Notebook Tour

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This guide explains the computer hardware features.

Contents

1 Components

Top components 1–2
Lights 1–2
TouchPad 1–6
Buttons, switches and readers 1–7
Keys 1–11
Hotkey quick reference 1–13
Front components 1–14
Rear components 1–16
Right-side components 1–18
Left-side components 1–20
Bottom components 1–22
WLAN antennae (select models only) 1–26
Additional hardware components 1–27
Labels 1–28

2 Specifications

Operating environment 2–1
Rated input power 2–2

Index

1

Components

This chapter explains the hardware features of the computer.

To see a list of hardware installed in the computer:

1. Select **Start > Computer > System properties**.
2. In the left task pane, click **Device Manager**.

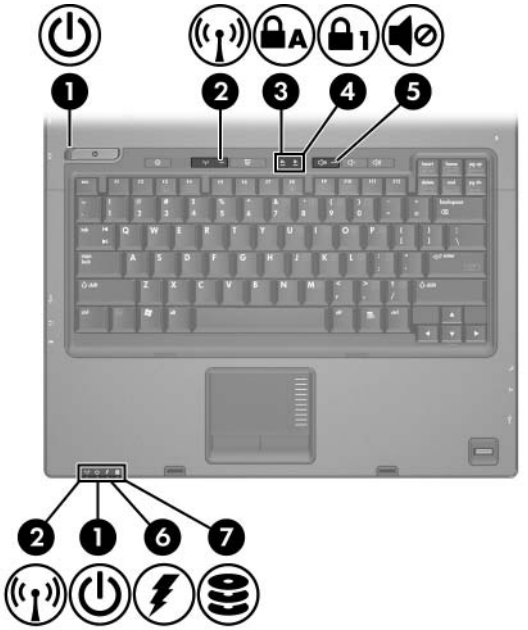
You can also add hardware or modify your device configurations using Device Manager.

Components included with the computer may vary by region and by model. The illustrations in this chapter identify the standard external features included in most computer models.

Top components

Lights

Refer to the illustration that most closely matches your computer.



Component		Description
❶	Power lights* (2)	On: The computer is on. Blinking: The computer is in the Sleep state. Off: The computer is off or in Hibernation.

(Continued)

Component		Description
❷	Wireless lights† (2)	On: An integrated wireless device, such as a wireless local area network (WLAN) device and/or a Bluetooth® device, is turned on.
❸	Caps lock light	On: Caps lock is on.
❹	Num lock light	On: Num lock is on or the embedded numeric keypad is enabled.
❺	Volume mute light	On: Computer sound is turned off.
❻	Battery light	Amber: A battery is charging. Green: A battery is close to full charge capacity. Blinking amber: A battery that is the only available power source has reached a low battery level. When the battery reaches a critical battery level, the battery light begins blinking rapidly. Off: If the computer is plugged into an external power source, the light is turned off when all batteries in the computer are fully charged. If the computer is not plugged into an external power source, the light stays off until the battery reaches a low battery level.
❼	Drive light	Blinking: The hard drive or optical drive is being accessed.

*The 2 power lights display the same information. The light on the power button is visible only when the computer is open. The power light on the front of the computer is visible whether the computer is open or closed.

†The 2 wireless lights display the same information. The light on the wireless button is visible only when the computer is open. The wireless light on the front of the computer is visible whether the computer is open or closed.

Component		Description
❶	Power lights* (2)	On: The computer is on. Blinking: The computer is in the Sleep state. Off: The computer is off or in Hibernation.
❷	Wireless lights† (2)	On: An integrated wireless device, such as a wireless local area network (WLAN) device and/or a Bluetooth device, is turned on.
❸	Caps lock light	On: Caps lock is on.
❹	Num lock light	On: Num lock is on or the embedded numeric keypad is enabled.

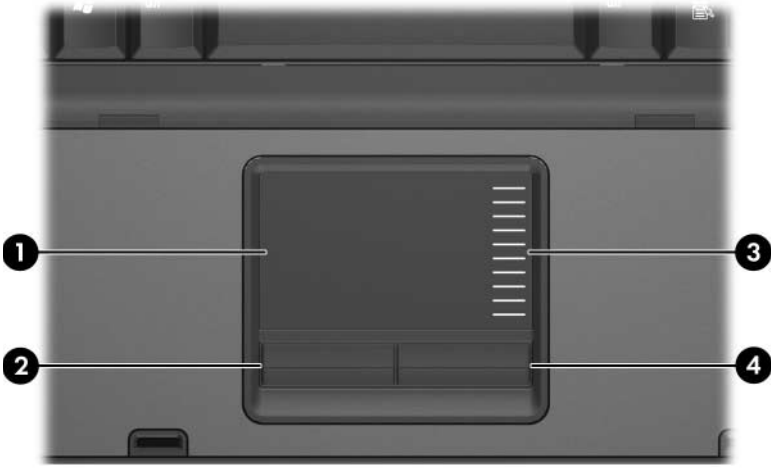
(Continued)

Component		Description
❺	Battery light	Amber: A battery is charging. Green: A battery is close to full charge capacity. Blinking amber: A battery that is the only available power source has reached a low battery level. When the battery reaches a critical battery level, the battery light begins blinking rapidly. Off: If the computer is plugged into an external power source, the light is turned off when all batteries in the computer are fully charged. If the computer is not plugged into an external power source, the light stays off until the battery reaches a low battery level.
❻	Drive light	Blinking: The hard drive or optical drive is being accessed.

*The 2 power lights display the same information. The light on the power button is visible only when the computer is open. The power light on the front of the computer is visible whether the computer is open or closed.

†The 2 wireless lights display the same information. The light on the wireless button is visible only when the computer is open. The wireless light on the front of the computer is visible whether the computer is open or closed.

TouchPad



Component		Description
❶	TouchPad*	Moves the pointer and selects or activates items on the screen. Can be set to perform other mouse functions, such as scrolling, selecting, and double-clicking.
❷	Left TouchPad button*	Functions like the left button on an external mouse.
❸	TouchPad scroll zone	Scrolls up or down.
❹	Right TouchPad button*	Functions like the right button on an external mouse.

*This table describes default settings.To view and change TouchPad preferences, select **Start > Control Panel > Hardware and Sound > Mouse.**

Buttons, switches and readers

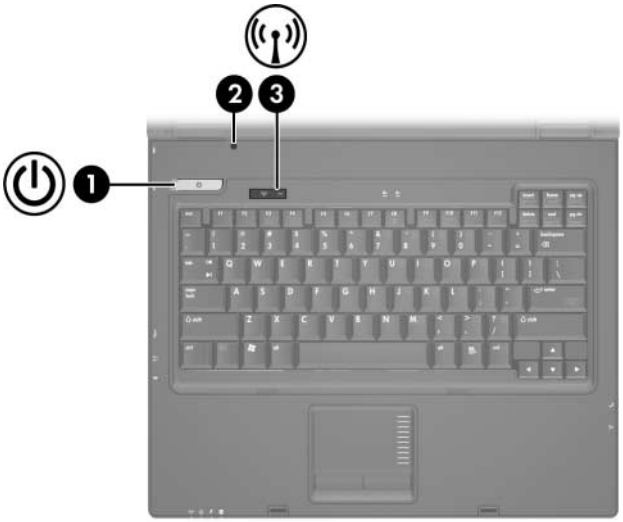
Refer to the illustration that most closely matches your computer.

Component		Description
1	Power button	When the computer is off, press the power button to turn on the computer. If the computer has stopped responding and Windows® shutdown procedures cannot be used, press and hold the power button for at least 5 seconds to turn off the computer. To learn more about your power settings, select **Start > Control Panel > System and Maintenance > Power Options**.

(Continued)

Component		Description
❷	Display switch	Initiates Sleep if the display is closed while the computer is on.
❸	Info Center button	Launches Info Center, which enables you to open various software solutions.
❹	Wireless button*	Turns the wireless feature on or off, but does not create a wireless connection. ✎ To establish a wireless connection, a wireless network must already be set up.
❺	Presentation button	Starts the Presentation feature.
❻	Volume mute button	Mutes and restores computer sound.
❼	Volume down button	Decreases speaker volume.
❽	Volume up button	Increases speaker volume.
❾	Internal microphone	Records sound.
❿	Fingerprint reader (select models only)	Allows a fingerprint logon to Windows, instead of a password logon.

*This table describes default settings. For information about changing default settings, refer to the user guides located in Help and Support.



Component		Description
❶	Power button	When the computer is off, press the power button to turn on the computer. If the computer has stopped responding and Windows® shutdown procedures cannot be used, press and hold the power button for at least 5 seconds to turn off the computer. To learn more about your power settings, select **Start > Control Panel > System and Maintenance > Power Options**.
❷	Display switch	Initiates Sleep if the display is closed while the computer is on.

(Continued)

Component	Description
❸ Wireless button*	Turns the wireless feature on or off, but does not create a wireless connection. ✎ To establish a wireless connection, a wireless network must already be set up.

*This table describes default settings. For information about changing default settings, refer to the user guides located in Help and Support.

Keys

Your computer may look slightly different from the illustrations in this chapter.

Component		Description
❶	**esc** key	Displays system information when pressed in combination with the **fn** key.
❷	**fn** key	Executes frequently used system functions when pressed in combination with a function key or the **esc** key.
❸	Windows logo key	Displays the Windows Start menu.
❹	Windows applications key	Displays a shortcut menu for items beneath the pointer.
❺	Embedded numeric keypad keys	Can be used like the keys on an external numeric keypad.

(Continued)

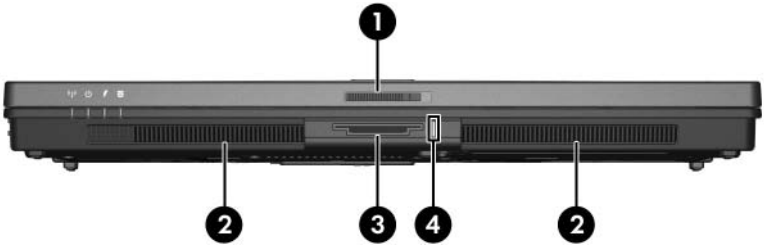
Component		Description
❻	Editing keys	Keys that assist in editing documents or files. Also can be used in combination with the **fn** key for frequently used system functions.
❼	Function keys	Execute frequently used system functions when pressed in combination with the **fn** key. ✎ Refer to the table in "Hotkey quick reference" for a description of each hotkey.

Hotkey quick reference

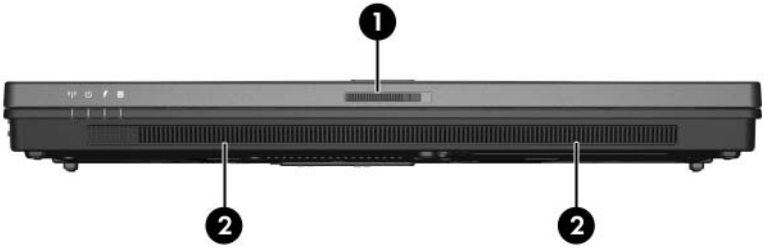
To perform this function	Press
Initiate Sleep	**fn+f3**
Exit Sleep	Power button
Alternate between computer display and external display	**fn+f4**
Display battery information	**fn+f8**
Clear battery information	**fn+f8**
Decrease screen brightness	**fn+f9**
Increase screen brightness	**fn+f10**
Display system information	**fn+esc**
Clear system information	**fn+esc** or press **enter**
Print screen content when in text mode or CGA graphics mode	**fn+insert [prt sc]**
Turn scroll lock on and off	**fn+home [scroll]**
Pause process on screen such as scrolling or the operation of a program or command	**fn+pg up [pause]**
Reset the keyboard or change from one session to another	**fn+delete [sys rq]**
Turn num lock on and off	**fn+end [num lk]**
Break away or halt operation in progress	**fn+pg dn [break]**

Front components

Refer to the illustration that most closely matches your computer.



Component		Description
1	Display release latch	Opens the computer.
2	Speakers (2)	Produce computer sound.
3	Digital Media Slot	Supports optional digital card formats: SD (Secure Digital) Memory Card, MultiMediaCard, Memory Stick, Memory Stick Pro, Memory Stick Duo (with adapter), SmartMedia card, and xD-Picture Card.
4	Digital Media Slot light	On: A digital card is being accessed.



Component		Description
1	Display release latch	Opens the computer.
2	Speakers (2)	Produce computer sound.

Rear components

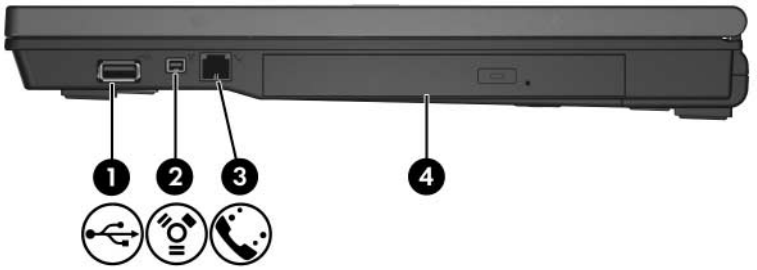
Refer to the illustration that most closely matches your computer.

Component		Description
❶	Security cable slot	Attaches an optional security cable to the computer. △ The security cable is designed to act as a deterrent, but may not prevent the computer from being mishandled or stolen.
❷	Power connector	Connects an AC adapter.
❸	S-Video-out jack	Connects an optional S-Video device such as a television, VCR, camcorder, overhead projector, or video capture card.

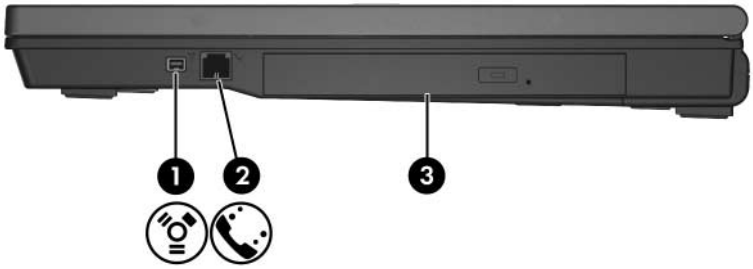
Component		Description
❶	Security cable slot	Attaches an optional security cable to the computer. △ The security cable is designed to act as a deterrent, but may not prevent the computer from being mishandled or stolen.
❷	Power connector	Connects an AC adapter.

Right-side components

Refer to the illustration that most closely matches your computer.



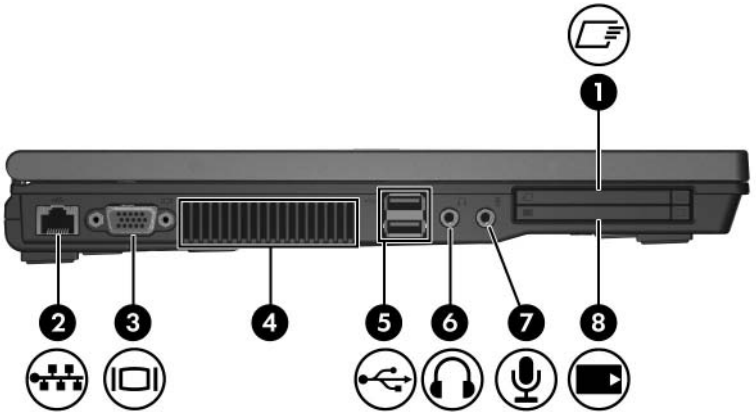
Component		Description
1	USB port	Connects optional USB devices.
2	1394 port	Connects an optional IEEE 1394 device, such as a camcorder.
3	RJ-11 (modem) jack	Connects a modem cable.
4	Optical drive	Reads an optical disc.



Component		Description
❶	1394 port	Connects an optional IEEE 1394 device, such as a camcorder.
❷	RJ-11 (modem) jack	Connects a modem cable.
❸	Optical drive	Reads an optical disc.

Left-side components

Your computer may look slightly different from the illustration in this chapter.



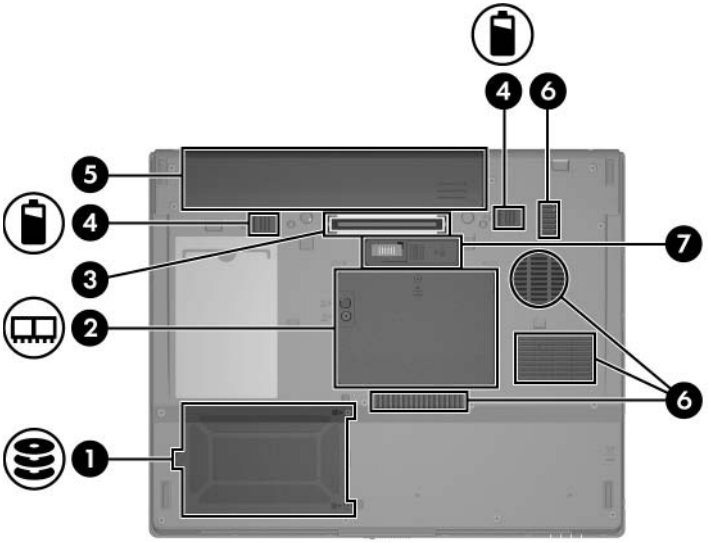
Component		Description
❶	ExpressCard slot (select models only)	Supports optional ExpressCard/54 or ExpressCard/34 cards.
❷	RJ-45 (network) jack	Connects a network cable.
❸	External monitor port	Connects an external monitor.

(Continued)

Component		Description
❹	Vent	Enables airflow to cool internal components. △ To prevent overheating, do not obstruct 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 thick rugs or clothing, to block airflow. ✎ The computer fan starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.
❺	USB ports (2)	Connect optional USB devices.
❻	Audio-out (headphone) jack	Produces system stereo sound when connected to optional powered stereo speakers, headphones, ear buds, a headset, or television audio.
❼	Audio-in (microphone) jack	Connects an optional headset microphone or a monaural microphone.
❽	PC Card slot (select models only) or smart card slot (select models only)	Supports optional Type I/II PC Cards, 16-bit PC Cards, and 32-bit (CardBus) or industry standard smart cards including Java™ Cards.

Bottom components

Refer to the illustration that most closely matches your computer.

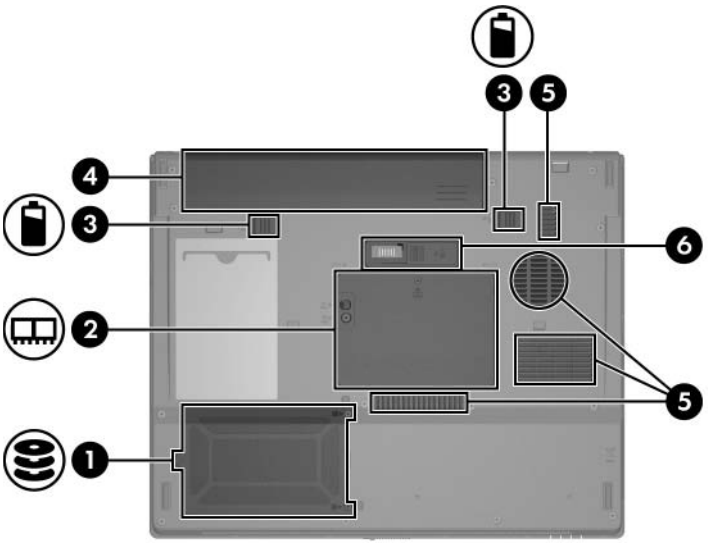


Component		Description
❶	Hard drive bay	Holds the hard drive.
❷	Expansion memory module compartment	Contains the expansion memory module slot
❸	Docking connector	Connects an optional docking device.
❹	Primary battery release latches (2)	Release the primary battery from the battery bay.
❺	Battery bay	Holds the primary battery.

(Continued)

Component		Description
❻	Vents (3)*	Enable airflow to cool internal components. ⚠ To prevent overheating, do not obstruct 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 thick rugs or clothing, to block airflow. ✎ The computer fan starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.
❼	Accessory battery connector (exposed when cover is pushed to the right)	Connects an optional accessory battery.

*Depending on your computer model, the vents on the computer may vary in number and location.



Component		Description
❶	Hard drive bay	Holds the hard drive.
❷	Expansion memory module compartment	Contains the expansion memory module slot
❸	Primary battery release latches (2)	Release the primary battery from the battery bay.
❹	Battery bay	Holds the primary battery.

(Continued)

Component		Description
❺	Vents (3)*	Enable airflow to cool internal components. ⚠ To prevent overheating, do not obstruct 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 thick rugs or clothing, to block airflow. ✎ The computer fan starts up automatically to cool internal components and prevent overheating. It is normal for the internal fan to cycle on and off during routine operation.
❻	Accessory battery connector (exposed when cover is pushed to the right)	Connects an optional accessory battery.

*Depending on your computer model, the vents on the computer may vary in number and location.

WLAN antennae (select models only)

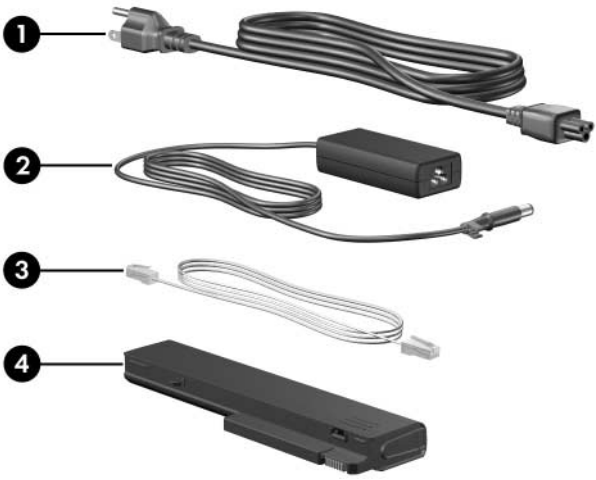
Two wireless antennae inside the display enclosure send and receive wireless device signals over wireless local area networks (WLANs). These antennae are not visible from the outside of the computer. For optimal transmission, keep the areas immediately around the antennae free from obstructions.

To see wireless regulatory notices, refer to your country's section of the *Regulatory, Safety and Environmental Notices* located in Help and Support.

Your computer may look slightly different from the illustration in this chapter.

For optimal transmission, keep the areas immediately around the antennae free from obstructions.

Additional hardware components



Component		Description
❶	Power cord*	Connects an AC adapter to an AC outlet.
❷	HP Smart AC Adapter	Converts AC power to DC power.
❸	Modem cable*	Connects the internal modem to an RJ-11 telephone jack or to a country-specific modem adapter.
❹	Battery*	Powers the computer when the computer is not plugged into external power.

*Modem cables, batteries, and power cords vary in appearance by region and country.

Labels

The labels affixed to the computer provide information you may need when you troubleshoot system problems or travel internationally with the computer.

- Service tag—Provides the product brand and series name, serial number (s/n), and product number (p/n) of the computer. Have this information available when you contact Customer Care. The service tag label is affixed to the bottom of the computer.
- Microsoft® Certificate of Authenticity—Contains the Windows Product Key. You may need the Product Key to update or troubleshoot the operating system. This certificate is affixed to the bottom of the computer.
- Regulatory label—Provides regulatory information about the computer. The regulatory label is affixed to the bottom of the computer.
- Modem approval label—Provides regulatory information about the modem and lists the agency approval markings required by some of the countries in which the modem has been approved for use. You may need this information when traveling internationally. The modem approval label is affixed to the bottom of the computer.
- Wireless certification label(s)—Provide information about optional wireless devices and the approval markings of some of the countries in which the devices have been approved for use. An optional device may be a wireless local area network (WLAN) device or an optional Bluetooth® device. If your computer model includes one or more wireless devices, one certification label per wireless device is included with your computer. You may need this information when traveling internationally. The WLAN and Bluetooth wireless certification labels are affixed inside the expansion memory module compartment.

2

Specifications

The following sections provide information on the operating environment specifications and power specifications of the computer.

Operating environment

The operating environment information in the following table may be helpful if you plan to use or transport the computer in extreme environments.

Factor	Metric	U.S.
Temperature		
Operating (not writing to optical disc)	0°C to 35°C	32°F to 95°F
Operating (writing to optical disc)	5°C to 35°C	41°F to 95°F
Nonoperating	-20°C to 60°C	-4°F to 140°F
Relative humidity (noncondensing)		
Operating	10% to 90%	10% to 90%
Nonoperating	5% to 95%	5% to 95%
Maximum altitude (unpressurized)		
Operating (14.7 to 10.1 psia*)	-15 m to 3,048 m	-50 ft to 10,000 ft
Nonoperating (14.7 to 4.4 psia*)	-15 m to 12,192 m	-50 ft to 40,000 ft

*Pounds per square inch absolute (psia) is another unit of measurement for altitude.

Rated input power

The power information in this section may be helpful if you plan to travel internationally with your computer.

The computer operates on DC power, which can be supplied by an AC or a DC power source. Although the computer can be powered from a standalone DC power source, it should be powered only with an AC adapter or a DC power source supplied by or approved for an HP computer.

The computer is capable of accepting DC power within the following specifications.

Input power	Rating
Operating voltage	18.5 V dc @ 3.5 A - 65 W
Operating current	3.5 A

This product is designed for IT power systems in Norway with phase-to-phase voltage not exceeding 240 V rms.

Index

1394 port 1–18, 1–19

A

AC adapter, identifying 1–27
accessory battery connector, identifying 1–23, 1–25
altitude specifications 2–1
antennae 1–26
applications key, Windows 1–11
audio-in (microphone) jack 1–21
audio-out (headphone) jack 1–21

B

battery bay 1–22, 1–24, 1–28
battery light, identifying 1–3, 1–5
battery pack release latch 1–22, 1–24
battery pack, identifying 1–27
bays
  battery 1–22, 1–24, 1–28
  hard drive 1–22, 1–24
Bluetooth label 1–28
buttons
  Info Center 1–8
  mute 1–8
  power 1–7, 1–9
  Presentation 1–8
  TouchPad 1–6
  volume 1–8
  wireless 1–8, 1–10

C

cables
  modem 1–20
  network 1–20
  RJ-11 (modem) 1–27
caps lock light 1–3, 1–4
Certificate of Authenticity label 1–28
compartments
  expansion memory module and Mini Card 1–22, 1–24
components
  bottom 1–22
  front 1–14
  left-side 1–20
  rear 1–16
  right-side 1–18
  top 1–2
connectors
  accessory battery 1–23, 1–25

docking 1–22
power 1–16, 1–17
cord, power, identifying 1–27

D

digital cards 1–14
Digital Media Slot light 1–14
Digital Media Slot, location 1–14
display release latch 1–14, 1–15
display switch, identifying 1–7, 1–9
docking connector 1–22
drive light 1–3, 1–5
drives, optical 1–18, 1–19

E

environmental specifications 2–1
ExpressCard slot 1–20
external monitor port 1–20

F

fingerprint reader 1–8
fn key 1–11
function keys 1–12

H

hard drive bay, identifying 1–22, 1–24
headphone (audio-out) jack 1–21
hotkeys
initiating Sleep 1–13
Quick Reference 1–13
HP Smart AC Adapter, identifying 1–27
humidity specifications 2–1

I

IEEE 1394 port 1–18, 1–19
Info Center button 1–8
internal microphone 1–8

J

jacks
audio-in (microphone) 1–21
audio-out (headphone) 1–21
RJ-11 (modem) 1–18, 1–19
RJ-45 (network) 1–20
S-Video-out 1–16

K

keypad keys 1–11
keys
editing 1–12
esc 1–11
fn 1–11
function 1–12
keypad 1–11
Windows applications 1–11
Windows logo 1–11

L

labels
Microsoft Certificate of Authenticity 1–28
modem approval 1–28
regulatory 1–28
service tag 1–28

wireless certification 1–28
WLAN 1–28
latches
battery pack release 1–22, 1–24
display release 1–14, 1–15
lights
battery 1–3, 1–5
caps lock 1–3, 1–4
Digital Media Slot 1–14
drive 1–3, 1–5
num lock 1–3, 1–4
power 1–2, 1–4
volume mute 1–3
wireless 1–3, 1–4
lock, security cable 1–16, 1–17

M

Memory Stick 1–14
Memory Stick Duo 1–14
Memory Stick Pro 1–14
microphone (audio-in) jack 1–21
microphone, internal 1–8
Microsoft Certificate of Authenticity label 1–28
modem approval label 1–28
modem cable 1–20
monitor port, external 1–20
MultiMediaCard 1–14
mute button 1–8

N

network (RJ-45) jack 1–20
network cable 1–20
num lock light 1–3, 1–4

O

operating environment specifications 2–1
operating system
Microsoft Certificate of Authenticity label 1–28
Product Key 1–28
optical drive, identifying 1–18, 1–19

P

PC Card slot 1–21
ports
1394 1–18, 1–19
external monitor 1–20
USB 1–18, 1–21
power button 1–7, 1–9
power connector 1–16, 1–17
power cord 1–27
power light 1–2, 1–4
Presentation button 1–8
Product Key 1–28
product name and number, computer 1–28

R

rated input power specifications 2–2
regulatory information
modem approval label 1–28
regulatory label 1–28
wireless certification labels 1–28
release latch
battery pack 1–22, 1–24
display 1–14, 1–15

RJ-11 (modem) cable 1–27
RJ-11 (modem) jack 1–18, 1–19
RJ-45 (network) jack 1–20

S

scrolling regions, TouchPad 1–6
Secure Digital (SD) Memory Card 1–14
security cable slot 1–16, 1–17
serial number, computer 1–28
service tag 1–28
Sleep hotkey 1–13
slots
  Digital Media 1–14
  ExpressCard 1–20
  memory 1–24
  PC Card 1–21
  security cable 1–16, 1–17
smart card slot 1–21
SmartMedia (SM) card 1–14
speakers 1–14, 1–15
specifications
  operating environment 2–1
  rated input power 2–2
S-Video-out jack 1–16
switches
  display 1–7, 1–9
  identifying 1–7, 1–9

T

temperature specifications 2–1
TouchPad 1–6
traveling with computer
  environmental specifications 2–2
  modem approval label 1–28
  wireless certification labels 1–28

U

USB ports, identifying 1–18, 1–21

V

vents 1–21, 1–23, 1–25
volume buttons 1–8
volume mute light 1–3

W

Windows applications key 1–11
Windows logo key 1–11
wireless antennae 1–26
wireless button 1–8, 1–10
wireless certification label 1–28
wireless light 1–3, 1–4
WLAN label 1–28
WWAN label 1–28

X

xD-Picture Card 1–14

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