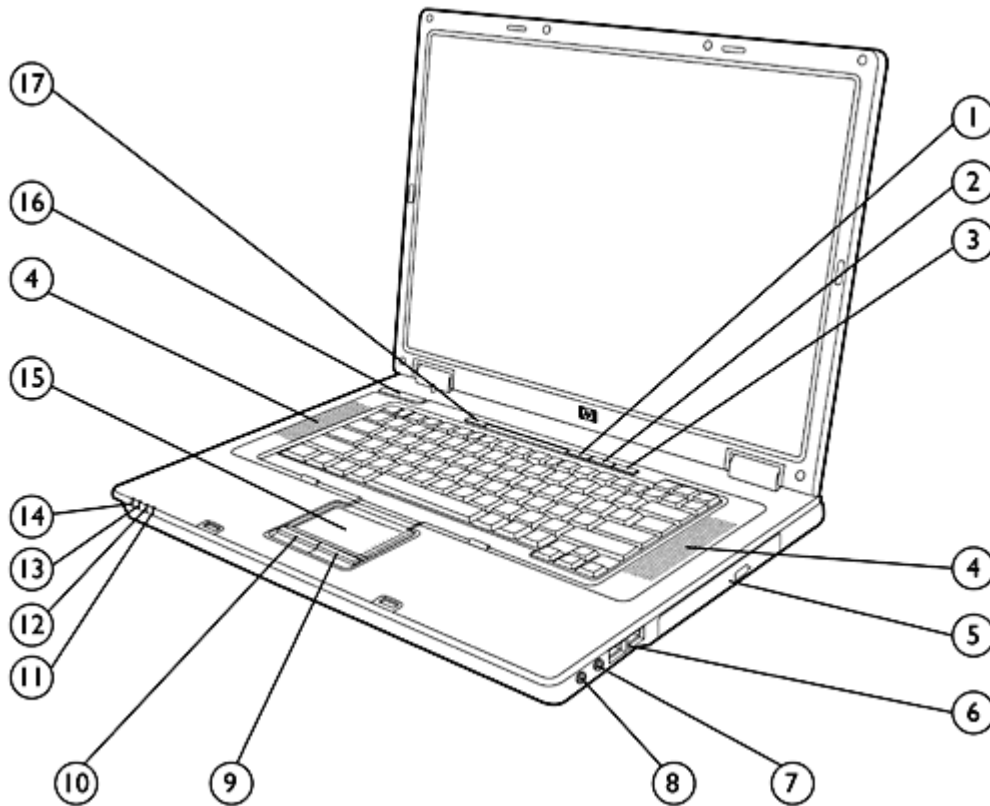
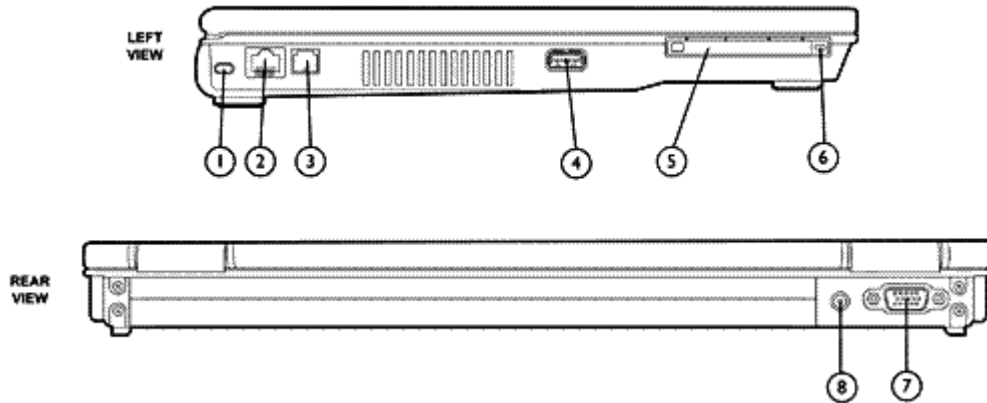


## Overview



1. Volume Mute Button with LED
2. Volume Down Button
3. Volume Up Button
4. Stereo Speakers
5. Integrated Optical Drive (optional)
6. 2 USB 2.0 Ports
7. Microphone Jack
8. Headphone Jack
9. Right Touchpad Button
10. Left Touchpad Button
11. Internal Storage Activity LED
12. Battery Charging LED
13. Power/Standby LED
14. Wireless On/Off LED
15. Touchpad with scroll zone
16. Power Button with LED
17. Wireless On/Off Button with LED

### Overview



- |                         |                              |
|-------------------------|------------------------------|
| 1. Kensington Lock Slot | 5. PC Card Slot              |
| 2. RJ-45 Port (NIC)     | 6. PC Card Eject Button      |
| 3. RJ-11 Port (Modem)   | 7. VGA/External Monitor Port |
| 4. USB 2.0 Port         | 8. Power Connector           |

### At A Glance

- Genuine Windows XP Embedded
- Sleek light-weight design starting at 5.4 lb (2.45 kg) and 1.2 inch (30 mm) thin at front
- 15.4-inch wide screen display
- Intel® Celeron® M processor
- Mobile Intel 945GM Express Chipset
- 1GB of 667 MHz DDR2 SDRAM
- Intel Graphics Media Accelerator 950
- 1GB or 2GB Flash Module
- Optional DVD-ROM Drive
- 802.11 a/b/g wireless LAN module
- Protected by a one-year standard parts and labor warranty – certain restrictions and exclusions apply.

### Standard Features

Processors	Intel Celeron M Processor 423* (1.06-GHz, 1-MB L2 cache, 533-MHz FSB) * Intel's numbering is not a measurement of higher performance. <b>NOTE:</b> Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.	
Operating System	Preinstalled	Genuine Windows XP Embedded
Chipset	Mobile Intel 945GM Express Chipset	
Graphics	Intel Graphics Media Accelerator 950 with up to 224-MB shared system memory Microsoft DirectX 9 capable	
Display	<b>Internal</b> <b>External</b>	15.4-inch WXGA display with 1280 x 800 resolution Up to 32-bit per pixel color depth VGA port supports resolutions up to 2048 x 1536 at 75 Hz, and lower resolutions at up to 100 Hz <b>NOTE:</b> Resolutions are dependent upon monitor capability, and resolution and color depth settings.
Memory	<b>Standard</b> <b>Maximum</b>	1024-MB 667-MHz DDR2 SDRAM SODIMM; one SODIMM slot Supports up to 2048-MB maximum <b>NOTE:</b> Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility.
Communications	Integrated Broadcom 10/100 Ethernet PCI Controller 56K V.92 modem* with digital line guard * Designed for downloads from 56K modem compliant sources. Maximum achievable download transmission rates currently do not reach 56 KB/s, and will vary with line conditions. Modem availability is subject to country regulatory approval.	
Integrated wireless LAN	<b>Broadcom 4311AG WiFi Adapter</b>	Integrated support for 802.11 a, b and g Up to 54-mbps data rate Wi-Fi certified for WPA2, WMM Cisco Compatible Extensions support (Version 4.0) Wired Equivalent Privacy (WEP) support up to 128-bit keys Wi-Fi Protected Access (WPA) and WPA2 support 802.1x authentication support, including EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, and LEAP Advanced Encryption Standard (AES) support s Dual antennas integrated in the display enclosure

### Standard Features

**Keyboard** The 101/102-key compatible keyboard features an industry standard, full-pitch key layout with desktop keyboard features, such as the isolated inverted-T cursor control keys, editing keys, both left and right control and alt keys, and 12 function keys. US and International key layouts are available. Other features include an integrated numeric keypad, hotkeys for instant access to power conservation, brightness, and other features, 19-mm x 19-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.

**One-Touch Productivity Buttons** Provide one-touch access to the following features: Wireless On/Off, Volume down, Volume up, and Volume Mute.

**Pointing Device** Touchpad with scroll zone and two soft-touch buttons

**Expansion Card Slots** **One Type I/II PC Card slot** Supports 32-bit CardBus and 16-bit PC Cards

**Internal Storage**

<b>Primary Storage</b>	1 GB Flash Module 2 GB Flash Module
<b>Optional Fixed Optical Drive</b>	DVD-ROM

**Interfaces**

<b>PC Card Slot</b>	One – Type I/II
<b>External Monitor</b>	One – VGA
<b>External Microphone</b>	One
<b>Headphone/Line out</b>	One
<b>Power Connector</b>	One
<b>RJ-11 (Modem)</b>	One
<b>RJ-45 (NIC)</b>	One
<b>USB 2.0</b>	Three
<b>Docking Connector</b>	One
<b>Accessory Battery Connector</b>	One
<b>LED Status Indicators</b>	Nine

**Audio** ADI1981HD High Definition CODEC  
Integrated 16-bit Sound Blaster Pro compatible audio  
24-bit DAC  
Integrated stereo speakers  
External volume up, volume down, and mute buttons  
Stereo headphone/line out  
Stereo microphone in

### Standard Features

<b>Software</b>	<b>Preinstalled Software</b>	Enhanced Write Filter Altiris Deployment Client HP ThinState Tools HP Session Allocation Manager Microsoft RDP Citrix ICA HP Quick Launch Buttons TeemNT Terminal Emulation Intervideo WinDVD
	<b>Additional software available from the Web</b>	HP RGS Graphics Compression Client HP OpenView Client Configuration Manager .NET Framework 2.0 Sun JVM PDF Complete

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**SMBIOS Version 2.4** System Management BIOS, previously known as DMI BIOS, is used to store system management information.

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<b>Security</b>	<b>Standard Features</b>	Configuration Control Hardware Memory Change Alert Ownership Tag Setup Password Power-On Password Kensington Lock Slot
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**Power Supply** External 65-watt Smart AC adapter, 6-foot (1.8-meter) power cord included. Total length including External AC adapter is 12 feet (3.66 meter). HP Fast Charge Technology\*

\*Fast Charge Technology recharges your battery up to 90% within 90 minutes when the system is off. Fast Charge Technology does not apply to 12-cell Ultra-Capacity batteries.

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<b>Battery</b>	<b>Primary Battery</b>	6-cell (47Wh) high capacity Lithium-Ion
	<b>Optional 8-Cell Extended Life Battery</b>	8-cell (52Wh) high capacity Lithium-Ion
	<b>Optional HP 12-Cell Ultra-Capacity Battery</b>	12-cell (95Wh) high capacity Lithium-Ion

### Standard Features

Battery Life	Primary Battery	Up to 5 hours
	Primary Battery and optional HP 8-Cell Extended Life Battery	Up to 10 hours and 45 minutes
	Primary Battery and optional HP 12-Cell Ultra-Capacity Battery	Up to 14 hours and 30 minutes

**NOTE:** The listed battery life measurements were taken on models running Microsoft Windows XP Professional. Battery life will vary depending on the product configuration, product model, applications loaded on the product, power management settings of the product, and the product features used by the customer. As with all batteries, the maximum capacity of this battery will decrease with time and usage.

System Standby Time	Up to 1 week
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Power Conservation	Standby ACPI compliance
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Docking	HP Docking Station
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HP's shared docking solution provides simple and convenient port replication and cable management. Supported features include 10/100 Ethernet NIC pass through, modem pass through, legacy parallel and serial ports, USB 2.0 ports, and integrated security mechanism.\* This docking solution is compatible across multiple Business Notebook platforms enabling a lower total cost of ownership.

\*HP/Kensington Cable Lock required (purchased separately)

Service and Support	HP Services includes a one-year standard parts and labor warranty, pick-up or carry-in, and toll-free 7 x 24 hardware technical phone support (depending on model). On-site service and warranty upgrades are also available. HP Care Pack Services extend service contracts beyond the standard warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at <a href="http://www.hp.com/go/lookuptool">http://www.hp.com/go/lookuptool</a> . Additional HP Care Pack Services information by product is available at <a href="http://www.hp.com/hps/carepack">http://www.hp.com/hps/carepack</a> .
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**NOTE:** Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details. <http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp>.

### Options

<b>Other Storage</b>	HP USB Diskette Drive	DC361B
<b>Expansion Solutions</b>	HP Docking Station	EN488AA#xxx
	HP Monitor Stand	PA507A
	HP Adjustable Notebook Stand	PA508A
<b>Power</b>	HP 1-bay Battery Charging Station	RW635AA#xxx
	HP 5-bay Battery Charging Station	RW636AA#ABA
	Battery Adapter Kit	RW637AA
	65W Smart AC Adapter	ED494AA#xxx
	90W Smart AC Adapter	ED495AA#xxx
	90W Smart Auto Adapter	ED493AA
	65W Air/Auto/AC Smart Combo Adapter	ED993AA#xxx
	6-cell 47Whr Li Ion Battery	TBD
	HP 8-cell Extended Life Battery	PB993A
	HP 12-cell Ultra-Capacity Battery	EJ092AA
<b>Carrying Cases</b>	HP Basic Carrying Case	AJ078AA
	HP Value Nylon Case	RR314AA
	HP Universal Nylon Case	RR315AA
	HP Executive Leather Case	RR316AA
	HP Deluxe Nylon Backpack	RR317AA
	HP Deluxe Roller Case	GD405AA
<b>Security</b>	HP/Kensington MicroSaver Security Lock	PC766A
<b>Input/Output Devices</b>	USB/PS2 Optical Mouse	DC369A
	HP USB Optical Travel Mouse	RH304AA

## Storage

### Removable Media Drive Support

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	Quantity Supported	Drive Bay
DVD-ROM Drive	One	Fixed optical drive bay

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### Internal Storage Support

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	Quantity Supported	Drive Bay
<b>Primary Hard Drives</b>		
1 GB Flash Module	One	Flash Drive Bay
2 GB Flash Module	One	Flash Drive Bay

### Technical Specifications

<b>System Unit</b>	<b>Dimensions (HxWxD)</b>	1.2 in (at front) x 14.1 in x 10.2 in 30 mm (at front) x 357 mm x 260 mm
	<b>Weight</b>	5.4 lb (2.45 kg)
	<b>NOTE:</b> Height varies depending upon where on the notebook the measurement is made. Weight includes 6-cell battery, 1 GB memory, 1 GB flash module, 802.11 wireless communications module. Weight varies by configuration and components.	
<b>Stand-Alone Power Requirements</b>	Normal Operating Voltage	19 V
	Average Operating Power	25 W
	Max Operating Power	< 65 W
<b>Temperature</b>	Operating	32° to 95° F (0° to 35° C)
	Non-operating	-4° to 140° F (-20° to 60° C)
<b>Relative Humidity</b>	Operating	10% to 90%, non-condensing
	Non-operating	5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
<b>Shock</b>	Operating	125 G, 2 ms, half-sine
	Non-operating	200 G, 2 ms, half-sine
<b>Random Vibration</b>	Operating	0.75 grms
	Non-operating	1.50 grms
<b>Altitude (unpressurized)</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>Industry Standard Certifications</b>	UL	Yes
	CSA	Yes
	FCC Compliance	Yes
	ICES	Yes
	Australia / NZ A-Tick Compliance	Yes
	CCC	Yes
	Japan VCCI Compliance	Yes
	MIC	Yes
	BSMI	Yes

### Technical Specifications

HP 65W Smart AC Adapter	Dimensions	4.17 x 1.85 x 1.1 in (10.6 x 4.7 x 2.8 cm)	
	Weight	0.62 lb (280 g)	
	Input	Input	100 to 240 VAC
		Input Efficiency	83% min at 115 VAC
		Input frequency range	47 to 63 Hz
	Output	Input AC current	1.7 A at 90 VAC, 0.85 A at 180 VAC
		Output power 65W	65W
		DC output	18.5V
		Hold-up time	5 msec at 115 VAC input
		Output current limit	<11A, Over voltage protection- 29V max automatic shutdown
	Connector	3 pin/grounded, mates with interchangeable cords	
	Environmental Design	Operating temperature	32° to 104° F (0° to 40° C)
		Non-operating (storage) temperature	-4° to 149° F (-20° to 65° C)
		Altitude	0 to 10,000 ft (0 to 3,048 m)
		Humidity	20% to 80%
EMI and Safety Certifications	Storage Humidity	10% to 90%	
	CE Mark – full compliance with LVD and EMC directives; Worldwide safety standards – IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals – C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE; MTBF – over 200,000 hours at 25°C ambient condition.		
	Option Kit Contents	65W AC Adapter, power cable, warranty booklet	

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47Wh Primary 6-Cell Battery	Dimensions (H x W x L)	0.8 x 1.9 x 10.6 in (2.0 x 4.8 x 27.0 cm)	
	Weight	0.74 lb (0.336 kg)	
	Cells/Type	6-cell Lithium-Ion	
	Energy	Watt-hour Capacity	47Wh
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 140° F (-10° to 60° C)
		Non-operating	-4° to 140° F (-20° to 60° C)
	Battery Re-Charge Time	System in OFF mode or Standby	2.5 hours
System ON		3 to 5 hours (depending on system power consumption)	
HP Fast Charge Technology		Charges the battery up to 90% within 1.5 hours when system is OFF	

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### Technical Specifications

Optional HP 8-Cell Extended Life Battery	Dimensions (H x W x L)	1.0 x 3.9 x 8.7 in (2.5 x 10.0 x 22.0 cm)		
	Weight	1.00 lb (0.455 kg)		
	Cells/Type	8-cell Lithium-Ion		
	Energy	Watt-hour Capacity	52Wh	
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)	
		Operating (Discharging)	14° to 140° F (-10° to 60° C)	
		Non-operating	-4° to 140° F (-20° to 60° C)	
	Battery Re-Charge Time	System in OFF mode or Standby	3 hours	
		System ON	3 to 5 hours (depending on system power consumption)	
		HP Fast Charge Technology	Charges the battery up to 90% within 90 minutes when system is OFF	
Fuel Gauge	When pressed, LEDs light indicating level of charge remaining on battery			

Optional HP 12-Cell Ultra-Capacity Battery	Dimensions (H x W x L)	1.3 x 6.0 x 10.6 in (3.33 x 15.25 x 26.88 cm)		
	Weight	1.77 lb (0.803 kg)		
	Cells/Type	12-cell Lithium-Ion		
	Energy	Watt-hour Capacity	95Wh	
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)	
		Operating (Discharging)	14° to 140° F (-10° to 60° C)	
		Non-operating	-4° to 140° F (-20° to 60° C)	
	Battery Re-Charge Time	System in OFF mode or Standby	3 to 4 hours	
		System ON	4 to 5 hours (depending on system power consumption)	
	Fuel Gauge	When pressed, LEDs light indicating level of charge remaining on battery		

15.4-inch Color TFT WXGA Display	Active Area (W x H)	13.0 x 8.1 in (33.1 x 20.7 cm)		
	Diagonal Size	15.4 in (39.1 cm)		
	Surface Treatment	Anti-glare		
	Contrast Ratio	300:1 (typical)		
	Refresh Rate	60 Hz		
	Brightness	170 nit (typical)		
	Pixel Resolution	Pitch	0.259 mm	
		Format	1280 x 800	
		Configuration	RGB stripe	
	Backlight	CCFL		
PPI	98			
Viewing Angle	±45° Horizontal, ±25° Vertical (typical)			

## Technical Specifications

### Internal Storage

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<b>1 GB Flash Module Drive (PATA)</b>	<b>Interface</b>	Standard ATA / IDE
	<b>Connector</b>	40-pin (2.54mm pitch) / 44-pin (2.00mm pitch)
	<b>Capacities</b>	1 GB
	<b>Transfer mode</b>	PIO Mode-4; MWDMA Mode-2
	<b>Sustained Read/Write Performance</b>	11 / 7 (MB/sec)
	<b>ECC Support</b>	3 random 12 bit symbol ECC per 512 bytes (RS)
	<b>Low Power Consumption (3.3V/5.0V)</b>	Active mode: 35mA/55mA Sleep mode: 100µA/150µA
	<b>Security function</b>	Write protection jumper (Optional) Factory-programmed, up to 20-byte unique ID (Software Protect mechanism) Protection Zone (Optional)
	<b>Product types</b>	Standard, Low-profile, Housing, Through Pin, Dual Through Pin
	<b>Orientation</b>	180D

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<b>2 GB Flash Module Drive (PATA)</b>	<b>Interface</b>	Standard ATA / IDE
	<b>Connector</b>	40-pin (2.54mm pitch) / 44-pin (2.00mm pitch)
	<b>Capacities</b>	2 GB
	<b>Transfer mode</b>	PIO Mode-4; MWDMA Mode-2
	<b>Sustained Read/Write Performance</b>	11 / 7 (MB/sec)
	<b>ECC Support</b>	3 random 12 bit symbol ECC per 512 bytes (RS)
	<b>Low Power Consumption (3.3V/5.0V)</b>	Active mode: 35mA/55mA Sleep mode: 100µA/150µA
	<b>Security function</b>	Write protection jumper (Optional) Factory-programmed, up to 20-byte unique ID (Software Protect mechanism) Protection Zone (Optional)
	<b>Product types</b>	Standard, Low-profile, Housing, Through Pin, Dual Through Pin
	<b>Orientation</b>	180D

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### Removable Storage Drives – Fixed Bay

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### Technical Specifications

DVD-ROM Drive	Access Times	Random	<116 ms CD <125 ms DVD
	Max Data Transfer Rate	24X CD-ROM	3,600 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	
	Supported Media (write)	None	
	Max Media Capacity (read)	4.7 GB	
	Transport	Tray Loading	

### PremierSound Audio

Hardware	Implementation	ADI1981HD High Definition CODEC
	Volume Controls	Up, down, and mute buttons
	Full Duplex	Yes
	Sound Blaster Pro compatible	Yes
	Microphone Jack	Stereo or mono
	Headphone/Line Out Jack	Stereo

Audio Output Quality	Frequency Response	20 Hz – 20 kHz
	Signal to Noise Ratio	>85 dB
	Total Harmonic Distortion	0.01%
	Noise Floor	-110 dB
	Play/Record Sampling Rate(s)	8 kHz – 48kHz
	DAC	16, 20 or 24-bit
	ADC	16 or 20-bit

Internal Speakers	Power Rating	2 Watts
	Impedance	4 Ohms

### Technical Specifications

#### Communications

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<b>Integrated Broadcom 10/100 Ethernet PCI Controller (BCM4401)</b>	<b>Ethernet Features</b>	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 Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable)
	<b>Power Management</b>	ACPI compliant -- multiple power modes Situation-sensitive features reduce power consumption
	<b>Manageability</b>	Wake-on-LAN from standby (configurable; Magic Packet and Microsoft) Wake-Up Frame)PXE 2.1 Remote Boot Statistics Gathering (RMON, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30) Comprehensive diagnostic and configuration software suite
	<b>Interface</b>	32-bit PCI, 33-MHz
	<b>NIC Device Driver Name</b>	Broadcom 440X 10/100 Integrated Controller

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<b>V.92 56K Data/Fax Modem</b>	<b>Form Factor</b>	MDC 1.5 Daughtercard
	<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>	V.92 data V.8bis V.80 V44, V.42bis, MNP5 (Compression) V.42 (LAPM, MNP2-4) (Error Correction) <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.34 V.32bis V.32 V.23 V.22bis V.22 V.21 Bell 212A

### Technical Specifications

	Bell 103J
<b>Fax Mode Capabilities</b>	TIA/EIA-578-B (Class 1) T.30, T.4 (Group 3) V.17 V.29 V.27ter V.21 Channel 2
<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

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<b>Broadcom 4311AG 802.11a/b/g WiFi Adapter</b>	<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g
	<b>Interoperability</b>	Wi-Fi certified Cisco Compatible Extensions Program compliant (details at: <a href="http://www.hp.com/go/notebooks/WLAN">www.hp.com/go/notebooks/WLAN</a> )
	<b>Frequency Band</b>	2.4 GHz and 5 GHz
	<b>Data Rates</b>	802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
	<b>Modulation</b>	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM
	<b>Security<sup>1</sup></b>	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP- MSCHAPv2, LEAP, EAP-FAST, EAP-SIM.  Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4).
	<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 (for CCK)<sup>2</sup></b>	17.5 dBm
	<b>Output Power (for OFDM; power varies by data rate)<sup>2</sup></b>	15 dBm



## Technical Specifications

**Eco Data**

**Eco-Label Certifications**

This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

- IT ECO declaration

**System Configuration**

The configuration used for the Energy Consumption and Declared Noise Emissions data for the Convertible Mini tower Desktop model is based on a "Typically Configured Notebook"

**Energy Consumption**

	115 VAC	230 VAC	100 VAC
Normal Operation	8.48 W	8.56 W	8.28 W
Sleep (Energy Star low power mode)	1.30 W	1.38 W	1.31 W
Off	0.841 W	0.915 W	0.839 W

**Heat Dissipation\***

	115 VAC	230 VAC	100 VAC
Normal Operation	29 BTU/hr	29 BTU/hr	28 BTU/hr
Sleep	4 BTU/hr	5 BTU/hr	5 BTU/hr
Off	3 BTU/hr	3 BTU/hr	3 BTU/hr

\* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

This product is in compliance with US executive order 13221, WOL (wake on LAN) disabled.

**Declared Noise Emissions  
(in accordance with  
ISO 7779 and ISO 9296)**

	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Idle	3	23
Operation	3	23

**Batteries**

This product complies with ISO standards:

- EU Directive 91/ 157/ EEC
- EU Directive 93/ 86/ EEC
- EU Directive 98/ 101/ EEC

Batteries used in the product do not contain:

- Mercury greater than 5ppm by weight
- Cadmium greater than 10ppm by weight
- Lead greater than 4000 ppm by weight.

The battery type and chemistry used in the product is:

Coin cell, Lithium  
6-Cell High capacity Lithium-Ion battery

**Additional  
information**

This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2002/95/EC.

This HP product is designed to comply with the Waste Electrical and



### Technical Specifications

Electronic Equipment (WEEE) Directive - 2002/96/EC.

This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).

Keyboard complies with ISO standard: ISO 9995, EN 29241-4, and ISO/IEC 15412

Input devices of this product comply with ISO 9241, part 9.

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

This product contains 0% recycled materials (by wt.)

This product is greater than 96.7% recycle-able when properly disposed of at end of life.

#### Packaging Materials

- External:
  - Paper / Cardboard 10 g
  - PET
- Internal:
  - EPE-Expanded Polyethylene 20 g
- The Paper / Cardboard packaging material is made from 100% recycled content.
- The PET packaging materials contains at least 100% recycled content.
- The EPE-Expanded Polyethylene packaging materials contains at least 100% recycled content.

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

#### Material Usage

This product does not contain any of the following substances in excess of regulatory limits (for reference of these limits please refer to the HP General Specification of the Environment (<http://www.hp.com/hpinfo/globalcitizenship/environment/>

### Technical Specifications

[supplychain/gen\\_specifications.html](#)):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants - may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Nickel - finishes must not be used on the external surface designed to be frequently handled or carried by the user.
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) - except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

#### End-of-life Management and Recycling

Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: <http://www.hp.com/go/reuse-recycle> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/recyclers>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

#### Hewlett-Packard Corporate Environmental Information

For more information about HP's commitment to the environment: Global Citizenship Report

<http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html>

Environment website

<http://www.hp.com/environment>

Eco-label certifications

<http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html>

ISO 14001 certificates:

<http://www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html>

### *Technical Specifications*

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