normaler Betrieb, nach ISO 7779) Die Schallemissionswerte der Produkte können in den produktbezogenen "IT ECO Declarations" auf folgender Internet Adresse gefunden werden: http://www.hp.com/go/ted

使用過度恐傷害視力

注意事項:

(1) 使用 30 分鐘請休息 10 分鐘。

(2) 2 歲以下幼兒不看螢幕，2 歲以上每天看螢幕不要超過 1 小時。

5 Environmental notices for notebook computers

This chapter provides country- and region-specific environmental notices and compliance information. Some of these notices may not apply to your product.

Electronic hardware, packaging and battery recycling

HP encourages customers to recycle used electronic hardware, HP original print cartridges packaging, and rechargeable batteries. For more information about recycling programs, go to http://www.hp.com/recycle.

For information about recycling the product in Japan, refer to http://www.hp.com/jp/hardwarerecycle/.

Disposal of waste equipment by users

This symbol means do not dispose of your product with your other household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment. For more information, please contact your household waste disposal service or go to http://www.hp.com/recycle.

Brazil alkaline battery disposal

Icon	Description
  Não descarte o produto eletrônico em lixo comum	Este produto eletroeletrônico e seus componentes não devem ser descartados no lixo comum, pois embora estejam em conformidade com padrões mundiais de restrição a substâncias nocivas, podem conter, ainda que em quantidades mínimas, substâncias impactantes ao meio ambiente. Ao final da vida útil deste produto, o usuário deverá entregá-lo à HP. A não observância dessa orientação sujeitará o infrator às sanções previstas em lei. Após o uso, as pilhas e/ou baterias dos produtos HP deverão ser entregues ao estabelecimento comercial ou rede de assistência técnica autorizada pela HP. Para maiores informações, inclusive sobre os pontos de recebimento, acesse: http://www.hp.com.br/reciclar

Brazil hardware recycling information

Icon	Description
	Este produto eletroeletrônico e seus componentes não devem ser descartados no lixo comum, pois embora estejam em conformidade com padrões mundiais de restrição a substâncias nocivas, podem conter, ainda que em quantidades mínimas, substâncias impactantes ao meio ambiente. Ao final da vida útil deste produto, o usuário deverá entregá-lo à HP. A não observância dessa orientação sujeitará o infrator às sanções previstas em lei. Após o uso, as pilhas e/ou baterias dos produtos HP deverão ser entregues ao estabelecimento comercial ou rede de assistência técnica autorizada pela HP.

Icon	Description
Não descarte o produto eletrônico em lixo comum	Para maiores informações, inclusive sobre os pontos de recebimento, acesse: http://www.hp.com.br/reciclar

ENERGY STAR® Certification (select models only)

ENERGY STAR is a U.S. Environmental Protection Agency voluntary program that helps businesses and individuals save money and protect our climate through superior energy efficiency. Products that earn the ENERGY STAR prevent greenhouse gas emissions by meeting strict energy efficiency criteria or requirements set by the U.S. Environmental Protection Agency. As an ENERGY STAR Partner, HP Inc. has followed the U.S. EPA's enhanced product certification process to ensure that products marked with the ENERGY STAR logo are ENERGY STAR certified per the applicable ENERGY STAR guidelines. The following logo appears on all ENERGY STAR-certified computers:

A key ENERGY STAR requirement for computer products is power management features that significantly reduce energy consumption when the product is not in use. Power management allows a computer to automatically enter a low power "sleep" mode, or other low power mode, after a defined period of inactivity. The power management features have been preset as follows when the computer is operating on AC power:

Computer type	Time to activate display sleep mode	Time to activate computer sleep mode (minutes)	Resuming from sleep mode
Notebooks, Mobile Workstations	Less than or equal to 15 minutes (varies by model)	Less than or equal to 30 minutes (varies by model)	Product will exit sleep mode when the power/sleep button is pressed. If Wake-on-Lan (WOL) is enabled, the system can resume from sleep in response to a network signal.
Tablets/Slates	Less than or equal to 1 minute	Not applicable	Not applicable

For computers that support an always-on, always-connected use profile where internet access is available (such as tablets and slates), alternative low power modes - such as Short or Long Idle modes (as defined in the ENERGY STAR Computer Program Requirements) are provided that consume very little power (</= 10 Watts) and when applicable, maximize product battery life. These alternative low power modes are dynamic, with the display sleep mode activated within 1 minute of user inactivity.

The computer exits Sleep when the power/Sleep button is pressed. When the Wake On LAN (WOL) feature is enabled, the computer can also exit Sleep in response to a network signal.

Additional information on the potential energy and financial savings of the power management feature can be found on the EPA ENERGY STAR Power Management Web site at http://www.energystar.gov/powermanagement.

Additional information on the ENERGY STAR program and its environmental benefits are available on the EPA ENERGY STAR Web site at http://www.energystar.gov.

ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.

Chemical substances

HP is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at http://www.hp.com/go/reach.

China environmental notices

微型计算机电源声明书

能耗信息说明

惠普公司对笔记本电脑提供能耗信息说明，更多信息请登陆

http://www.hp.com/hpinfo/globalcitizenship/environment/productdata/chinasepa.html

回收信息说明

惠普公司对废弃的电子计算机（笔记本电脑）提供回收服务，更多信息请登陆

http://www.hp.com.cn/hardwarerecycle

环境标志信息：

微型计算机(台式计算机, 笔记本电脑等)在中国环境标志认证产品范围内，环境标志表明该产品不仅品质合格，而且在生产,使用和处理过程中都符合特定的环境保护要求,与同类产品相比,具有低毒少害,节约资源等环境优势,在国家环保部网站 (http://www.sepa.gov.cn)可以浏览环境标志的信息,此外获得中国环境标志认证的产品售出后 3 年内均可在各服务中心选择维修或更换部件，也可通过更换更高性能的零部件或模块实现硬件升级

特别提醒：

如您需要确认本产品处于零能耗状态，请按下电源关闭按钮，并将插头从电源插座断开。

China PC energy label

In accordance with "The Regulation of the Implementation on China Energy Label for Microcomputers" (CEL-30), this microcomputer has an Energy Efficiency Label. The energy efficiency grade, TEC (Typical Energy Consumption), and product category presented on the label are determined and calculated according to the standard GB28380-2012.

1. Energy Efficiency Grades

The grade is determined by the standard with the calculation of base consumption level with the sum of all the allowances for additional components such as main memory and graphics card. For products of any grade, the TEC should not exceed the value specified in the following table:

Product Type		TEC (kilowatt hour)		
		Grade 1	Grade 2	Grade 3
Desktop microcomputer, AIO	Category A	98.0+∑Efa	148.0+∑Efa	198.0+∑Efa
	Category B	125.0+∑Efa	175.0+∑Efa	225.0+∑Efa
	Category C	159.0+∑Efa	209.0+∑Efa	259.0+∑Efa
	Category D	184.0+∑Efa	234.0+∑Efa	284.0+∑Efa

Product Type	TEC (kilowatt hour)			
Portable Computer	Category A	20.0+∑Efa	35.0+∑Efa	45.0+∑Efa
	Category B	26.0+∑Efa	45.0+∑Efa	65.0+∑Efa
	Category C	54.5+∑Efa	75.0+∑Efa	123.5+∑Efa

NOTE: ∑Efa is the sum of power factor of product additional functions.

2. Typical Energy Consumption

The energy consumption figure presented on the label is the data measured with the representative configuration that covers all the configurations in the registration unit which is selected according to CEL-30. Thus, actual energy consumption of this specific microcomputer may not be the same as the TEC data presented in the label.

3. Product Category

The product category is determined by the standard according to the microcomputer's configuration. The categorization of products complies with the regulations in the following table:

Product Type	Configuration Description	
	Desktop microcomputer, AIO	Portable Computer
Category A	The desktop microcomputer and AIO whose configuration is out of the scope of Category B, C, and D	The portable computer whose configuration is out of the scope of Category B and C
Category B	CPU physical core number of 2, and system memory of not less than 2GB	A Discrete GPU
Category C	CPU physical core number of over 2, with at least one of the following features: 1. System memory of not less than 2 GB 2. A Discrete GPU	The product that has a CPU physical core number of not less than 2, system memory of not less than 2GB, A Discrete GPU with Frame Buffer Width not less than 128-bit.
Category D	CPU physical core number of not less than 4, with at least one of the following features: 1. System memory of not less than 4 GB 2. A Discrete GPU with Frame Buffer Width not less than 128-bit	

For more details on the specification, please refer to the standard GB28380-2012.

本机根据《微型计算机能源效率标识实施规则》（CEL-30）的要求加施中国能效标识。能效标识中显示的能效等级、典型能源消耗和产品类型均根据《微型计算机能效限定值及能效等级》（GB28380-2012）的要求确定。对上述标识内容的说明如下：

1. 能效等级

微型计算机的能效等级由基础能源消耗值和附加功能功耗因子之和决定。微型计算机能效各等级的典型能源消耗应不大于下表的规定

微型计算机类型			能源消耗(千瓦时)		
			1	2	3
	台式微型计算机及	A 类	98.0+ΣEfa	148.0+ΣEfa	198.0+ΣEfa
一体机		B 类	125.0+ΣEfa	175.0+ΣEfa	225.0+ΣEfa
		C 类	159.0+ΣEfa	209.0+ΣEfa	259.0+ΣEfa
		D 类	184.0+ΣEfa	234.0+ΣEfa	284.0+ΣEfa
	便携式	A 类	20.0+ΣEfa	35.0+ΣEfa	45.0+ΣEfa
计算机		B 类	26.0+ΣEfa	45.0+ΣEfa	65.0+ΣEfa
		C 类	54.5+ΣEfa	75.0+ΣEfa	123.5+ΣEfa

注：ΣEfa 为微型计算机附加功能功耗因子之和

2. 典型能源消耗

典型能源消耗值代表一个备案单元中，符合《微型计算机能源效率标识实施规则》要求的代表性规格型号产品的数值。因此，本机的典型能源消耗值可能与其所加施的能效标识中所示的典型能源消耗值不一致。

3. 产品类型

产品类型根据微型计算机的配置确定。参见下表：

类型	配置说明	
	台式微型计算机及一体机	便携式计算机
A 类	下列 B 类、C 类、D 类配置以外的台式微型计算机及一体机	下列 B 类、C 类配置以外的便携式计算机
B 类	中央处理器（CPU）物理核心数为 2，系统内存大于等于 2GB	具有独立图形显示单元（GPU）
C 类	中央处理器（CPU）物理核心数大于 2，且至少具有以下特征中的一条 a. a）系统内存大于等于 2GB； b. 独立图形显示单元（GPU）	中央处理器（CPU）物理核心数大于等于 2，系统内存大于等于 2GB，具有独立图形显示单元（GPU）且显存位宽大于等于 128 位.
D 类	中央处理器（CPU）物理核心数大于等于 4，且至少具有以下特征中的一条： a. 系统内存大于等于 4GB； b. 具有独立图形显示单元（GPU）且显存位宽大于等于 128 位	

关于标识内容的更详细技术信息，请参考《微型计算机能效限定值及能效等级》（GB28380-2012）

China restriction of hazardous substances (RoHS)

The Table of Hazardous Substances/Elements and their Content

As required by China's Management Methods for Restricted Use of Hazardous Substances in Electrical and Electronic Products

	Hazardous Substances					
Part Name	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Battery	X	O	O	O	O	O
Cables	X	O	O	O	O	O
Camera	X	O	O	O	O	O
Chassis/Other	X	O	O	O	O	O
Flash memory card reader	X	O	O	O	O	O
Floppy disk drive	X	O	O	O	O	O
Hard disk drive	X	O	O	O	O	O
Headphones	X	O	O	O	O	O
I/O PCAs	X	O	O	O	O	O
Keyboard	X	O	O	O	O	O
Liquid crystal display (LCD) panel	X	O	O	O	O	O
Media (CD/DVD/floppy)	O	O	O	O	O	O
Memory	X	O	O	O	O	O
Motherboard, processor, heat sinks	X	O	O	O	O	O
Mouse	X	O	O	O	O	O
Optical disk drive	X	O	O	O	O	O
Optional docking device	X	O	O	O	O	O
Power adapter	X	O	O	O	O	O
Power supply	X	O	O	O	O	O
Remote control	X	O	O	O	O	O
Smart card/Java™ card reader	X	O	O	O	O	O
Speakers, external	X	O	O	O	O	O
TV tuner	X	O	O	O	O	O
USB flash memory drive	X	O	O	O	O	O

	Hazardous Substances					
Part Name	**Lead (Pb)**	**Mercury (Hg)**	**Cadmium (Cd)**	**Hexavalent Chromium (Cr(VI))**	**Polybrominated biphenyls (PBB)**	**Polybrominated diphenyl ethers (PBDE)**
USB hub	X	O	O	O	O	O
Web camera	X	O	O	O	O	O
Wireless receiver	X	O	O	O	O	O
Wireless cards	X	O	O	O	O	O

This form has been prepared in compliance with the provisions of SJ/T 11364.

O: Indicates that the content of said hazardous substance in all of the homogenous materials in the component is within the limits required by GB/T 26572.

X: Indicates that the content of said hazardous substance exceeds the limits required by GB/T 26572 in at least one homogenous material in the component.

All parts named in this table with an "X" are in compliance with the European Union's RoHS Legislation.

NOTE: The referenced Environmental Protection Use Period Marking was determined according to normal operating use conditions of the product such as temperature and humidity.

产品中有害物质或元素的名称及含量

根据中国《电器电子产品有害物质限制使用管理办法》

	有害物质					
部件名称	**铅 (Pb)**	**汞 (Hg)**	**镉 (Cd)**	**六价铬 (Cr(VI))**	**多溴联苯 (PBB)**	**多溴二苯醚 (PBDE)**
电池	X	O	O	O	O	O
线缆	X	O	O	O	O	O
摄像头	X	O	O	O	O	O
机箱/其他	X	O	O	O	O	O
闪存读卡器	X	O	O	O	O	O
软盘驱动器	X	O	O	O	O	O
硬盘驱动器	X	O	O	O	O	O
耳机	X	O	O	O	O	O
I/O PCA	X	O	O	O	O	O
键盘	X	O	O	O	O	O
液晶显示器 (LCD) 面板	X	O	O	O	O	O
介质（CD/DVD/软盘）	O	O	O	O	O	O
内存	X	O	O	O	O	O
主板、处理器、散热器	X	O	O	O	O	O

部件名称	有害物质					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
鼠标	X	O	O	O	O	O
光盘驱动器	X	O	O	O	O	O
对接设备选件	X	O	O	O	O	O
电源适配器	X	O	O	O	O	O
电源	X	O	O	O	O	O
投影仪	X	O	O	O	O	O
遥控器	X	O	O	O	O	O
智能卡/Java™ 读卡器	X	O	O	O	O	O
扬声器（外置）	X	O	O	O	O	O
电视调谐器	X	O	O	O	O	O
USB 闪存驱动器	X	O	O	O	O	O
USB 集线器	X	O	O	O	O	O
网络摄像头	X	O	O	O	O	O
无线接收器	X	O	O	O	O	O
无线网卡	X	O	O	O	O	O

本表格依据 SJ/T 11364 的规定编制。

O：表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。

X：表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。

此表中所有名称中含 "X" 的部件均符合欧盟 RoHS 立法。

注：环保使用期限的参考标识取决于产品正常工作的温度和湿度等条件

India restriction of hazardous substances (RoHS)

This product complies with the "India E-waste (Management and Handling) Rule 2011" and prohibits use of lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers in concentrations exceeding 0.1 weight % and 0.01 weight % for cadmium, except for the exemptions set in Schedule 2 of the Rule.

Information for European Union Commission Regulation 1275/2008

To locate product power consumption data, including when the product is in networked standby with all wired network ports connected and wireless devices connected, refer to section P14 "Additional information" of the product IT ECO Declaration at http://www.hp.com/hpinfo/globalcitizenship/environment/productdata/itecodesktop-pc.html.

Where applicable, activate and deactivate a wireless network using the instructions included in the product user guide or the operating system. Information is also available at http://www.hp.com/support.

IT ECO declarations

For notebook PCs, go to http://www.hp.com/hpinfo/globalcitizenship/environment/productdata/iteconotebook-o.html.

Japan restriction of hazardous substances (RoHS)

2008 年、日本における製品含有表示方法、JISC0950 が公示されました。製造事業者は、2006 年 7 月1 日 以降に販売される電気・電子機器の特定化学物質の含有に付きまして情報提供を義務付けられました。製品の部材表示に付きましては、

http://www.hp.com/go/jisc0950

を参照してください

A Japanese regulatory requirement, defined by specification JIS C 0950, 2008, mandates that manufacturers provide Material Content Declarations for certain categories of electronic products offered for sale after July 1, 2006.

To view the JIS C 0950 material declaration for this product, visit http://www.hp.com/go/jisc0950.

Mexico Sustainable Energy Use Law

This product has been labeled in compliance with the Mexico Sustainable Energy Use Law requiring disclosure of power consumption in the normal use (idle mode) and standby modes. Your product is one of many configurations in this model family; the idle mode power consumption of your specific configuration may vary from the information on the label. Actual power consumption of your product may be higher or lower than the value reported on the Mexico product energy label due to factors such as configuration (components and modules chosen) and usage (tasks being performed, software installed and running, etc.).

Turkey EEE regulation

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

Ukraine restriction of hazardous substances (RoHS)

The equipment complies with requirements of the Technical Regulation, approved by the Resolution of Cabinet of Ministry of Ukraine as of December 3, 2008 № 1057, in terms of restrictions for the use of certain dangerous substances in electrical and electronic equipment.

Україна обмеження на наявність небезпечних речовин

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнані, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057.

Perchlorate material—special handling may apply

See http://www.dtsc.ca.gov/hazardouswaste/perchlorate.

This product's real-time clock battery or coin cell battery may contain perchlorate and may require special handling when recycled or disposed of in California.

6 Environmental notices for desktops, thin clients and personal workstations

This chapter provides country- and region-specific environmental notices and compliance information. Some of these notices may not apply to your product.

Electronic hardware, packaging and battery recycling

HP encourages customers to recycle used electronic hardware, HP original print cartridges packaging, and rechargeable batteries. For more information about recycling programs, go to http://www.hp.com/recycle.

For information about recycling the product in Japan, refer to http://www.hp.com/jp/hardwarerecycle/.

Disposal of waste equipment by users

Icon	Description
	This symbol means do not dispose of your product with your other household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment. For more information, please contact your household waste disposal service or go to http://www.hp.com/recycle.

Brazil alkaline battery disposal

Icon	Description
Não descarte o produto eletrônico em lixo comum	Este produto eletroeletrônico e seus componentes não devem ser descartados no lixo comum, pois embora estejam em conformidade com padrões mundiais de restrição a substâncias nocivas, podem conter, ainda que em quantidades mínimas, substâncias impactantes ao meio ambiente. Ao final da vida útil deste produto, o usuário deverá entregá-lo à HP. A não observância dessa orientação sujeitará o infrator às sanções previstas em lei. Após o uso, as pilhas e/ou baterias dos produtos HP deverão ser entregues ao estabelecimento comercial ou rede de assistência técnica autorizada pela HP. Para maiores informações, inclusive sobre os pontos de recebimento, acesse: http://www.hp.com.br/reciclar

Brazil hardware recycling information

Icon	Description
	Este produto eletroeletrônico e seus componentes não devem ser descartados no lixo comum, pois embora estejam em conformidade com padrões mundiais de restrição a substâncias nocivas, podem conter, ainda que em quantidades mínimas, substâncias impactantes ao meio ambiente. Ao final da vida útil deste produto, o usuário deverá entregá-lo à HP. A não observância dessa orientação sujeitará o infrator às sanções previstas em lei. Após o uso, as pilhas e/ou baterias dos produtos HP deverão ser entregues ao estabelecimento comercial ou rede de assistência técnica autorizada pela HP. Para maiores informações, inclusive sobre os pontos de recebimento, acesse: http://www.hp.com.br/reciclar

Icon	Description
	Não descarte o produto eletrônico em lixo comum

ENERGY STAR® Certification (select models only)

ENERGY STAR is a U.S. Environmental Protection Agency voluntary program that helps businesses and individuals save money and protect our climate through superior energy efficiency. Products that earn the ENERGY STAR prevent greenhouse gas emissions by meeting strict energy efficiency criteria or requirements set by the U.S. Environmental Protection Agency. As an ENERGY STAR Partner, HP Inc. has followed the U.S. EPA's enhanced product certification process to ensure that products marked with the ENERGY STAR logo are ENERGY STAR certified per the applicable ENERGY STAR guidelines. The following logo appears on all ENERGY STAR-certified computers:

A key ENERGY STAR requirement for computer products is power management features that significantly reduce energy consumption when the product is not in use. Power management allows a computer to automatically enter a low power "sleep" mode, or other low power mode, after a defined period of inactivity. The power management features have been preset as follows when the computer is operating on AC power:

Computer type	Time to activate display sleep mode	Time to activate computer sleep mode (minutes)	Resuming from sleep mode
Desktops, Integrated Desktops, Workstations	Less than or equal to 15 minutes (varies by model)	Less than or equal to 30 minutes (varies by model)	Product will exit sleep mode when user interacts with any input device, including the mouse or keyboard. If Wake-on-Lan (WOL) is enabled, the system can resume from sleep in response to a network signal.
Thin clients	Less than or equal to 15 minutes (varies by model)	Less than or equal to 30 minutes when sleep mode is supported by the operating system (varies by model)	When sleep mode is supported by operating system product will exit sleep mode when user interacts with any input device, including the mouse or keyboard. If Wake-on-Lan (WOL) is enabled, the system can resume from sleep in response to a network signal.

The computer exits Sleep when the power/Sleep button is pressed. When the Wake On LAN (WOL) feature is enabled, the computer can also exit Sleep in response to a network signal.

Additional information on the potential energy and financial savings of the power management feature can be found on the EPA ENERGY STAR Power Management Web site at http://www.energystar.gov/powermanagement.

Additional information on the ENERGY STAR program and its environmental benefits are available on the EPA ENERGY STAR Web site at http://www.energystar.gov.

ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.

Chemical substances

HP is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No. 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at http://www.hp.com/go/reach.

Mercury statement

This statement applies to All-in-One computers with built-in display panels that do not use LED backlighting.

This HP product may contain the following material that might require special handling at end-of-life:

- Mercury in the fluorescent lamp in the display LCD

Disposal of mercury can be regulated because of environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance (EIA) (http://www.eiae.org).

Perchlorate material–special handling may apply

The computer's real-time clock battery may contain perchlorate and may require special handling when recycled or disposed of in California. See http://www.dtsc.ca.gov/hazardouswaste/perchlorate/.

China environmental notices

微型计算机电源声明书

能耗信息说明

惠普公司对笔记本电脑提供能耗信息说明，更多信息请登陆

http://www.hp.com/hpinfo/globalcitizenship/environment/productdata/chinasepa.html

回收信息说明

惠普公司对废弃的电子计算机（笔记本电脑）提供回收服务，更多信息请登陆

http://www.hp.com.cn/hardwarerecycle

环境标志信息：

微型计算机(台式计算机，笔记本电脑等)在中国环境标志认证产品范围内，环境标志表明该产品不仅品质合格，而且在生产，使用和处理过程中都符合特定的环境保护要求，与同类产品相比，具有低毒少害，节约资源等环境优势，在国家环保部网站 (http://www.sepa.gov.cn)可以浏览环境标志的信息,此外获得中国环境标志认证的产品售出后 3 年内均可在各服务中心选择维修或更换部件，也可通过更换更高性能的零部件或模块实现硬件升级

特别提醒：

如您需要确认本产品处于零能耗状态，请按下电源关闭按钮，并将插头从电源插座断开。

China PC energy label

In accordance with "The Regulation of the Implementation on China Energy Label for Microcomputers" (CEL-30), this microcomputer has an Energy Efficiency Label. The energy efficiency grade, TEC (Typical Energy Consumption), and product category presented on the label are determined and calculated according to the standard GB28380-2012.

1. Energy Efficiency Grades

   The grade is determined by the standard with the calculation of base consumption level with the sum of all the allowances for additional components such as main memory and graphics card. For products of any grade, the TEC should not exceed the value specified in the following table:

Product Type		TEC (kilowatt hour)		
		Grade 1	Grade 2	Grade 3
Desktop microcomputer, AIO	Category A	98.0+∑Efa	148.0+∑Efa	198.0+∑Efa
	Category B	125.0+∑Efa	175.0+∑Efa	225.0+∑Efa
	Category C	159.0+∑Efa	209.0+∑Efa	259.0+∑Efa
	Category D	184.0+∑Efa	234.0+∑Efa	284.0+∑Efa
Portable Computer	Category A	20.0+∑Efa	35.0+∑Efa	45.0+∑Efa
	Category B	26.0+∑Efa	45.0+∑Efa	65.0+∑Efa
	Category C	54.5+∑Efa	75.0+∑Efa	123.5+∑Efa

   NOTE: ∑Efa is the sum of power factor of product additional functions.

2. Typical Energy Consumption

   The energy consumption figure presented on the label is the data measured with the representative configuration that covers all the configurations in the registration unit which is selected according to CEL-30. Thus, actual energy consumption of this specific microcomputer may not be the same as the TEC data presented in the label.

3. Product Category

   The product category is determined by the standard according to the microcomputer's configuration. The categorization of products complies with the regulations in the following table:

Product Type	Configuration Description	
	Desktop microcomputer, AIO	Portable Computer
Category A	The desktop microcomputer and AIO whose configuration is out of the scope of Category B, C, and D	The portable computer whose configuration is out of the scope of Category B and C
Category B	CPU physical core number of 2, and system memory of not less than 2GB	A Discrete GPU
Category C	CPU physical core number of over 2, with at least one of the following features: 1. System memory of not less than 2 GB	The product that has a CPU physical core number of not less than 2, system memory of not less than 2GB, A Discrete GPU with Frame Buffer Width not less than 128-bit.

Product Type	Configuration Description
	2. A Discrete GPU
Category D	CPU physical core number of not less than 4, with at least one of the following features:
	1. System memory of not less than 4 GB
	2. A Discrete GPU with Frame Buffer Width not less than 128-bit

For more details on the specification, please refer to the standard GB28380-2012.

本机根据《微型计算机能源效率标识实施规则》（CEL-30）的要求加施中国能效标识。能效标识中显示的能效等级、典型能源消耗和产品类型均根据《微型计算机能效限定值及能效等级》（GB28380-2012）的要求确定。对上述标识内容的说明如下：

1. 能效等级

微型计算机的能效等级由基础能源消耗值和附加功能功耗因子之和决定。微型计算机能效各等级的典型能源消耗应不大于下表的规定

微型计算机类型			能源消耗(千瓦时)		
			1	2	3
一体机	台式微型计算机及	A 类	98.0+ΣEfa	148.0+ΣEfa	198.0+ΣEfa
		B 类	125.0+ΣEfa	175.0+ΣEfa	225.0+ΣEfa
		C 类	159.0+ΣEfa	209.0+ΣEfa	259.0+ΣEfa
		D 类	184.0+ΣEfa	234.0+ΣEfa	284.0+ΣEfa
计算机	便携式	A 类	20.0+ΣEfa	35.0+ΣEfa	45.0+ΣEfa
		B 类	26.0+ΣEfa	45.0+ΣEfa	65.0+ΣEfa
		C 类	54.5+ΣEfa	75.0+ΣEfa	123.5+ΣEfa

注：ΣEfa 为微型计算机附加功能功耗因子之和

2. 典型能源消耗

典型能源消耗值代表一个备案单元中，符合《微型计算机能源效率标识实施规则》要求的代表性规格型号产品的数值。因此，本机的典型能源消耗值可能与其所加施的能效标识中所示的典型能源消耗值不一致。

3. 产品类型

产品类型根据微型计算机的配置确定。参见下表：

类型	配置说明	
	台式微型计算机及一体机	便携式计算机
A 类	下列 B 类、C 类、D 类配置以外的台式微型计算机及一体机	下列 B 类、C 类配置以外的便携式计算机
B 类	中央处理器（CPU）物理核心数为 2，系统内存大于等于 2GB	具有独立图形显示单元（GPU）
C 类	中央处理器（CPU）物理核心数大于 2，且至少具有以下特征中的一条 a. a）系统内存大于等于 2GB； b. 独立图形显示单元（GPU）	中央处理器（CPU）物理核心数大于等于 2，系统内存大于等于 2GB，具有独立图形显示单元（GPU）且显存位宽大于等于 128 位.
D 类	中央处理器（CPU）物理核心数大于等于 4，且至少具有以下特征中的一条： a. 系统内存大于等于 4GB； b. 具有独立图形显示单元（GPU）且显存位宽大于等于 128 位	

关于标识内容的更详细技术信息，请参考《微型计算机能效限定值及能效等级》（GB28380-2012）

China restriction of hazard substances (ROHS)

The Table of Hazardous Substances/Elements and their Content

As required by China's Management Methods for Restricted Use of Hazardous Substances in Electrical and Electronic Products

	Hazardous Substances					
Part Name	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Battery	X	O	O	O	O	O
Cables	X	O	O	O	O	O
Camera	X	O	O	O	O	O
Chassis/Other	X	O	O	O	O	O
Flash memory card reader	X	O	O	O	O	O
Floppy disk drive	X	O	O	O	O	O
Hard disk drive	X	O	O	O	O	O
Headphones	X	O	O	O	O	O
I/O PCAs	X	O	O	O	O	O
Keyboard	X	O	O	O	O	O
Liquid crystal display (LCD) panel	X	O	O	O	O	O
Media (CD/DVD/floppy)	O	O	O	O	O	O
Memory	X	O	O	O	O	O
Motherboard, processor, heat sinks	X	O	O	O	O	O
Mouse	X	O	O	O	O	O
Optical disk drive	X	O	O	O	O	O
Optional docking device	X	O	O	O	O	O
Power adapter	X	O	O	O	O	O
Power supply	X	O	O	O	O	O
Projector	X	O	O	O	O	O
Remote control	X	O	O	O	O	O
Smart card/Java™ card reader	X	O	O	O	O	O
Speakers, external	X	O	O	O	O	O
Stylus	X	O	O	O	O	O

	Hazardous Substances					
Part Name	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Touch mat	X	O	O	O	O	O
TV tuner	X	O	O	O	O	O
USB flash memory drive	X	O	O	O	O	O
USB hub	X	O	O	O	O	O
Web camera	X	O	O	O	O	O
Wireless receiver	X	O	O	O	O	O
Wireless cards	X	O	O	O	O	O
3D Capture Stage/ Turntable	X	O	O	O	O	O

This form has been prepared in compliance with the provisions of SJ/T 11364.

O: Indicates that the content of said hazardous substance in all of the homogenous materials in the component is within the limits required by GB/T 26572.

X: Indicates that the content of said hazardous substance exceeds the limits required by GB/T 26572 in at least one homogenous material in the component.

All parts named in this table with an "X" are in compliance with the European Union's RoHS Legislation.

NOTE: The referenced Environmental Protection Use Period Marking was determined according to normal operating use conditions of the product such as temperature and humidity.

产品中有害物质或元素的名称及含量

根据中国《电器电子产品有害物质限制使用管理办法》

	有害物质					
部件名称	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电池	X	O	O	O	O	O
线缆	X	O	O	O	O	O
摄像头	X	O	O	O	O	O
机箱/其他	X	O	O	O	O	O
闪存读卡器	X	O	O	O	O	O
软盘驱动器	X	O	O	O	O	O
硬盘驱动器	X	O	O	O	O	O
耳机	X	O	O	O	O	O
I/O PCA	X	O	O	O	O	O
键盘	X	O	O	O	O	O

部件名称	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
				有害物质		
液晶显示器 (LCD) 面板	X	O	O	O	O	O
介质（CD/DVD/软盘）	O	O	O	O	O	O
内存	X	O	O	O	O	O
主板、处理器、散热器	X	O	O	O	O	O
鼠标	X	O	O	O	O	O
光驱	X	O	O	O	O	O
对接设备选件	X	O	O	O	O	O
电源适配器	X	O	O	O	O	O
电源	X	O	O	O	O	O
投影仪	X	O	O	O	O	O
遥控器	X	O	O	O	O	O
智能卡/Java™ 读卡器	X	O	O	O	O	O
扬声器（外置）	X	O	O	O	O	O
触控笔	X	O	O	O	O	O
触控板	X	O	O	O	O	O
电视调谐器	X	O	O	O	O	O
USB 闪存驱动器	X	O	O	O	O	O
USB 集线器	X	O	O	O	O	O
网络摄像头	X	O	O	O	O	O
无线接收器	X	O	O	O	O	O
无线网卡	X	O	O	O	O	O
3D 捕获台/转盘	X	O	O	O	O	O

本表格依据 SJ/T 11364 的规定编制。

O：表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。

X：表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。

此表中所有名称中含 "X" 的部件均符合欧盟 RoHS 立法。

注：环保使用期限的参考标识取决于产品正常工作的温度和湿度等条件

India restriction of hazardous substances (RoHS)

This product complies with the "India E-waste (Management and Handling) Rule 2011" and prohibits use of lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers in concentrations exceeding 0.1 weight % and 0.01 weight % for cadmium, except for the exemptions set in Schedule 2 of the Rule.

Information for European Union Commission Regulation 1275/2008

To locate product power consumption data, including when the product is in networked standby with all wired network ports connected and wireless devices connected, refer to section P14 "Additional information" of the product IT ECO Declaration at http://www.hp.com/hpinfo/globalcitizenship/environment/productdata/itecodesktop-pc.html.

Where applicable, activate and deactivate a wireless network using the instructions included in the product user guide or the operating system. Information is also available at http://www.hp.com/support.

IT ECO declarations

Desktop PCs and Thin Clients

http://www.hp.com/hpinfo/globalcitizenship/environment/productdata/itecodesktop-pc.html?jumpid=reg_R1002_USEN

Workstations

http://www.hp.com/hpinfo/globalcitizenship/environment/productdata/itecoworkstatio.html

Japan restriction of hazardous substances (RoHS)

2008 年、日本における製品含有表示方法、JISC0950 が公示されました。製造事業者は、2006 年 7 月 1 日以降に販売される電気・電子機器の特定化学物質の含有に付きまして情報提供を義務付けられました。製品の部材表示に付きましては、

http://www.hp.com/go/jisc0950

を参照してください

A Japanese regulatory requirement, defined by specification JIS C 0950, 2008, mandates that manufacturers provide Material Content Declarations for certain categories of electronic products offered for sale after July 1, 2006.

To view the JIS C 0950 material declaration for this product, visit http://www.hp.com/go/jisc0950.

Mehiški zakon o uporabi trajnostne energije

Ley para el Aprovechamiento Sustentable de la Energía de México

Se ha etiquetado este producto en conformidad con la Ley para el Aprovechamiento Sustentable de la Energía de México, que requiere la divulgación del consumo de energía del modo de uso normal (modo inactivo) y del modo de espera. Su producto es una de las muchas configuraciones de esta familia de modelos; el consumo de energía del modo inactivo de su configuración específica puede diferir de la información de la etiqueta. El consumo real de energía de su producto puede ser mayor o menor que el valor informado en la etiqueta de

energía de producto para México a causa de factores como la configuración (componentes y módulos seleccionados) y el uso (tareas que se están efectuando, software instalado y en ejecución, etc.).

NOTE: Esta ley no es aplicable a los workstations.

This product has been labeled in compliance with the Mexico Sustainable Energy Use Law requiring disclosure of power consumption in the normal use (idle mode) and standby modes. Your product is one of many configurations in this model family; the idle mode power consumption of your specific configuration may vary from the information on the label. Actual power consumption of your product may be higher or lower than the value reported on the Mexico product energy label due to factors such as configuration (components and modules chosen) and usage (tasks being performed, software installed and running, etc.).

NOTE: Workstations are not labeled because the law is not applicable to the workstation product category.

Turkey EEE regulation

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

Omejevanje uporabe nekaterih nevarnih snovi (RoHS) za Ukrajino

The equipment complies with requirements of the Technical Regulation, approved by the Resolution of Cabinet of Ministry of Ukraine as of December 3, 2008 № 1057, in terms of restrictions for the use of certain dangerous substances in electrical and electronic equipment.

Україна обмеження на наявність небезпечних речовин

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнані, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057.

TCO Certified Edge Certification

This section applies only to products bearing the TCO Certified Edge logo.

TCO DEVELOPMENT

Congratulations!

This product is TCO Certified – for Sustainable IT

TCO Certified is an international third party sustainability certification for IT products. TCO Certified ensures that the manufacture, use and recycling of IT products reflect environmental, social and economic responsibility. Every TCO Certified product model is verified by an accredited independent test laboratory.

Along with meeting all requirements in TCO Certified, this product also meets the exclusive TCO Certified Edge certification, recognizing best in class products in a specific sustainability attribute.

Summary of TCO Certified Criteria:

Corporate Social Responsibility
Socially responsible production - working conditions and labor law in manufacturing country
Energy Efficiency
Energy efficiency of product and power supply. Energy Star compliant, where applicable
Environmental Management System
Manufacturer must be certified according to either ISO 14001 or EMAS
Minimization of Hazardous Substances
Limits on cadmium, mercury, lead & hexavalent chromium including requirements for mercury-free products, halogenated substances and hazardous flame retardants
Design for Recycling
Coding of plastics for easy recycling. Limit on the number of different plastics used.
Product Lifetime, Product Take Back
Minimum one-year product warranty. Minimum three-year availability of spare parts. Product takeback
Packaging
Limits on hazardous substances in product packaging. Packaging prepared for recycling
Ergonomic, User-centered design
Visual ergonomics in products with a display. Adjustability for user comfort (displays, headsets)
Acoustic performance – protection against sound spikes (headsets) and fan noise (projectors, computers)
Ergonomically designed keyboard (notebooks)
Electrical Safety, minimal electro-magnetic Emissions
Third Party Testing
All certified product models have been tested in an independent, accredited laboratory.

A detailed criteria set is available for download at www.tcodevelopment.com, where you can also find a searchable database of all TCO Certified IT products.

TCO Development, the organization behind TCO Certified, has been an international driver in the field of Sustainable IT for 20 years. Criteria in TCO Certified are developed in collaboration with scientists, experts, users and manufacturers. Organizations around the world rely on TCO Certified as a tool to help them reach their sustainable IT goals. We are owned by TCO, a non-profit organization representing office workers. TCO Development is headquartered in Stockholm, Sweden, with regional presence in North America and Asia.

For more information, please visit
www.tcodevelopment.com

Index