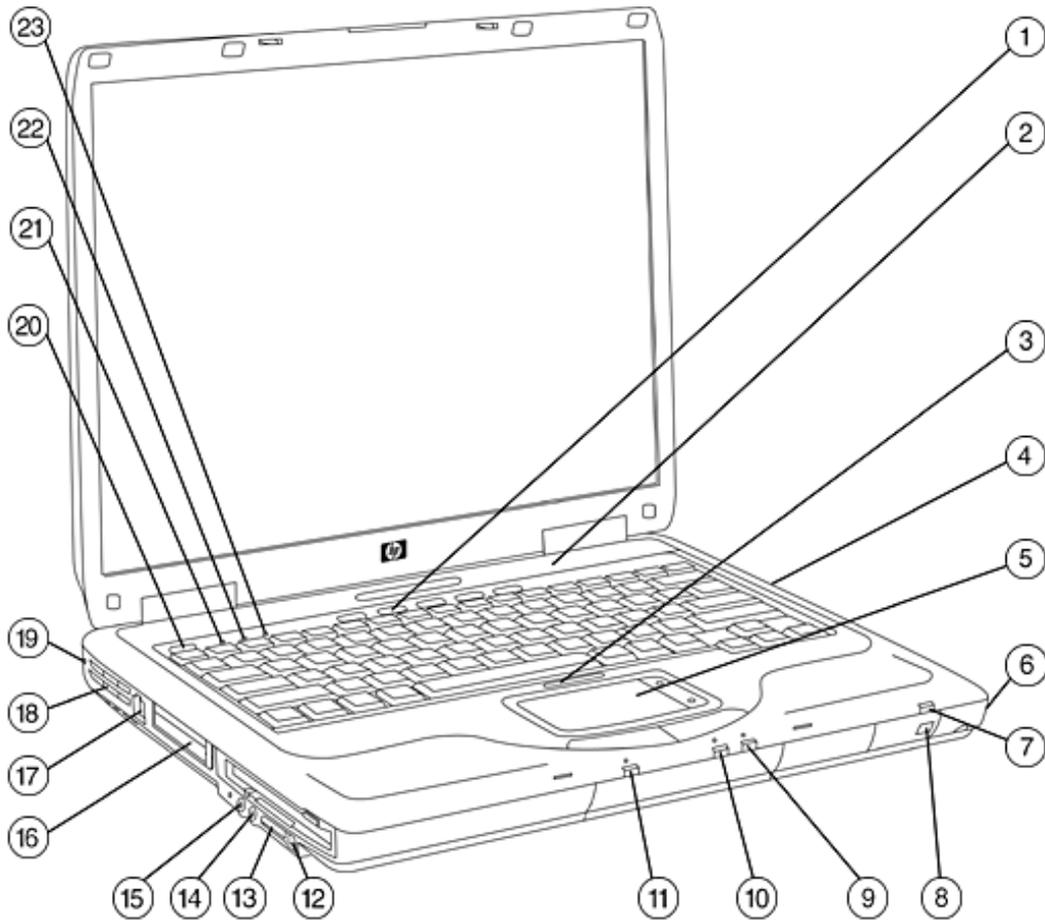
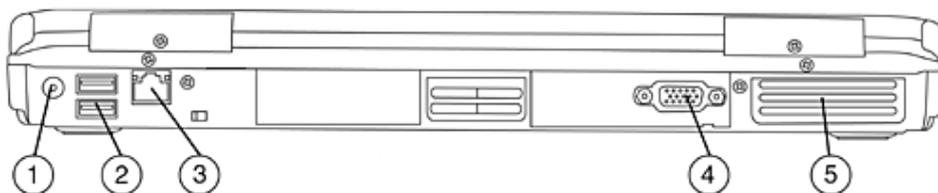


## Overview



- |                             |                       |
|-----------------------------|-----------------------|
| 1. Easy Access Buttons (5)  | 13. Volume Controls   |
| 2. Stereo Speakers          | 14. Headphone         |
| 3. Touch Pad On/Off Button  | 15. Audio In          |
| 4. Fixed Optical Drive      | 16. PC Card Slots (1) |
| 5. Touch Pad                | 17. RJ-11 (Modem)     |
| 6. Primary Battery          | 18. Air Vent          |
| 7. Wireless LED             | 19. Kensington Lock   |
| 8. Wireless On/Off Button   | 20. Power Button      |
| 9. Battery Charging LED     | 21. Caps Lock LED     |
| 10. Hard Drive Activity LED | 22. Num Lock LED      |
| 11. System Power LED        | 23. Keypad LED        |
| 12. Mute Lock LED           |                       |



- |                  |              |
|------------------|--------------|
| 1. DC In         | 4. VGA Video |
| 2. USB Ports (2) | 5. Air Vent  |
| 3. RJ-45         |              |

### Overview

#### At A Glance

- Microsoft Windows XP Professional, Microsoft Windows XP Home
- Intel® Celeron® M processors
  - Intel 852GM with 400-MHz Front Side Bus
- Support for 15-inch display
- Two 266-MHz DDR memory slots with support for up to 1024 MB
- 9.5-mm ATA100 4200-rpm hard drive at 30 GB
- Integrated optical drive support for 24x CD-ROM or 24x DVD/CD-RW combination
- Integrated 10/100 Ethernet NIC
- Support for 802.11b/g solution
- Integrated 56-K data/fax modem
- Support for a wide range of peripheral devices
- Protected by a one-year, worldwide limited warranty (certain restrictions and exclusions apply). Consult the HP Customer Support Center for details.
- 3/3/0 Flexi-warranty available

#### What's Special

- Range of connectivity solutions

### Standard Features

#### Processors

Intel Celeron M Processor 320\* (1.3 GHz, 512K cache, 400 MHz FSB)

Intel Celeron M Processor 340\* (1.5 GHz, 512K cache, 400 MHz FSB)

**NOTE:** Intel Celeron M Processors do not support enhanced Intel SpeedStep™ technology.

Processor speed denotes maximum performance mode; processors run at approximately 600 MHz in battery optimization mode.

\* Intel's numbering is not a measurement of higher performance. All other product names mentioned herein may be trademarks of their respective companies.

#### Operating System

One of the following

Microsoft Windows XP Professional

Microsoft Windows XP Home Edition

#### Chipset

Intel 852GM Chipset with 400MHz Front Side Bus

#### Displays

Internal

15-inch XGA display with 1024 x 768 resolution and 16 M colors

External

Up to 32-bit per pixel color depth

Supports 640 x 480, 800 x 600, 1024 x 768, 1280 x 768, 1280 x 1024, or 1600 x 1200 resolutions up to 100-Hz refresh rate, dependent upon monitor capability, and resolution and color depth settings

**NOTE:** Durable PC-ABS plastic display enclosure.

#### Memory

Standard

Configurable from 256 to 1024 MB 266-MHz DDR SDRAM (SODIMM in slot 1)

Maximum

1024-MB 266-MHz DDR SDRAM (512-MB SODIMMs in slots 1 and 2)

**NOTE:** Uses PC 2700 DDR 333MHz memory module but system runs at 266MHz.

Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility.

#### Communications

LAN

Integrated 10/100 NIC

Wireless

Mini PCI 802.11 b/g on select models

Intel PRO/Wireless 2200BG 802.11b/g Mini PCI on select models

Modem

56 KB data/fax 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.

#### 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 11 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, brightness, display selection, 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.

#### Quick Launch Buttons

Five Quick Launch buttons designed to provide one-touch access to commonly used features including Internet access, Wireless on/off, and Presentation mode

#### Status indicator

Seven LEDs: System power, battery charging, disk activity, Caps Lock, Num Lock, keypad, and wireless

### Standard Features

**Pointing Device** Touchpad with two-way scroll device

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**PC Card Slots** One Type I/II PC Card slot; 16-bit PCMCIA and 32-bit CardBus

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<b>Storage</b>	<b>Hard Drives</b>	9.5 mm, ATA 100 40 GB, 4200 rpm	
	<b>Optical Drives</b>	<b>Fixed Bay</b>	24x CD-ROM 24x DVD/CD-RW combination

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**Multimedia**

- AC Link audio
- Speakers
- External volume control
- Ports for headphone and external microphone
- Microphone in
- Intervideo WinDVD enables MPEG2 playback (CD only – SKUs don't get this software)
- Windows Media Player enables MPEG1 playback (Part of Windows XP)
- Optical drives: 24x CD-ROM, 24x DVD/CD-RW combination

**NOTE:** No internal microphone.

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<b>Interfaces</b>	PC Card	One Type I/II slots
	External Monitor	One port
	16-bit PCMCIA and 32-bit CardBus	One port
	Microphone	One port
	Headphone	One port
	DC power	Auto/Air adapter support External 65 W three-wire AC adapter
	RJ-11	One port – modem
	RJ-45	One port – NIC
	USB 2.0	Two ports

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**Graphics** Integrated Intel Extreme Graphics 2 with up to 64MB of shared system memory for graphics

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**Audio**

- AC Link audio
- Speakers
- Microphone and headphone jacks
- Volume control

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### Standard Features

<b>Software</b>	<b>Preinstalled Software</b>	<p>Adobe Acrobat Reader 6.0</p> <p>HP Quick Launch Button Software</p> <p>HP Mobile Printing Driver</p> <p>HP Help and Support (XP Only)</p> <p>Synaptics Touchpad Driver</p> <p>WinDVD 4.0 – DVD Player (for optional DVD+RW, DVD/CDRW combo and DVD drives)*</p> <p>Symantec Antivirus software</p> <p><b>NOTE:</b> Symantec Norton Antivirus 2003 (Complimentary 60 days Live Update).</p> <p>Sonic RecordNow 6.5 (for optional DVD+RW &amp; DVD/CDRW combo drives)</p>
	<b>Software Available on Internet</b>	<p>Microsoft Windows 2000 drivers</p>
<p><b>NOTE:</b> *Software is loaded on the HDD and must be installed by running the Setup Compaq Software utility.</p>		

<b>System Recovery</b>	<p>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.</p>
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<b>Security</b>	<p>Configuration control through F10 set-up</p> <p>Memory change alert</p> <p>Ownership tag</p> <p>Set-up password</p> <p>Power-on password</p> <p>DriveLock</p> <p>Kensington Lock Slot</p>
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<b>Power Supply</b>	<p>External 65 watt AC adapter with 6-foot (1.8-meter) power cord</p> <p>Total length including external AC adapter is 12 feet (3.66 m)</p>
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<b>Battery</b>	Six-cell Lithium-Ion (2.2 Ah)
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#### Notebook Battery Life benchmark results

HP Compaq nx9020		
Processor/RAM	Celeron M 1.5Ghz	256 MB
Operating System	XP Pro, SP1a	
HDD/Mfr.	40GB	
Video Driver	Intel 852GM	
Resolution/colors	14.1" XGA	
CD-ROM	CD	
BIOS release	Phoenix NB 4.0 rel 6.0	
Battery chemistry	Li-Ion	
Nominal rating	11.1V, 4.4AH, 48 Wh, 6-cell	

Business Winstone BatteryMark 2004	Run Date	COMMENTS
6-cell, Wireless off	3h 35m	

### Standard Features

Power Management Settings	
Scheme	Portable/Laptop
Turn off monitor	Never
Turn off hard disks	Never
System Standby	Never
Hibernation	Off
LCD Brightness	Half brightness under DC power (5/10 clicks)
Volume control	Half
Wireless (802.11 & Bluetooth)	Off

#### Quick Specs disclaimer:

**NOTE:** Actual results may vary with product model, configuration, and individual usage. Hewlett-Packard testing of a HP Compaq nx9020 with an Intel Celeron M 1.5GHz CPU, Windows XP Pro, 14.1-inch XGA LCD, 256-MB RAM, 40-GB HDD, 11.1V Lithium-Ion battery, and NIC/modem, achieved an overall Business Winstone 2004 BatteryMark score of **3h 35m** Business Winstone® 2004 BatteryMark™ Version 1.1 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 2003 Ziff Davis Media Inc. All Rights Reserved.

**Power Conservation** Supports enhanced Intel SpeedStep Technology (which allows Battery Optimized Mode, Maximum Performance Mode, or Automatic mode)  
 Hibernation  
 Instant-on via standby  
 ACPI compliance  
**NOTE:** Enhanced Intel SpeedStep™ technology support is only on Intel Pentium-M processors.

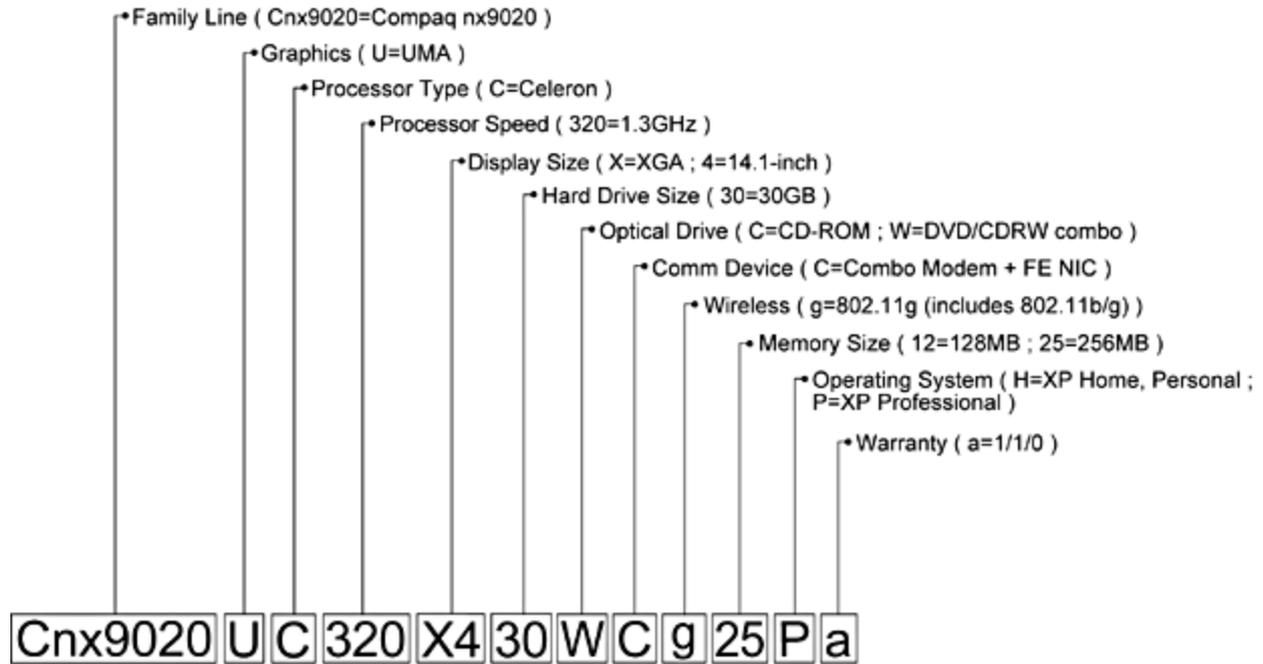
**Wireless Devices** Intel PRO/Wireless 2200BG 802.11b/g wireless LAN Up to 54 Mbps at 2.4 GHz Wi-Fi certified

**Service and Support** HP Services include a one-year Worldwide Limited Warranty, which covers mail-in, pick-up-and-return (PUR), or carry-in support and defective parts replacement for the first year of ownership.  
**NOTE:** Warranty terms may vary by geographic region. For detailed warranty information, refer to the warranty statement included with the product or to the HP website. <http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp>.

### Standard Features

#### Naming Convention

The Etymology of a Model name:



### Models

Hnx9020UC320X430CCN25H  
P/N PR017UA#ABA

<b>Processor</b>	Intel Celeron M 320 (1.3GHz) 400 MHz FSB
<b>Operating System</b>	Microsoft Windows XP Home
<b>Display</b>	15-inch color TFT XGA
<b>Cache Memory</b>	512K, L2 Cache
<b>Standard Memory</b>	256 MB (1 DIMM) 266 MHz DDR
<b>Maximum Memory</b>	1024 MB (266 MHz) DDR
<b>Hard Drive</b>	40 GB
<b>Optical Drive</b>	CD Drive
<b>Communications</b>	Type III Mini PCI 56K high speed modem, (LOM) integrated 10/100 NIC
<b>Graphics</b>	Intel Extreme Graphics 2 with 32MB shared system memory
<b>Warranty</b>	One Year

### Standard Features

Hnx9020UC340X540WCc25P  
P/N PL613UA#ABA

<b>Processor</b>	Intel Celeron M 340 (1.5GHz) 400 MHz FSB
<b>Operating System</b>	Microsoft Windows XP Professional
<b>Display</b>	15-inch color TFT XGA
<b>Cache Memory</b>	512K, L2 Cache
<b>Standard Memory</b>	256 MB (1 DIMM) 266 MHz DDR
<b>Maximum Memory</b>	1024 MB (266 MHz) DDR
<b>Hard Drive</b>	40 GB
<b>Optical Drive</b>	DVD/CD-RW Drive
<b>Communications</b>	Type III Mini PCI 56K high speed modem, (LOM) integrated 10/100 NIC Integrated 802.11b/g WLAN
<b>Graphics</b>	Intel Extreme Graphics 2 with 64MB shared system memory
<b>Warranty</b>	One Year

### Options

<b>Memory</b>	512-MB 333-MHz DDR Memory Upgrade	DC390B
	256-MB 333-MHz DDR Memory Upgrade	DC389B
<b>NOTE:</b> System runs at a maximum of 266 MHz with 333 MHz memory modules installed.		
<b>Other Storage Devices</b>	USB Diskette Drive	DC361B
	HP USB Digital Drive with 128MB SD memory	DL702A
	40 GB USB Hard Drive	DQ549A
<b>Power</b>	Li Lon Standard replacement Battery (8 cell)	F4809A
<b>Common Power Solutions</b>	External Battery Charger	DF933A#ABA
	65W AC Adapter	DC359A#ABA
	AC Adapter 90W	DC895B#ABA
	Auto Power Adapter/Charger (90W)	DC303B
	Aircraft Power Cables (90W)	DC899A
<b>Input Devices</b>	USB Travel Mouse (optical scroll mouse)	F2100A
	USB/PS2 Mouse	DC369A
	Wireless Keyboard and Mouse	DL989A#ABA
<b>Docking</b>	4-Port USB 2.0 Hub	DG954A
<b>Security</b>	Security Cable Lock	DC368A
	PC Card Smart Card Reader	DC350B
<b>Carrying Cases</b>	HP Entry Value Carrying case	DL617A
	HP Top Load Leather Case	DC917A
	HP Sport Backpack	DG102A

### Memory

#### HP Compaq nx9020 Business Notebook

Up to 2048 MB of 266-MHz DDR SDRAM memory

Two DIMM slots (user accessible under the keyboard deck)

DIMM sizes supported: 128 MB, 256 MB, 512 MB, or 1024 MB

#### Standard Memory

- 128 MB (128 MB x 1)
- 256 MB (256 MB x 1)
- 512 MB (512 MB x 1 or 256 MB x 2)
- 1024 MB (512 MB x 2)

#### Optional Memory Upgrades

Support for up to 1024 MB of memory is available (with the installation of optional DDR SDRAM memory kits)

Memory	Slot 1	Slot 2
128 MB	128 MB	Empty
256 MB	256 MB	Empty
512 MB	256 MB	256 MB
512 MB	512 MB	Empty
768 MB	512 MB	256 MB
1024 MB	512 MB	512 MB

**NOTE:** This chart does not represent all possible memory configurations.

**NOTE:** 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.

#### Memory Upgrades

1024 MB 333 MHz

DC890B

512 MB 333 MHz

DC390B

256 MB 333 MHz

DC389B

**NOTE:** System runs at a maximum of 266 MHz with 333 MHz memory modules installed

## Storage

### Removable Media Drive Support

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System Drive Support	Quantity Supported
DVD/CD-RW combination	Up to one - fixed
CD-ROM	Up to one - fixed

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### Hard Drive Support

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System Drive Support	Drive Bay Supported
40-GB 4200 rpm SMART Hard Drive	Dedicated hard drive bay

### Technical Specifications

<b>System Unit</b>	<b>Dimensions (HxWxD)</b>	15-inch TFT panel display support	12.96 x 10.72 x 1.65 in for 15-inch LCD (32.92 x 27.23 x 4.19 cm for 15-inch LCD)
	<b>Weight</b>	With 6-cell std battery With 8-cell std battery (option)	6.78 lb (3.08 kg) with 15-inch display 6.99 lb (3.17 kg) with 15-inch display
<b>NOTE:</b> Height varies depending upon where on the notebook the measurement is made. Weight varies by configuration and components.			
<b>Stand-Alone Power Requirements</b>	Nominal Operating Voltage		11.1V (on 6-cell battery)
			14.8V (on 8-cell battery)
			18.5V (on AC power)
	Average Operating Power		9.76W (on battery) (with portable/laptop)
			19.41W (on AC power)
	Peak Operating Power		65W
	Power in suspend mode		< 200 mW
Power in hibernation mode		< 50 mW	
<b>Temperature</b>	Operating		50° to 95° F (10° to 35° C)
	Non-operating		-4° to 140° F (-20° to 60° C)
<b>Relative Humidity</b>	Operating		10% to 90% relative humidity, non-condensing
	Non-operating		5% to 90% relative humidity, 101.6° F (38.7° C) maximum wet bulb temperature
<b>Shock</b>	Operating		50 G, 2 ms, half-sine
	Non-operating		175 G, 2 ms, half-sine
<b>Random Vibration</b>	Operating		0.75 grms
	Non-operating		1.50 grms
<b>Vibration</b>	Operating		0.5 G, 10 to 500 Hz, 0.5 Oct/Min sweep rate
	Non-operating		1.0 G, 10 to 500 Hz, 0.5 Oct/Min sweep rate
<b>Altitude</b>	Operating		-50 to 10,000 ft (-15.24 to 3,048 m)
	Non-operating		-50 to 40,000 ft (-15.24 to 12,192 m)
<b>Maximum Altitude (unpressurized)</b>	Operating		0 to 10,000 ft (3,048 m) (14.7 to 10.1 psia)
	Non-operating		0 to 30,000 ft (9,144 m) (14.7 to 4.4 psia)
<b>Industry Standard Certifications</b>	Blue Angel		No
	UL		Yes
	Energy Star		Yes
	Canadian Safety		Yes
	CSA (Canada)		Yes
	TUV GS		No
	Nordic Safety		No
	Mexican Safety		Yes
	Poland Compliance		Yes
	Australia/NZ Compliance		Yes
	CCC		Yes
	Taiwan Greenmark		Yes
	Japan Compliance		Yes
	MIC		Yes
BSMI		Yes	
CE Marking Compliance		Yes	
KONCAR		Yes	
GOST		Yes	
SASO		Yes	
SABS		Yes	

### Technical Specifications

UKRSERTCOMPUTER Yes

<b>External AC Adapter</b>	<b>Weight</b>	0.535 lb (0.24 kg) (adapter) 0.29 lb (0.13 kg) (power cord)	
	<b>Power Supply (Input)</b>	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

<b>Primary Lithium-Ion Battery Pack</b>	<b>Dimensions (H x W x L)</b>	2.1 x 9.505 x 13.4.68 cm		
	<b>Weight</b>	0.75 lb (0.34 kg)		
	<b>Cells/Type</b>	6-cell Lithium-Ion	3S2P	
	<b>Energy</b>	Voltage	11.1V	
		Amp-hour capacity	4.4 Ahr	
		Watt-hour capacity	50 Whr	
	<b>Temperature</b>	Operating	Discharge	32° to 158° F (0° to 70° C)
			Charge	32° to 140° F (0° to 60° C)
		Non-operating	For 1 month	-4° to 140° F (-20° to 60° C)
			For 3 months	-4° to 113° F (-20° to 45° C)
<b>Battery Re-Charge Time</b>	System in OFF mode or Standby	For 6 months	-4° to 86° F (-20° to 30° C)	
		~2.3 hours		
	System ON (depending on system power consumption)	Depend on system loading		

<b>15-Inch Color TFT XGA Display</b>	<b>Dimensions (H x W)</b>	11.8 x 9.0 in (30.4 x 22.8 cm)		
	<b>Diagonal Size</b>	15 in (38.0 cm)		
	<b>Mounting</b>	Internal Panel Supports, Side Mounted		
	<b>Number of Colors</b>	16 M		
	<b>Contrast Ratio</b>	250:1 typical		
	<b>Refresh Rate</b>	60 Hz		
	<b>Brightness</b>	150 nit typical (min)		
	<b>Pixel Resolution</b>	Pitch	0.297 x 0.297 mm	
		Format	1024 x 768	
		Configuration	RGB Stripe	
	<b>Backlight</b>	CCFT		
	<b>Character Display</b>	80 x 25		
	<b>Total Power Consumption</b>	5.5 W		
<b>Viewing Angle</b>	±40° degrees Horizontal, +20°/-40° Vertical (typical)			

## Technical Specifications

### Hard Drives

<b>40-GB 4200 rpm</b>	<b>Drive Weight</b>	0.22 lb (102 g)	
	<b>Capacity</b>	40 GB	
	<b>Height</b>	0.374 in (9.5 mm)	
	<b>Width</b>	2.75 in (70 mm)	
	<b>Interface</b>	ATA-5	
	<b>Transfer Rate</b>	Synchronous (maximum)	100 MB/s (Drive Capability)
	<b>Seek Time</b> (typical reads, including settling)	Single Track	3.0 ms
		Average	13 ms
		Maximum	24 ms
	<b>Rotational Speed</b>	4200 rpm	
	<b>Logical Blocks</b>	78,140,160	
	<b>Operating Temperature</b>	41° to 131° F (5° to 55° C)	
<b>Features</b>	ATA security		
<b>24x DVD/CD-RW Combination Drive</b>	<b>Dimensions</b>	0.5 x 5.21 x 4.97 in (1.27 x 13.25 x 12.61 cm)	
	<b>Weight</b>	0.551 lb (250 g)	
	<b>Access Times</b>	Random	<110 ms CD
			<130 ms DVD
		Full Stroke	<210 ms CD
			<225 ms DVD
	<b>Max data transfer rate</b>	24X CD-ROM	3,600 KB/s
		24X CD-R	3,600 KB/s
		24X CD-RW	3,600 KB/s
		8X DVD-ROM	10,500 KB/s
	<b>Transfer Mode</b>	Multiword DMA Mode 2	
	<b>Interface</b>	EIDE	
	<b>Supported Media (read)</b>	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-R, DVD+R, DVD-RW, DVD+RW, DVD-RAM	
	<b>Supported Media (write)</b>	CD-R, CD-RW	
	<b>Max Media Capacity (read)</b>	4.7GB	
<b>Max Media Capacity (write)</b>	700MB		
<b>Transport</b>	Tray Loading		

### Technical Specifications

<b>CD-ROM Drive</b>	<b>Dimensions</b>	0.5 x 5.21 x 4.97 in (1.27 x 13.25 x 12.61 cm)		
	<b>Weight</b>	0.496 lb (225 g)		
	<b>Access Times</b>	Random	<110 ms CD	
		Full Stroke	<220 ms CD	
	<b>Max data transfer rate</b>	24X CD-ROM	3,600 KB/s	
	<b>Transfer Mode</b>	Multiword DMA Mode 2		
	<b>Interface</b>	EIDE		
	<b>Supported Media (read)</b>	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		
	<b>Supported Media (write)</b>	None		
	<b>Max Media Capacity (read)</b>	700MB		
	<b>Max Media Capacity (write)</b>	None		
	<b>Transport</b>	Tray Loading		

<b>Audio</b>	<b>Hardware</b>	<b>Implementation</b>	AC97 CODEC	
		<b>Audio Signal Link to CPU</b>	Audio CODEC (AC) link	
		<b>Full Duplex</b>	Yes	
	<b>Audio Output Quality</b>	<b>Stereo Inputs</b>	Line In - 20K Impedance (with Port Replicator only)	
			Microphone - 20K Impedance	
		<b>Stereo Outputs</b>	Headphone jack, S/PDIF from Port Replicator only	
		<b>Frequency Response</b>	20 Hz – 20 kHz	
		<b>Signal to Noise Ratio</b>	>90dB	
		<b>Total Harmonic Distortion</b>	0.01%	
		<b>Noise Floor</b>	-120dB	
		<b>Play/Record Sampling Rate(s)</b>	7 kHz - 48 kHz	
		<b>AD/DA Resolution</b>	16 bit	

### Technical Specifications

#### Communications

<b>Intel Pro/Wireless 2200BG 802.11b/g WLAN</b>	<b>Wireless LAN Standards</b>	IEEE 802.11b IEEE 802.11g
	<b>Interoperability</b>	Wi-Fi certified (details available at <a href="http://www.hp.com/go/WLAN">http://www.hp.com/go/WLAN</a> )
	<b>Frequency Band</b>	2.402 to 2.494 GHz
	<b>Data Rates</b>	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
	<b>Modulation</b>	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM
	<b>Security</b>	64 and 128 bit WEP encryption Support for WiFi Protected Access (WPA) including TKIP, MIC Support for 802.1x authentication types: EAP-TLS, LEAP (Cisco), PEAP (Microsoft implementation); more details available at <a href="http://www.hp.com/go/WLAN">http://www.hp.com/go/WLAN</a> . Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program).
	<b>Sub-channels</b>	Multinational support with frequency bands and channels compliant to local regulations.
	<b>Media Access Protocol</b>	CSMA/CA (Collision Avoidance) with ACK
	<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	<b>Roaming</b>	IEEE 802.11 compliant roaming between access points.
	<b>Output Power</b>	16 ±2 dBm for CCK 11 +6/-1 dBm for OFDM (power varies by data rate) Maximum output power may vary by country according to local regulations
	<b>Power Consumption</b>	Transmit: 1.8 Watts (max) Receive: 1.0 Watts (max) Idle mode: 75mW, nominal
	<b>Power Management</b>	ACPI compliant power management 802.11 Compliant Power Saving Mode
	<b>Receiver Sensitivity<sup>1</sup></b>	54 Mbps: -72 dBm, 11 Mbps: -84 dBm, 1 Mbps: -94 dBm
	<b>Antenna type</b>	High efficiency dual band antenna with polarization diversity, mounted in the display enclosure
	<b>Range (typical)</b>	Outdoor 1200 feet at 1 Mbps 250 feet at 54 Mbps Indoor 300 feet at 1 Mbps 50 feet at 54 Mbps
	<b>Form Factor</b>	MiniPCI Type IIIB
	<b>Weight</b>	0.026 lb (11.75 g) max
	<b>Dimensions</b>	0.20 x 1.75 x 2.34 in (4.9 x 44.6 x 59.8 mm)
	<b>Operating Voltage</b>	3.3v
	<b>Temperature</b>	Operating 32° to 158° F (0° to 70° C) Non-operating -40° to 176° F (-40° to 80° C)

### Technical Specifications

<b>Humidity</b>	Operating	10 to 90% (non-condensing)
	Non-operating	5 to 95% (non-condensing)
<b>Altitude</b>	Operating	0 to 10,000 ft (0 to 3,048 m)
	Non-operating	0 to 50,000 ft (0 to 15,240 m)
<b>Configuration Utility</b>	Choice of Configuration Utility:	
	<ul style="list-style-type: none"> <li>● Intel PROset for Microsoft Windows 2000 or XP (required for Cisco Compatible Extensions support)</li> <li>● Microsoft Windows XP Wireless Zero Configuration Utility</li> </ul>	
	<b>NOTE:</b> May also be compatible with certain third party software supplicants.	
<b>LED Activity</b>	LED Off – Radio OFF; Solid LED On – Radio ON	
	<p><small>1 Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).</small></p>	

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<b>Integrated 10/100 NIC</b>	<b>Ethernet Features</b>	<p>10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14)</p> <p>100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30)</p> <p>Auto-Negotiation (Automatic Speed Selection)</p> <p>Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s</p> <p>IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable)</p>
	<b>Power Management</b>	<p>ACPI 1.1a compliant -- multiple power modes</p> <p>Situation-sensitive features reduce power consumption</p>
	<b>Manageability</b>	<p>Wake-on-LAN from all Power-Managed States (configurable; Magic Packet and Microsoft Wake-Up Frame)</p> <p>PXE 2.0 Remote Boot</p> <p>Statistics Gathering (RMON, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30))</p> <p>Comprehensive diagnostic and configuration software suite</p>
	<b>NIC Device Driver Name</b>	Broadcom 440X 10/100 Integrated Controller
	<b>Drivers Available</b>	<p>Windows XP</p> <p>Windows 2000</p> <p>DOS NDIS2 and ODI</p>

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### Technical Specifications

<b>Conexant Modem</b>	<b>Form Factor</b>	Modem On Motherboard
	<b>Power Management Support</b>	APM Revision 1.2, ACPI
	<b>Approvals/Certifications</b>	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
	<b>Data Mode Capabilities</b>	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) <b>Optional symbol rates:</b> 2800, 3429 Asymmetric Symbol rates <b>Synchronous primary channel data signaling rates:</b> 3600, 31200 Automatic rate re-negotiation V.32bis V.32 V.23 V.22bis V.22 V.21 Bell 212A Bell 103J TIA-578-S (Class 1) T.30, T.4 (Group 3) V.17 V.29 V.27ter V.21 Channel 2
	<b>Fax Mode Capabilities</b>	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
	<b>Command Set</b>	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

### Technical Specifications

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