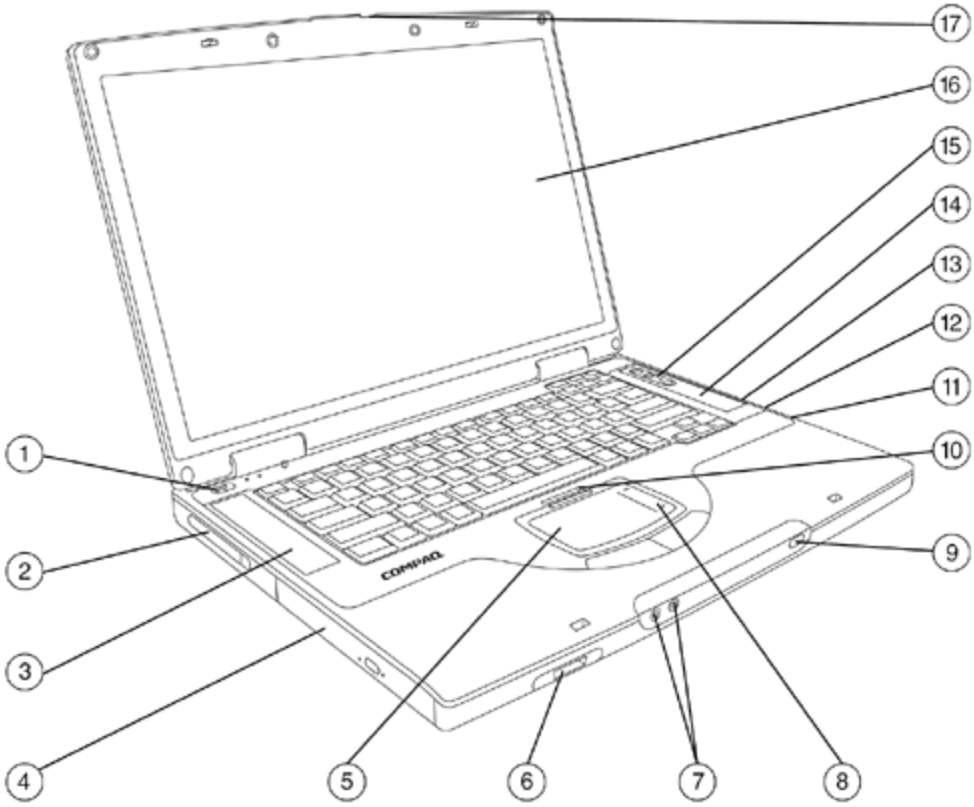
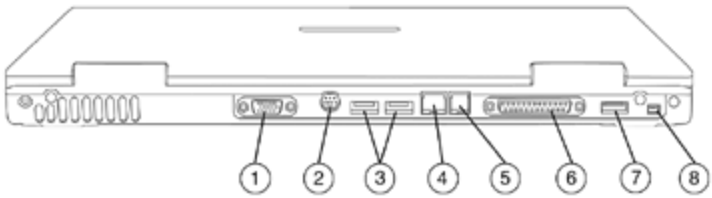
Overview



1. Power Button
2. PC Card Slot
3. Left Speaker
4. Optical Disk Drive
5. Touch Pad with dedicated scroll
6. SD Card Slot
7. Headphone and microphone in/out ports
8. Dedicated scroll (from #5)
9. Wireless on/off switch
10. Touchpad on/off switch
11. Fast IR
12. Power connector
13. Kensington Lock
14. Right Speaker
15. Volume Controls
16. 15.4-inch Wide Display
17. Display Lid Latch



1. VGA Port
2. S-Video port
3. (2 of 3) USB ports
4. RJ-45 port
5. RJ-11 port
6. Parallel port
7. (1 of 3) USB port
8. 1394

Overview

At A Glance

- Microsoft Windows XP Professional
  NOTE: Microsoft Windows 2000 Driver support via web.
- Intel® Centrino™ Mobile Technology
- Intel Pentium® M processors - up to 2.0 GHz
- Intel 855PM Chipset
- Intel PRO/Wireless 2200BG network connection available
- Integrated 10/100 NIC
- Optional Bluetooth™
- 15.4-inch WXGA or WSXGA+ display
- ATI Mobility Radeon 9200 Graphics w/32MB or 64MB DDR SDRAM
- Choice of 4200 rpm or performance 5400 rpm hard drive up to 80 GB
- Choice of DVD+RW, DVD/CD-RW or DVD optical drive
- Configurations as light as 6.5 lb (2.948 kg) weight, 1.36 in (3.45 cm) thin
- 256-MB DDR SDRAM (333-MHz) minimum, 2 SODIMM slots available; upgradeable to 2 GB
- Up to 80-GB 5400 rpm hard drive
- Full-sized keyboard
- Three (3) USB 2.0 ports
- Includes a one-year, worldwide warranty. Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.

What's New

- Intel PRO/Wireless 2200BG (802.11b/g) network connection
- Microsoft Windows XP Professional
  NOTE: Microsoft Windows 2000 Driver support via web.
- Fast 333-MHz DDR SDRAM system memory

What's Special

- Thin and Wide design with 15.4-inch widescreen!
- Microsoft Windows XP Professional
  NOTE: Microsoft Windows 2000 Driver support via web.
- Intel® Centrino™ Mobile Technology
- Performance graphics ATI Mobility Radeon 9200 with dedicated 32MB or 64MB DDR SDRAM

Standard Features

Processors
One of the following:

Intel Pentium M processor 755* – 2.0 GHz, 2-MB L2 cache, 400-MHz Front Side Bus
Intel Pentium M processor 745* – 1.8 GHz, 2-MB L2 cache, 400-MHz Front Side Bus
Intel Pentium M processor 735* – 1.7 GHz, 2-MB L2 cache, 400-MHz Front Side Bus
Intel Pentium M Processor 725* – 1.6 GHz, 2-MB L2 cache, 400-MHz Front Side Bus
Intel Pentium M Processor 715* – 1.5 GHz, 2-MB L2 cache, 400-MHz Front Side Bus
1.7 GHz on Intel Pentium M processor with 400-MHz Front Side Bus and 1 MB L2 cache
1.5 GHz on Intel Pentium M processor with 400-MHz Front Side Bus and 1 MB L2 cache
Chipset: Intel 855PM

NOTE: Pentium M processors support enhanced Intel SpeedStep™ technology.
*NOTE: Intel's numbering is not a measurement of higher performance.

Operating System

Microsoft Windows XP Professional, (requires 256MB of memory minimum)
NOTE: Microsoft Windows 2000 Driver support via web.

Panel
One of the following

Internal Support	15.4-inch color TFT WSXGA+ with 1680 x 1050 resolution (up to 16.7M colors internal)
	15.4-inch color TFT WXGA with 1280 x 800 resolution (up to 16.7M colors internal)
External Support	Up to 32-bit per pixel color depth
	Supports external VGA display: 640x480, 800x600, 1024x768, 1152x864, 1280x800, 1280x1024, 1680x1050, 1600x1200, 1792x1344, 1800x1440, 1920x1200, 1920x1440, 2048x1536 resolutions up to 160-Hz refresh rate, dependent upon monitor capability, resolution and color depth settings.

Memory

Standard/Maximum	256-MB (333-MHz) DDR SDRAM (256-MB SODIMM in slot 1)
	2048-MB (333-MHz) DDR SDRAM (1024-MB SODIMMs in slots 1 and 2)

NOTE: Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility.
NOTE: 2 memory slots user accessible-one on the base, one underneath the keyboard deck.

Communications

Integrated 10/100 NIC
High speed 56K modem

NOTE: Designed only to allow faster downloads from compliant sources. Maximum achievable download transmission rates currently do not reach 56 KB/s, and will vary with line conditions.
NOTE: Modem availability is subject to country regulatory approval.

Wireless Devices

The HP nx7010 notebook supports a broad range of secure, integrated wireless LAN options. Integrated Bluetooth is also an option and can be combined with any one of the supported wireless LAN options.

All integrated wireless LAN options – Wi-Fi certified and with Cisco Compatible Extensions support
Intel PRO/Wireless 2200BG (802.11b/g) network connection – Intel Centrino mobile technology, up to 11mbps throughput performance.
Integrated Bluetooth – designed to the Bluetooth v1.1 specification

NOTE: Wireless On/Off button – required by the FAA is located on front of unit.

Standard Features

Keyboard	The 101/102-key compatible keyboard features an industry standard, full-width layout with desktop keyboard features, such as the isolated inverted-T cursor control keys, 3x2 editing keys, both left and right control and alt keys, and 12 function keys. The US layout has 84 keys and the International layout 85 keys. Other features include an integrated numeric keypad, hotkeys for instant access to power conservation, volume, brightness, and other features, 19.05 mm x 19.05 mm key pitch (center-to-center spacing), 2.5 mm stroke, comfort-dished keycaps, and bright key legends for improved visibility in low light conditions.	
Pointing Device	Touch pad with on/off button and dedicated scroll up/down surface	
PC Card Slots	One Type II PC Card Slot which support both 32-bit CardBus and 16-bit PC Cards	
Flash Media Slots	One integrated Secure Digital (SD) slot	
Storage	**Primary Hard Dive**	80-GB 5400 rpm Hard Drive 80-GB 4200 rpm Hard Drive 60-GB 5400 rpm Hard Drive 60-GB 4200 rpm Hard Drive 40-GB 4200 rpm Hard Drive
	Optical Drives	DVD+RW DVD-CD-RW combo DVD
Multimedia	JBL Pro Speakers and 16-bit stereo sound Dedicated hardware volume controls Headphone-out port Microphone-in port Software MPEG1 support DVD movie playback software DVD+RW Drive (on select models) DVD/CD-RW combo drive (on select models) DVD-ROM drive with movie playback software (on select models) 4X AGP graphics 32-MB or 64-MB of VRAM	

Standard Features

Interfaces	PC Card	One Type II
	Enhanced Parallel EPP/ECP	1 (can be used to connect external parallel diskette drive)
	VGA	1
	Port Replicator	1 (basic port replicator only)
	Headphone/Line-out	1
	Microphone-in	1
	DC Power	1
	RJ-11 (modem)	1
	RJ-45 (NIC)	1
	S-Video	1
	Infrared Port	1 (4 Mb/s support) (IrDA 4 MB compliant. IR performance will vary depending on performance of IR peripherals and application used.)
	USB 2.0	3
	1394	1
	LED status indicators	8

Graphics

ATI Mobility Radeon 9200, 64-bit video graphics with 32- or 64-MB dedicated memory

Software

Preinstalled software

WinDVD 5.0 DVD Player (on DVD, DVD/CDRW & DVD+RW models)
Roxio Easy CD Creator 6 (on DVD/CDRW, DVD+RWmodels)
Adobe Acrobat Reader 6
Symantec Norton Anti-Virus 2003
HP Mobile Printing Driver
HP Help and Support (XP only)
Synaptics Touchpad Driver
Microsoft Office 2003 Applications on select models
NOTE: Symantec Norton Antivirus 2003 (Complimentary 60 days Live Update).

Software provided on CD

Intervideo WinDVD Creator 2.0 (on DVD+R/RW) models

Additional software available from the Web

Microsoft Windows 2000 Driver support
ATI POWERPLAY (BIOS update)

System Recovery

Each unit is shipped with a recovery CD kit containing Operating System Recovery and Driver/Application Recovery CDs. These CDs allow users to either recover or repair the notebook operating system and select drivers without losing personal data. The Operating System CD also provides the option of reinstalling the operating system software provided with the notebook. (NOTE: This option erases the hard disk and restores the base operating system. Drivers and applications are installed using the other CDs provided with the kit.)

Security

Power-on Password
Kensington MicroSave security slot; accepts 3rd party security lock devices.

Power Supply

65-watt adapter
External AC adapter, 6-foot/1.8-meter power cord included. Total length including External AC adapter is 12 feet/3.66 meters

Standard Features

Battery

The HP Compaq Business Notebook nx7010 provides up to 5 hours of battery life using the standard 8-cell Lithium-Ion battery.

Battery Re-Charge Time	System in OFF mode or Standby	2 hours
	System ON (depending on system power consumption)	2-5 hours

NOTE: Actual results may vary with product model, configuration, and individual usage. Hewlett-Packard testing of a HP Compaq Business Notebook nx7010 with an Intel Pentium M 1.5 GHz CPU, Windows XP Professional, 15.4-inch WSXGA+ LCD, 256-MB RAM, 60-GB HDD, Lithium-Ion battery, and NIC/modem, achieved an overall Business Winstone 2002 BatteryMark score of 5h 25m Business Winstone 2002 BatteryMark Version 1.0 units. Winstone is a registered trademark and BatteryMark™ is a trademark of Ziff Davis Publishing Holdings Inc. in the U.S. and other countries. Copyright 2002 Ziff Davis Media Inc. All Rights Reserved. System parameters followed test recommendations: panel brightness 50%, wireless turned off (802.11 and Bluetooth), power management scheme – Laptop/Portable, hard drive, standby and video timers set to never.

NOTE: This test was performed without independent verification by eTesting Labs Inc. eTesting Labs Inc. makes no representations or warranties as to the result of the test. BatteryMark is a trademark of Ziff Davis Publishing Holdings Inc., and affiliate of eTesting Labs Inc., in the U.S. and other countries.

Power Conservation

Hibernation

Instant-on via Standby

Pop-ups with six presets

Supports enhanced Intel SpeedStep Technology (which allows Battery Optimized Mode, Maximum performance Mode, or Automatic mode)

ACPI compliant

Docking

Port Replicator
The sleek port replicator provides simple and convenient port management.
NOTE: Supports all connectivity ports pass through except DVI.

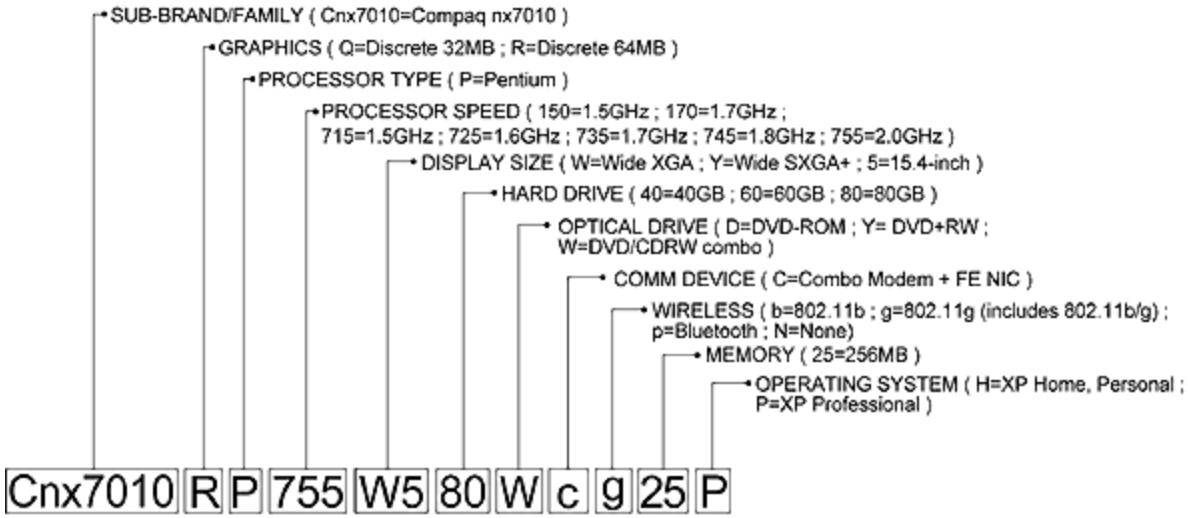
Service and Support

HP Services includes a one-year, Worldwide Limited Warranty, pick-up or carry-in; upgraded warranty and toll-free 7 x 24 hardware technical phone support available. On-site service* is also available.

NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.
http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp?
*on-site service available through HP Care Pack Services for US only.

Naming Convention

The Etymology of a Model name:



Models

Cnx7010QP150W540WCg25P DV140U#ABA	**Processor**	1.5-GHz Intel Pentium M processor with 400-MHz Processor Side Bus	
	Operating System	Microsoft Windows XP Professional	
	Display	15.4-inch color TFT WXGA with 1280 x 800 resolution (up to 16.7M colors internal)	
	Cache Memory	1024-KB L2 cache	
	Memory	**Standard**	256-MB 333-MHz DDR SDRAM (256-MB SODIMM in slot 1)
		Maximum	2048-MB 333-MHz DDR SDRAM (1024-MB SODIMMs in slots 1 and 2)
	Hard Drive	40-GB 4200 rpm Hard Drive	
	Video Memory	32 MB dedicated memory	
	Optical Drive	DVD/CD-RW combo drive	
	Graphics	ATI Mobility Radeon 9200, 64-bit video graphics	
	Audio	JBL Pro Speakers and 16-bit stereo sound Dedicated hardware volume controls Headphone-out port Microphone-in port	
	Communications	High speed 56K modem, integrated 10/100 NIC	
	Wireless	Intel PRO/Wireless 2200BG (802.11b/g) network connection	
	Pointing Device	Touch pad with on/off button and dedicated scroll up/down surface	
	Battery	8-cell Lithium-Ion battery External 65W adapter	
	Warranty	1/1/0	

Cnx7010QP170W560WCg51P DV139U#ABA	**Processor**	1.7-GHz Intel Pentium M processor with 400-MHz Processor Side Bus	
	Operating System	Microsoft Windows XP Professional	
	Display	15.4-inch color TFT WXGA with 1280 x 800 resolution (up to 16.7M colors internal)	
	Cache Memory	1024-KB L2 cache	
	Memory	**Standard**	512-MB 333-MHz DDR SDRAM (256-MB SODIMMs in slot 1 and 2)
		Maximum	2048-MB 333-MHz DDR SDRAM (1024-MB SODIMMs in slots 1 and 2)
	Hard Drive	60-GB 4200 rpm Hard Drive	
	Video Memory	32 MB dedicated memory	
	Optical Drive	DVD/CD-RW combo drive	
	Graphics	ATI Mobility Radeon 9200, 64-bit video graphics	
	Audio	JBL Pro Speakers and 16-bit stereo sound Dedicated hardware volume controls Headphone-out port Microphone-in port	
	Communications	High speed 56K modem, integrated 10/100 NIC	
	Wireless	Intel PRO/Wireless 2200BG (802.11b/g) network connection	
	Pointing Device	Touch pad with on/off button and dedicated scroll up/down surface	
	Battery	8-cell Lithium-Ion battery External 65W adapter	
	Warranty	1/1/0	

Standard Features

Cnx7010RP170Y560WCg51P PL529UA#ABA	**Processor**	Intel Pentium M processor 735 (1.7 GHz, 2-MB L2 cache, 400-MHz Front Side Bus)	
	Operating System	Microsoft Windows XP Professional	
	Display	15.4-inch color TFT WSXGA+ with 1680 x 1050 resolution (up to 16.7M colors internal)	
	Cache Memory	2048-KB L2 cache	
	Memory	**Standard**	512-MB 333-MHz DDR SDRAM (256-MB SODIMMs in slot 1 and 2)
		Maximum	2048-MB 333-MHz DDR SDRAM (1024-MB SODIMMs in slots 1 and 2)
	Hard Drive	60-GB 4200 rpm Hard Drive	
	Video Memory	64 MB dedicated memory	
	Optical Drive	DVD/CD-RW combo drive	
	Graphics	ATI Mobility Radeon 9200, 64-bit video graphics	
	Audio	JBL Pro Speakers and 16-bit stereo sound Dedicated hardware volume controls Headphone-out port Microphone-in port	
	Communications	High speed 56K modem, integrated 10/100 NIC	
	Wireless	Intel PRO/Wireless 2200BG (802.11b/g) network connection	
	Pointing Device	Touch pad with on/off button and dedicated scroll up/down surface	
	Battery	8-cell Lithium-Ion battery External 65W adapter	
	Warranty	1/1/0	

Cnx7010RP735Y580YCg51P PL574UA#ABA	**Processor**	Intel Pentium M processor 735 (1.7 GHz, 2-MB L2 cache, 400-MHz Front Side Bus)	
	Operating System	Microsoft Windows XP Professional	
	Display	15.4-inch color TFT WSXGA+ with 1680 x 1050 resolution (up to 16.7M colors internal)	
	Cache Memory	2048-KB L2 cache	
	Memory	**Standard**	512-MB 333-MHz DDR SDRAM (256-MB SODIMMs in slot 1 and 2)
		Maximum	2048-MB 333-MHz DDR SDRAM (1024-MB SODIMMs in slots 1 and 2)
	Hard Drive	80-GB 4200 rpm Hard Drive	
	Video Memory	64 MB dedicated memory	
	Optical Drive	DVD+RW drive	
	Graphics	ATI Mobility Radeon 9200, 64-bit video graphics	
	Audio	JBL Pro Speakers and 16-bit stereo sound Dedicated hardware volume controls Headphone-out port Microphone-in port	
	Communications	High speed 56K modem, integrated 10/100 NIC	
	Wireless	Intel PRO/Wireless 2200BG (802.11b/g) network connection	
	Pointing Device	Touch pad with on/off button and dedicated scroll up/down surface	
	Battery	8-cell Lithium-Ion battery External 65W adapter	
	Warranty	1/1/0	

Standard Features

Cnx7010RP725W560YCg51P
PL578UA#ABA

Processor	Intel Pentium M processor 725 (1.6 GHz, 2-MB L2 cache, 400-MHz Front Side Bus)	
Operating System	Microsoft Windows XP Professional	
Display	15.4-inch color TFT WXGA with 1280 x 800 resolution (up to 16.7M colors internal)	
Cache Memory	2048-KB L2 cache	
Memory	**Standard**	512-MB 333-MHz DDR SDRAM (256-MB SODIMMs in slot 1 and 2)
	Maximum	2048-MB 333-MHz DDR SDRAM (1024-MB SODIMMs in slots 1 and 2)
Hard Drive	60-GB 4200 rpm Hard Drive	
Video Memory	64 MB dedicated memory	
Optical Drive	DVD+RW drive	
Graphics	ATI Mobility Radeon 9200, 64-bit video graphics	
Audio	JBL Pro Speakers and 16-bit stereo sound Dedicated hardware volume controls Headphone-out port Microphone-in port	
Communications	High speed 56K modem, integrated 10/100 NIC	
Wireless	Intel PRO/Wireless 2200BG (802.11b/g) network connection	
Pointing Device	Touch pad with on/off button and dedicated scroll up/down surface	
Battery	8-cell Lithium-Ion battery External 65W adapter	
Warranty	1/1/0	

Options

Storage	HP USB Digital Drive with 128MB SD memory card	DL702A
	HP 5GB PC Card	DF928A
	USB 1.1 Diskette Drive	DC361B
	SD Card Memory (128MB)	FA135A#AC3
	SD Card Memory (256MB)	FA136A#AC3
	SD Card Memory (512MB)	FA184A#AC3
Memory	256-MB (333-MHz) DDR RAM Memory Upgrade	DC389B
	512-MB (333-MHz) DDR RAM Memory Upgrade	DC390B
	1024-MB (333-MHz) DDR RAM Memory Upgrade	DC890B
Expansion	Basic Port Replicator (USB 2.0)	DC367B#ABA
	4-port USB 2.0 Hub	DG954A
	Monitor Stand	DC377A
Power	Primary Battery Pack (8-cell)	DL615A
	65W 3-wire AC Adapter	DC359A#ABA
	90W AC Adapter	DC895A#ABA
	90W Auto/Truck Adapter	DC303B
	90W Air Cables	DC899A
Carrying Cases	HP Top Load Nylon Case	DC915A
	HP Top Load Leather Case	DC917A
	HP Executive Nylon Case	DC916A
	Value Nylon Case	DL617A
	HP Sport Backpack	DG102A
Security	PC Card Smart Card Reader	DC350B
	Security Cable Lock	DC368A
Input/Output Devices	Wireless Keyboard & Mouse	DL989A#ABA
	USB, PS/2 Keyboard & Optical Mouse	DM687A#ABA
	USB/PS2 Keyboard	DC852A#ABA
	USB/PS2 Mouse	DC369A
	HP USB Travel Mouse (optical mouse)	F2100A

Memory

HP Compaq nx7010 thin and wide Business Notebook

Standard Memory
0-MB of memory on system board,
2 Slots total
1-256-MB DIMM installed in Slot 1
1-Additional open Memory Slot (Only 1 slot user accessible)

(NOTE: 2 slots user accessible-one on the base and one underneath the keyboard deck)

Memory	Slot 1	Slot 2
256 MB	256 MB	Empty

Standard Memory Plus Optional Memory
Support for up to 2048-MB of DDR SDRAM memory is available with the installation of optional DDR SDRAM Memory Kits.

Memory	Slot 1	Slot 2
256 MB	256 MB	--
384 MB	256 MB	128 MB
512 MB	512 MB	--
768 MB	512 MB	256 MB
1024 MB	512 MB	512 MB
1024 MB	1024 MB	--
2048 MB	1024 MB	1024 MB

NOTE: This chart does not represent all possible memory configurations. Due to the non-industry standard nature of some third-party memory modules, we strongly recommend using only HP branded memory modules to ensure compatibility.

Following are memory options available from HP:

- 1024-MB (333-MHz DDR SDRAM Memory Upgrade DC890B
- 512-MB (333-MHz) DDR SDRAM Memory Upgrade DC390B
- 256-MB (333-MHz) DDR SDRAM Memory Upgrade DC389B

Drive Support

System Drive Support	Quantity Supported	Drive Bay Supported
Removable Media		
DVD+RW	1	Dedicated
DVD/CD-RW Combo Drive	1	Dedicated
DVD-ROM Drive	1	Dedicated
Hard Drives		
80-GB Hard Drive	1	Dedicated hard drive bay
60-GB Hard Drive	1	Dedicated hard drive bay
40-GB Hard Drive	1	Dedicated hard drive bay

System Unit	**Dimensions** (HxWxD)	15.4-inch TFT panel display	1.36 x 14.0 x 10.0 in (3.45 x 35.56 x 25.4 cm)
	Weight	15.4-inch LCD, CD-RW, DVD or CD, 1 SODIMM	6.5 lb (2.948 kg)
	NOTE: * = Weight varies by configuration.		
	Stand-Alone Power Requirements	Nominal Operating Voltage (Li-Ion)	14.4 V (8-cell)
		Average Operating Power	15.8 W
		Peak Operating Power	38W
		Power in suspend mode	< 800 mW
		Power in hibernation mode	< 100 mW
	Power Supply	Rated Input Voltage	100 to 240 VAC (auto-switching)
		Rated Input Current	1.3A
		Rated Frequency	50 to 60 Hz
	Temperature	Operating	50° to 95° F (10° to 35° C)
		Non-operating	14° to 140° F (-10° to 60° C)
	Relative Humidity	Operating	10% to 90% relative humidity, non-condensing
		Non-operating	5% to 90% relative humidity, 101.6° F (38.7° C) Maximum wetbulb temperature
	Shock	Operating	10 G, 11 ms, half-sine
		Non-operating	60 G, 11 ms, half-sine
	Vibration	Operating	0.5 G zero-to-peak, 10 to 500 Hz, 0.25 oct/min sweep rate
		Non-operating	1.0 G, zero-to-peak, 10 to 500 Hz, 0.5 oct/min sweep rate
	Maximum Altitude (unpressurized)	Operating	0 to 10,000 ft (0 to 3,048 m)
		Non-operating	0 to 30,000 ft (0 to 9,144 m)

15.4-Inch Color TFT WSXGA Display with wide viewing angle	**Dimensions** (H x W)	13.0 x 8.1 in (33.1 x 20.7 cm)	
	Diagonal Size	15.4 in (39.1 cm)	
	Mounting	Internal Panel Supports, Side Mounted	
	Number of Colors	Up to 16.8M	
	Contrast Ratio	200:1	
	Brightness	180nt typical	
	Pixel Resolution	Pitch	0.193 mm
		Format	1680 x 1050
		Configuration	RGB stripe
	Backlight	Edge Lit	
	Character Display	80 x 25	
	Viewing Angle	±65° Horizontal, ±50° Vertical (typical)	

15.4-Inch Color TFT WXGA Display with wide viewing angle	**Dimensions** (H x W)	13.0 x 8.1 in (33.1 x 20.7 cm)	
	Diagonal Size	15.4 in (39.1 cm)	
	Mounting	Internal Panel Supports, Side Mounted	
	Number of Colors	Up to 16.8M	
	Contrast Ratio	200:1	
	Brightness	180nt typical	
	Pixel Resolution	Pitch	0.259 mm
		Format	1280 x 800
		Configuration	RGB stripe
	Backlight	Edge Lit	
	Character Display	80 x 25	
	Viewing Angle	±65° Horizontal, ±50° Vertical (typical)	

Hard Drives

80-GB (5400 rpm)	**Drive Weight**	0.22 lb (99 g)	
	Capacity	80 GB	
	Height	0.374 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-5	
	Transfer Rate	Synchronous (maximum)	100 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track	3 ms
		Average	13 ms
		Maximum	24 ms
	Rotational Speed	5400 rpm	
	Logical Blocks	156,301,488	
	Operating Temperature	41° to 131° F (5° to 55° C)	
	Features	ATA security	

80-GB (4200 rpm)	**Drive Weight**	0.22 lb (102 g)	
	Capacity	80 GB	
	Height	0.374 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-5	
	Transfer Rate	Synchronous (maximum)	100 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track	3 ms
		Average	13 ms
		Maximum	24 ms
	Rotational Speed	4200 rpm	
	Logical Blocks	156,301,488	
	Operating Temperature	41° to 131° F (5° to 55° C)	
	Features	ATA security	

60-GB (5400 rpm)	**Drive Weight**	0.22 lb (102 g)	
	Capacity	60 GB	
	Height	0.374 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-5	
	Transfer Rate	Synchronous (maximum)	100 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track	3 ms
		Average	13 ms
		Maximum	24 ms
	Rotational Speed	5400 rpm	
	Logical Blocks	117,210,240	
	Operating Temperature	41° to 131° F (5° to 55° C)	
	Features	ATA security	
60-GB (4200 rpm)	**Drive Weight**	0.22 lb (102 g)	
	Capacity	60 GB	
	Height	0.374 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-5	
	Transfer Rate	Synchronous (maximum)	100 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track	3 ms
		Average	13 ms
		Maximum	24 ms
	Rotational Speed	4200 rpm	
	Logical Blocks	117,210,240	
	Operating Temperature	41° to 131° F (5° to 55° C)	
	Features	ATA security	
40-GB (4200 rpm)	**Drive Weight**	0.22 lb (102 g)	
	Capacity	40 GB	
	Height	0.374 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-5	
	Transfer Rate	Synchronous (maximum)	100 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track	3.0 ms
		Average	13 ms
		Maximum	24 ms
	Rotational Speed	4200 rpm	
	Logical Blocks	78,140,160	
	Operating Temperature	41° to 131° F (5° to 55° C)	
		ATA security	

External AC Adapter without Power Faction Correction	**Weight**	0.65 lb (0.29 kg) (adapter) 0.29 lb (0.13kg) (power cord)		
	Power Supply (Input)	Operating Voltage	100 to 240 VAC RMS	
		Operating Current	1.7 A RMS	
		Operating Frequency Range	47 to 63 Hz AC	
		Maximum Transient	4/50 kV	
Lithium-Ion Battery Pack (8-cell)	**Dimensions** (L x W x D)	5.25 x 3.63 x 0.75 in (13.4 x 9.2 x 1.9 cm)		
	Weight	0.96 lb (0.43 kg)		
	Energy	Voltage	14.8 V	
		Amp-hour capacity	Typical 4.4 Ah	
		Watt-hour capacity	Typical 64 Wh	
	Temperature	Operating	32° to 140° F (0° to 60° C)	
		Non-operating	-4° to 140° F (-20° to 60° C)	
DVD+RW Drive	**Access Times**	Random	CD	<175 ms
			DVD	<230 ms
		Full Stroke	CD	<285 ms
			DVD	<335 ms
	Maximum data transfer rate	24X - CD-ROM	3600 KB/s	
		8X - DVD	10,800 KB/s	
		16X - CD-R	2400 KB/s	
		8X - CD-RW	1200 KB/s	
		2X - DVD+R	2700 KB/s	
		2X - DVD+RW	2700 KB/s	
	Transfer Mode	Multiword DMA Mode 2		
	Interface	EIDE		
	Supported Media (read)	CD-DA, CD+(E)G, CD-MIDI, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW		
	Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+RW		
	Maximum Media Capacity (read)	4.7 GB		
	Maximum Media Capacity (write)	4.7 GB		
	Transport	tray loading		

24X DVD/CD-RW Combo Drive	**Access Times**	Random	CD	<110 ms
			DVD	<130 ms
		Full Stroke	CD	<210 ms
			DVD	<225 ms
	Maximum data transfer rate	24X - CD-ROM	3600 KB/s	
		8X - DVD	10,800 KB/s	
		24X - CD-R	3600 KB/s	
		24X - CD-RW	3600 KB/s	
	Transfer Mode	Multiword DMA Mode 2		
	Interface	EIDE		
	Supported Media (read)	CD-DA, CD+(E)G, CD-MIDI, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW		
	Supported Media (write)	CD-R, CD-RW		
	Maximum Media Capacity (read)	4.7 GB		
	Maximum Media Capacity (write)	700 MB		
	Transport	tray loading		

8X DVD-ROM Drive	**Access Times**	Random	CD	< 100 ms
			DVD	< 125 ms
		Full Stroke	CD	< 175 ms
			DVD	< 225 ms
	Maximum data transfer rate	24X - CD-ROM	3600 KB/s	
		8X - DVD	10,800 KB/s	
	Transfer Mode	Multiword DMA Mode 2		
	Interface	EIDE		
	Supported Media (read)	CD-DA, CD+(E)G, CD-MIDI, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW		
	Maximum Media Capacity (read)	4.7 GB		
	Transport	tray loading		

Audio	Features	SoundMAX
	Wavetable Synthesis	
	# of Voices	Up to 1024 (CPU dependent)
	# of MIDI Channels	16
	Max. Sound Set Size	Unlimited (host RAM dependent)
	Sound Set Formats	DLS (Level 1), XGlite
	Bundled GeneralMIDI Sound Set(s)	1.2 MB XGlite
	Built-In Effects	Reverb and Chorus
	Sound Blaster PRO Emulation	Yes
	3D Positioning/Environments	
	Formats Supported	I3DL2/DS3D 7/EAX 2/A3D 1
	Environmental Acoustics	EnvironmentFX (EAX compatible)
	Additional 3D APIs	MacroFX / ZoomFX
	Standard HRTFs	2 Channel
	Hardware	
	Implementation	AC97 CODEC
	Audio Signal Link to CPU	Audio CODEC (AC) link
	Full Duplex	Yes
	Stereo Inputs	Line In - 20K Impedancefrom (with Port Replicator)
	Mono Inputs	Microphone - 20K Impedance
	Stereo Outputs	Analog, S/PDIF from Port Replicator only
	Audio Output Quality	
	Frequency Response	20 Hz - 20 kHz
	Signal to Noise Ratio	>94dB
	Total Harmonic Distortion	0.01%
	Play/Record Sampling Rate(s)	7 kHz - 48 kHz
	AD/DA Resolution	16 bit
	Speakers	JBL Pro
	Amplifier Power	2-Watts RMS
	Speaker Impedance	4-Ohms

Integrated Agere AC'97 Modem	Form Factor	MDC Daughtercard
	Power Management Support	APM Revision 1.2, ACPI
	Approvals/ Certifications	UL, CSA, NEMKO, CCIB, Industry Canada, FCC Part 68, CTR21, FCC Part 15 Class B, Canadian ICES-003 Class B, C.I.S.P.R.22, Australian ACA, CE Mark, Other Countries
	Data Mode Capabilities	High speed 56K modem (a-law, mu-law) V.8bis V.80 V44, V.42bis, MNP5 (Compression) V.42 (LAPM, MNP2-4) (Error Correction) V.34 (file date: 10/96) Optional symbol rates: 2800, 3429 Asymmetric Symbol rates Synchronous primary channel data signaling rates: 3600, 31200 Automatic rate re-negotiation V.32bis V.32 V.23 V.22bis V.22 V.21 Bell 212A Bell 103J
	Fax Mode Capabilities	TIA-578-S (Class 1) T.30, T.4 (Group 3) V.17 V.29 V.27ter V.21 Channel 2
	Command Set	V.250 (Partial) TIA-602 Identification: +GMI, +GMM, +GMR Port control: +IPR, +ICF, +IFC, +ILRR Modulation: +MS, +MR, +MA Error control: +ES, +ER, +EB, +ESR, +ETBM Data compression: +DS, +DR V.251

Intel PRO/Wireless 2200BG Network Connection	Form Factor	Mini PCI Type 3B (model WM3B2200BG)
	Dual Diversity Antenna	On-board dual diversity switching
	Frequency Band	2.4 to 2.497 GHz
	Modulation	CCK, DQPSK, DBPSK, OFDM
	Wireless Medium	2.4 GHz ISM: Direct Sequence Spread Spectrum (DSSS)
	Channels	Full 14 channel support. Multinational support with frequency bands and channels compliant to local regulations.
	Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
	Indoor Range	100 ft (30 m) at 11 Mbps/300 ft (90 m) at 1 Mbps
	Outdoor Range	400 ft (120 m) at 11 Mbps/1500 ft (460 m) at 1 Mbps
	Transmit Output Power	18 dBm (typical) for 802.11b 15 dBm (typical) for 802.11g (varies with data rate)
	Operating Systems	Microsoft Windows XP Professional Microsoft Windows XP Home Microsoft Windows 2000
	WECA	WiFi certification for 802.11b, 802.11g
	WHQL	Yes
	WLAN Standard	IEEE 802.11b, 802.11g
	Architecture	Infrastructure or ad hoc (peer-to-peer)
	Roaming	802.11 compliant for seamless roaming between access points
	Security	LEAP, TKIP, 802.1x, EAP-TLS, 128-bit and 64-bit WEP

Integrated 10/100 NIC	Ethernet Features	10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30) Auto-Negotiation (Automatic Speed Selection) Full and Half Duplex operation at 10 and 100 Mbit/s IEEE 802.1p QoS (Quality of Service) Support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable)
	Power Management	ACPI compliant
	Performance Features	TCP/IP/UDP Checksum Offload (configurable) Microsoft Large Send Offload (configurable) TCP Segmentation Offload CPU Task Offload
	Manageability	PXE Remote Boot
	NIC Device Driver Name	Realtek RTL8139 C+ Fast Ethernet NIC
	Drivers Available	Windows XP Windows 2000

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