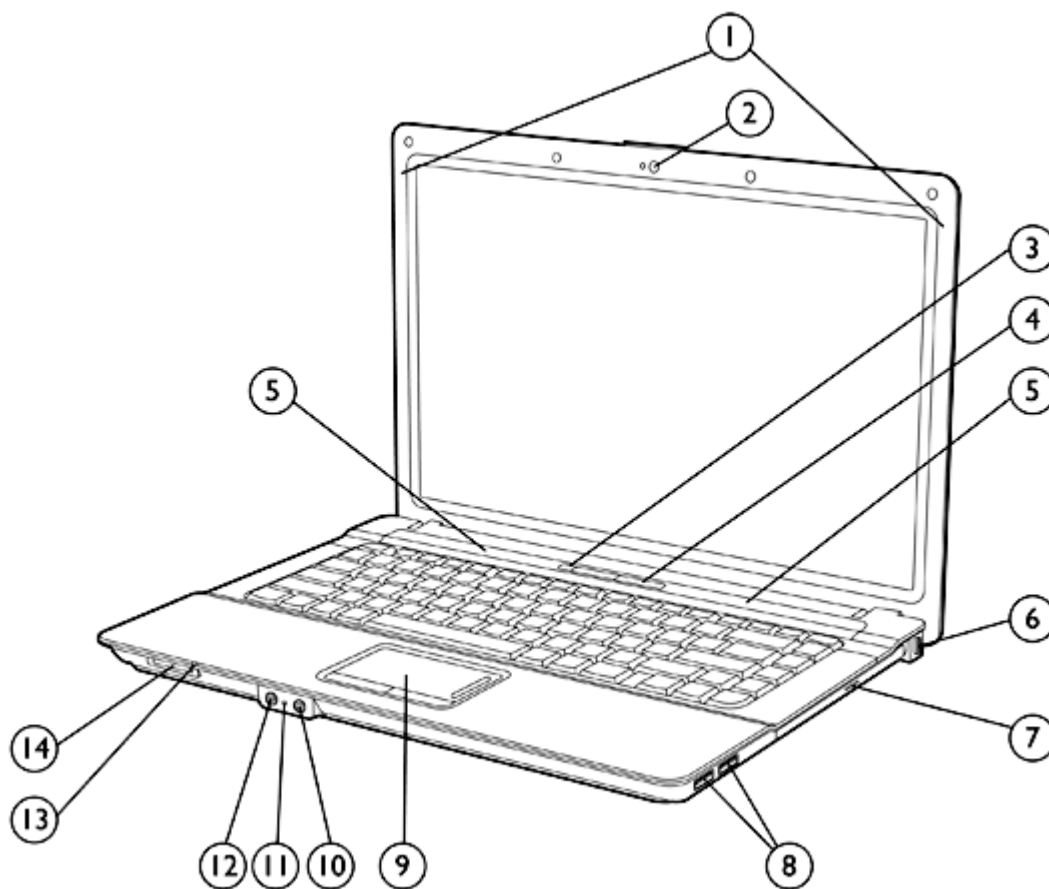# QuickSpecs

HP Compaq 6735s Notebook PC

Overview
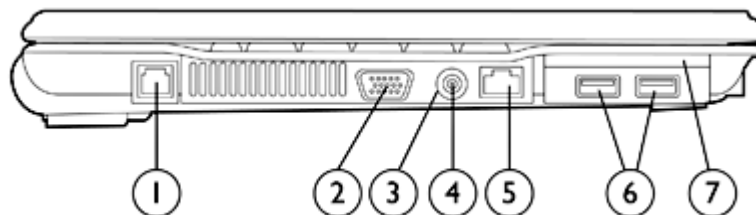
HP recommends Windows Vista® Business

1. WLAN antennas
2. Optional VGA webcam
3. Wireless on/off button with LED indicator
4. Power button with LED indicator
5. Stereo speakers
6. Kensington Lock slot
7. Optical drive

8. (2) USB 2.0 ports
9. Touchpad with scroll zone
10. Stereo microphone in
11. Integrated microphone
12. Stereo headphone/line out
13. Hard drive activity LED indicator
14. Media Card slot

Left View

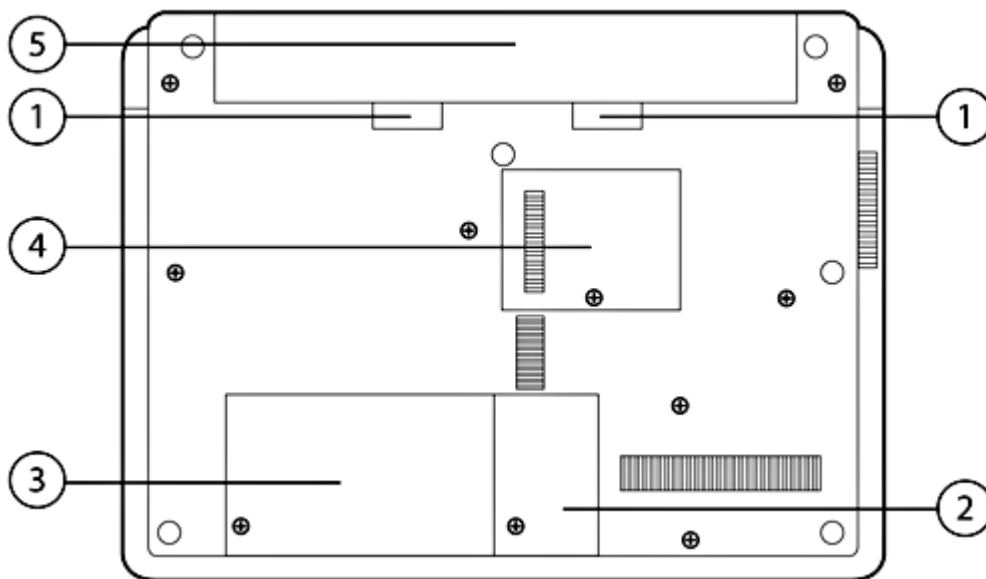1. RJ-11/modem port

5. RJ-45/Ethernet port

Overview

2. VGA connector (external monitor/projector)
3. Battery Charging LED indicator
4. Power Connector

6. (2) USB 2.0 ports
7. ExpressCard/54 slot

Bottom View

1. Battery release latches
2. WLAN module compartment (select models)
3. Hard drive bay

4. Memory module compartment
5. Battery bay

At A Glance

- Genuine Windows Vista Business 32, Genuine Windows Vista Business 32 with downgrade to Windows XP Professional custom installed, Genuine Windows Vista Home Basic 32, or FreeDOS
- Thin, lightweight design starting at 5.5 lb/2.49 kg and 1.27 in/32.3 mm thin at front
- Widescreen 15.4-inch diagonal display with BrightView
- Flexible wireless connectivity options:
    - Integrated 802.11 a/b/g/n draft 2.0 or b/g wireless LAN module
    - Bluetooth® 2.0
- AMD Turion™ X2 Ultra Dual-Core Mobile Processor, AMD Turion™ X2 Dual-Core Mobile Processor or AMD Sempron™ Processor for Notebook PCs
- Integrated optical drive
- Integrated Media Card Reader
- Enhanced security features including HP ProtectTools Security Manager and HP SpareKey
- Optional integrated VGA webcam
- Up to 320 GB 5400 rpm user-removable hard drive with HP 3D DriveGuard protection
- Up to 8 GB of 800 MHz DDR2 SDRAM supported, dual channel memory support
- Marvell Ethernet (10/100 NIC)
- Touchpad with scroll zone

QuickSpecs

Standard Features

Processors	AMD Turion X2 Ultra Dual-Core Mobile Processor ZM-82 (2.2-GHz, 2 x 1-MB L2 cache)	
	AMD Turion X2 Dual-Core Mobile Processor RM-70 (2.0-GHz, 2 x 512-KB L2 cache)	
	AMD Sempron Processor for Notebook PCs SI-40 (2.0-GHz, 512-KB L2 cache)	
	NOTE: Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.	

Operating System	**Preinstalled**	Genuine Windows Vista Business 32* Genuine Windows Vista Business 32 with downgrade to Windows XP Professional custom installed*† Genuine Windows Vista Home Basic 32* Genuine Windows Vista Home Premium 32* (limited availability) FreeDOS
	Supported	Genuine Windows Vista Business 64* Genuine Windows XP Professional
	Certified	SuSE Linux Enterprise Desktop 10

* Certain Windows Vista product features require advanced or additional hardware. See http://www.microsoft.com/windowsvista/getready/hardwarereqs.mspx and http://www.microsoft.com/windowsvista/getready/capable.mspx for details. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit: http://www.windowsvista.com/upgradeadvisor.

† Windows Vista Business may be included for future upgrade if desired. To qualify for this downgrade an end user must be a business (including governmental or educational institutions) and is expected to order annually at least 25 customer systems with the same custom image.

Chipset	AMD M780G

Graphics	Integrated UMA Graphics ATI Mobility Radeon HD 3200 with shared system memory Microsoft DirectX 10 capable

Display	**Internal**	15.4-inch diagonal WXGA anti-glare (1280 x 800 resolution) 15.4-inch diagonal WXGA BrightView (1280 x 800 resolution)
	External	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 **NOTE:** Resolutions are dependent upon monitor capability, and resolution and color depth settings.

QuickSpecs

Standard Features

Memory	Standard	800 MHz DDR2 SDRAM; two slots supporting dual channel memory 1024 MB or 2048 MB
	Maximum	Upgradeable to 8192 MB with 4096 MB SODIMMs in slots 1 and 2, Maximum memory with AMD Sempron processor is 4096 MB
	Dual-channel	Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory slots.

NOTE: Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed. Full availability of 4 GB or more of memory requires Windows Vista Business 64-bit or Linux. With Windows 32-bit operating systems, the amount of usable memory is dependent upon your configuration, so that above 3 GB all memory may not be available due to system resource requirements.

Communications

Marvell Ethernet (10/100 NIC)

56K V.92 modem*

* 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.

Wireless Devices

Support for a broad range of secure, integrated wireless LAN options featuring support for the latest industry standards. Integrated Bluetooth is also available (factory configurable only) and can be combined with any of the supported wireless LAN options.

All 802.11 integrated wireless LAN options	Wi-Fi certified* Cisco Compatible Extensions support 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 Dual antennas integrated in the display enclosure
Broadcom 4322AGN 802.11a/b/g/draft-n Wi-Fi Adapter	Integrated support for 802.11a, b, g, and n draft 2.0* Up to 300 mbps data rate
Broadcom 4312G 802.11b/g WiFi Adapter	Integrated support for 802.11 b and g Up to 54 mbps data rate
HP Integrated Module with Bluetooth Wireless Technology	Bluetooth Specification v2.0 compliant Works with a wide range of Bluetooth devices

* The specifications for 802.11n draft 2.0 are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11n WLAN devices. In countries where n draft 2.0 is not allowed, this capability is not enabled.

QuickSpecs

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. U.S. 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, and comfort-dished keycaps.	
Pointing device	Touchpad with scroll zone, two pick buttons	
Expansion card slots	ExpressCard/54 slot	Supports ExpressCard/54 (54 mm x 75 mm x 5 mm) and ExpressCard/34 (34 mm x 75 mm x 5 mm) card sizes
	Media Card Reader	Supports SD (Secure Digital), MMC (MultiMedia Card), Memory Stick, Memory Stick Pro, Memory Stick Duo*, xD-Picture card
	* Memory Stick Duo Adapters are required and sold separately. Inserting a Memory Stick Duo Card directly into your notebook could damage the memory card and/or notebook.	
Storage	Internal Storage Device	120/160/250/320 GB 5400 rpm SMART SATA II Hard Drive
	NOTE: These hard drives are customer removable and will withstand multiple insertion/removal cycles. Up to 10 GB is reserved for the system recovery software.	
	HP 3D DriveGuard	The hard drive is mounted directly to the notebook frame, reducing the transmission of shock to the hard drive. Uses three-axis digital motion detection with intelligent sensitivity to help protect the hard drive during normal use from shock and vibration. The digital accelerometer temporarily halts all data transfer and parks the hard drive when abrupt motion is detected.
	Fixed optical drive	DVD+/-RW SuperMulti DL LightScribe Drive DVD/CD-RW Combo Drive
Interfaces	ExpressCard/54 slot	One (Supports ExpressCard/54 and ExpressCard/34)
	External monitor	One (VGA)
	Stereo microphone in	One
	Stereo headphone/line out	One
	Power connector	One
	RJ-11/modem	One
	RJ-45/Ethernet	One
	USB 2.0	Four
	LED status indicators	Seven

Standard Features

Audio/Visual	High Definition Audio support
	Integrated stereo speakers
	Integrated microphone
	Stereo headphone/line out
	Stereo microphone in
	Optional VGA webcam

Software	**Preinstalled software with Windows Vista or Windows XP**	HP Recovery Manager
		HP Help and Support Center
		HP Universal Print Driver
		HP ProtectTools Security Manager:
		BIOS Configuration for HP ProtectTools
		Credential Manager for HP ProtectTools
		Drive Encryption for HP ProtectTools
		Embedded Security for HP ProtectTools
		HP Quick Launch Buttons
		HP Wireless Assistant
		Microsoft Office Ready with 60-day Office Professional 2007 Trial Edition (select models)
		PDF Complete SE
		Intervideo WinDVD – DVD Player
		Roxio Creator Business (for optional DVD+/-RW and DVD/CDRW drives)
		McAfee Total Protection*
		Synaptics Touchpad Driver
		Microsoft Windows Live Messenger (select models)
		HP Webcam Software (with optional VGA webcam)
	Additional software available from the web	HP SoftPaq Download Manager
		HP Client Manager Software
		HP Client Management Solutions

* 60 day trial period for McAfee Total Protection for Small Business software. Internet access required to receive updates. First update included. Subscription required for updates thereafter.

HP Recovery Manager	Each unit is shipped with HP Recovery Manager. HP Recovery Manager enables fast recovery of the factory preinstalled image if the system becomes corrupted or if important system files are accidentally deleted. Up to 10 GB of the hard drive is reserved for the system recovery software.

HP ProtectTools Security Manager	HP ProtectTools Security Manager is the security platform for business notebooks and desktops. The HP ProtectTools Security Manager is an extensible client security console that delivers enhanced security capabilities through add-on software modules. Modules currently available are:

- BIOS Configuration for HP ProtectTools
- Credential Manager for HP ProtectTools
- Drive Encryption for HP ProtectTools
- File Sanitizer for HP ProtectTools
- Set-up Wizard for HP ProtectTools

Standard Features

Security	Standard Features	HP ProtectTools Security Manager
		Enhanced Pre-Boot Security
		HP SpareKey
		One-Step Logon
		Configuration Control Hardware
		Memory Change Alert
		Ownership Tag
		Setup Password
		Power-On Password
		HP Disk Sanitizer
		Kensington Lock Slot
		Support for Computrace / LoJack for Laptops (must be purchased separately)

For more information on HP security solutions refer to: http://www.hp.com/go/security.

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*

*HP Fast Charge recharges your battery up to 90% within 90 minutes when the system is off.

Battery	Primary battery	6-cell (47 WHr) Li-Ion battery
		8-cell (63 WHr) Li-Ion battery

Battery Life		8-cell (63 WHr)	6-cell (47 WHr)
	Primary battery	Up to TBD hours and TBD minutes	Up to TBD hours and TBD 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 TBD week

Power Conservation	Hibernation
	Standby
	ACPI compliance

Service and Support	HP Services offers standard limited 1-year warranty; 1-year limited warranty on primary battery. 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: http://www.hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at: http://www.hp.com/hps/carepack.

NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details. http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp.

QuickSpecs

Standard Features

Select Model(s)

6735s KS115UT#ABA Smart Buy	Processor	AMD Sempron Processor for Notebook PCs SI-40 (2.0-GHz, 512-KB L2 cache)
	Operating System	Genuine Windows Vista Home Basic 32
	System Memory	1024-MB 800-MHz DDR2 SDRAM (1 DIMM)
	Hard Drive	120-GB 5400 rpm SATA HDD
	Display	15.4-inch diagonal WXGA BrightView (1280 x 800 resolution)
	Graphics	Integrated UMA Graphics ATI Mobility Radeon HD 3200 with shared system memory
	Audio	High Definition Audio support; Integrated stereo speakers; Integrated microphone; Stereo headphone/line out; Stereo microphone in
	Web Cam	Integrated VGA webcam
	Communications	Marvell Ethernet (10/100 NIC) 56K V.92 modem
	Integrated Wireless	Broadcom 4312G 802.11b/g WiFi Adapter
	Pointing Device	Touchpad with scroll zone, two pick buttons
	Optical Drive	DVD+/-RW SuperMulti DL LightScribe Drive
	Battery	6-cell (47 WHr) Lithium-Ion
	Power	External 65-watt Smart AC adapter
	Warranty	1 Year Limited Warranty

6735s KS116UA#ABA	Processor	AMD Sempron Processor for Notebook PCs SI-40 (2.0-GHz, 512-KB L2 cache)
	Operating System	Genuine Windows Vista Home Basic 32
	System Memory	1024-MB 800-MHz DDR2 SDRAM (1 DIMM)
	Hard Drive	120-GB 5400 rpm SATA HDD
	Display	15.4-inch diagonal WXGA BrightView (1280 x 800 resolution)
	Graphics	Integrated UMA Graphics ATI Mobility Radeon HD 3200 with shared system memory
	Audio	High Definition Audio support; Integrated stereo speakers; Integrated microphone; Stereo headphone/line out; Stereo microphone in
	Web Cam	not included
	Communications	Marvell Ethernet (10/100 NIC) 56K V.92 modem
	Integrated Wireless	Broadcom 4312G 802.11b/g WiFi Adapter
	Pointing Device	Touchpad with scroll zone, two pick buttons
	Optical Drive	DVD/CD-RW Combo Drive
	Battery	6-cell (47 WHr) Lithium-Ion
	Power	External 65-watt Smart AC adapter
	Warranty	1 Year Limited Warranty

QuickSpecs

Standard Features

6735s KS117UT#ABA Smart Buy	Processor	AMD Turion X2 Dual-Core Mobile Processor RM-70 (2.0-GHz, 2 x 512-KB L2 cache)
	Operating System	Genuine Windows Vista Home Premium 32
	System Memory	2048-MB 800-MHz DDR2 SDRAM (1 DIMM)
	Hard Drive	160-GB 5400 rpm SATA HDD
	Display	15.4-inch diagonal WXGA BrightView (1280 x 800 resolution)
	Graphics	Integrated UMA Graphics ATI Mobility Radeon HD 3200 with shared system memory
	Audio	High Definition Audio support; Integrated stereo speakers; Integrated microphone; Stereo headphone/line out; Stereo microphone in
	Web Cam	Integrated VGA webcam
	Communications	Marvell Ethernet (10/100 NIC) 56K V.92 modem
	Integrated Wireless	Broadcom 4312G 802.11b/g WiFi Adapter
	Pointing Device	Touchpad with scroll zone, two pick buttons
	Optical Drive	DVD+/-RW SuperMulti DL LightScribe Drive
	Battery	6-cell (47 WHr) Lithium-Ion
	Power	External 65-watt Smart AC adapter
	Warranty	1 Year Limited Warranty

6735s KS118UT#ABA Smart Buy	Processor	AMD Turion X2 Dual-Core Mobile Processor RM-70 (2.0-GHz, 2 x 512-KB L2 cache)
	Operating System	Genuine Windows Vista Business with downgrade to Windows XP Professional custom installed
	System Memory	2048-MB 800-MHz DDR2 SDRAM (1 DIMM)
	Hard Drive	250-GB 5400 rpm SATA HDD
	Display	15.4-inch diagonal WXGA BrightView (1280 x 800 resolution)
	Graphics	Integrated UMA Graphics ATI Mobility Radeon HD 3200 with shared system memory
	Audio	High Definition Audio support; Integrated stereo speakers; Integrated microphone; Stereo headphone/line out; Stereo microphone in
	Web Cam	Integrated VGA webcam
	Communications	Marvell Ethernet (10/100 NIC) 56K V.92 modem
	Integrated Wireless	Broadcom 4322AGN 802.11a/b/g/draft-n Wi-Fi Adapter HP
	Pointing Device	Touchpad with scroll zone, two pick buttons
	Optical Drive	DVD+/-RW SuperMulti DL LightScribe Drive
	Battery	6-cell (47 WHr) Lithium-Ion
	Power	External 65-watt Smart AC adapter
	Warranty	1 Year Limited Warranty

QuickSpecs

Standard Features

6735s KS119UA#ABA	Processor	AMD Turion X2 Dual-Core Mobile Processor RM-70 (2.0-GHz, 2 x 512-KB L2 cache)
	Operating System	Genuine Windows Vista Home Premium 32
	System Memory	2048-MB 800-MHz DDR2 SDRAM (1 DIMM)
	Hard Drive	160-GB 5400 rpm SATA HDD
	Display	15.4-inch diagonal WXGA BrightView (1280 x 800 resolution)
	Graphics	Integrated UMA Graphics ATI Mobility Radeon HD 3200 with shared system memory
	Audio	High Definition Audio support; Integrated stereo speakers; Integrated microphone; Stereo headphone/line out; Stereo microphone in
	Web Cam	Not included
	Communications	Marvell Ethernet (10/100 NIC) 56K V.92 modem
	Integrated Wireless	Broadcom 4322AGN 802.11a/b/g/draft-n Wi-Fi Adapter HP Integrated Module with Bluetooth Wireless Technology
	Pointing Device	Touchpad with scroll zone, two pick buttons
	Optical Drive	DVD+/-RW SuperMulti DL LightScribe Drive
	Battery	6-cell (47 WHr) Lithium-Ion
	Power	External 65-watt Smart AC adapter
	Warranty	1 Year Limited Warranty

6735s KS043UT#ABA Smart Buy	Processor	AMD Turion X2 Dual-Core Mobile Processor RM-70 (2.0-GHz, 2 x 512-KB L2 cache)
	Operating System	Genuine Windows Vista Home Premium 32
	System Memory	1024-MB 800-MHz DDR2 SDRAM (1 DIMM)
	Hard Drive	160-GB 5400 rpm SATA HDD
	Display	15.4-inch diagonal WXGA BrightView (1280 x 800 resolution)
	Graphics	Integrated UMA Graphics ATI Mobility Radeon HD 3200 with shared system memory
	Audio	High Definition Audio support; Integrated stereo speakers; Integrated microphone; Stereo headphone/line out; Stereo microphone in
	Web Cam	not included
	Communications	Marvell Ethernet (10/100 NIC) 56K V.92 modem
	Integrated Wireless	Broadcom 4312G 802.11b/g WiFi Adapter
	Pointing Device	Touchpad with scroll zone, two pick buttons
	Optical Drive	DVD+/-RW SuperMulti DL LightScribe Drive
	Battery	8-cell (63 WHr) Lithium-Ion
	Power	External 65-watt Smart AC adapter
	Warranty	1 Year Limited Warranty

QuickSpecs

Standard Features

6735s KS088UT#ABA Smart Buy	Processor	AMD Turion X2 Dual-Core Mobile Processor RM-70 (2.0-GHz, 2 x 512-KB L2 cache)
	Operating System	Genuine Windows Vista Business with downgrade to Windows XP Professional custom installed
	System Memory	2048-MB 800-MHz DDR2 SDRAM (1 DIMM)
	Hard Drive	160-GB 5400 rpm SATA HDD
	Display	15.4-inch diagonal WXGA BrightView (1280 x 800 resolution)
	Graphics	Integrated UMA Graphics ATI Mobility Radeon HD 3200 with shared system memory
	Audio	High Definition Audio support; Integrated stereo speakers; Integrated microphone; Stereo headphone/line out; Stereo microphone in
	Web Cam	not included
	Communications	Marvell Ethernet (10/100 NIC) 56K V.92 modem
	Integrated Wireless	Broadcom 4312G 802.11b/g WiFi Adapter
	Pointing Device	Touchpad with scroll zone, two pick buttons
	Optical Drive	DVD+/-RW SuperMulti DL LightScribe Drive
	Battery	8-cell (63 WHr) Lithium-Ion
	Power	External 65-watt Smart AC adapter
	Warranty	1 Year Limited Warranty

6735s KS044UT#ABA Smart Buy	Processor	AMD Turion X2 Dual-Core Mobile Processor RM-70 (2.0-GHz, 2 x 512-KB L2 cache)
	Operating System	Genuine Windows Vista Business with downgrade to Windows XP Professional custom installed
	System Memory	2048-MB 800-MHz DDR2 SDRAM (1 DIMM)
	Hard Drive	250-GB 5400 rpm SATA HDD
	Display	15.4-inch diagonal WXGA BrightView (1280 x 800 resolution)
	Graphics	Integrated UMA Graphics ATI Mobility Radeon HD 3200 with shared system memory
	Audio	High Definition Audio support; Integrated stereo speakers; Integrated microphone; Stereo headphone/line out; Stereo microphone in
	Web Cam	Integrated VGA webcam
	Communications	Marvell Ethernet (10/100 NIC) 56K V.92 modem
	Integrated Wireless	Broadcom 4322AGN 802.11a/b/g/draft-n Wi-Fi Adapter HP Integrated Module with Bluetooth Wireless Technology
	Pointing Device	Touchpad with scroll zone, two pick buttons
	Optical Drive	DVD+/-RW SuperMulti DL LightScribe Drive
	Battery	8-cell (63 WHr) Lithium-Ion
	Power	External 65-watt Smart AC adapter
	Warranty	1 Year Limited Warranty

QuickSpecs

Options

Memory	HP 1 GB (DDR2 800 MHz) SODIMM	KT292AA
	HP 2 GB (DDR2 800 MHz) SODIMM	KT293AA
	HP 4 GB (DDR2 800 MHz) SODIMM	KT294AA

Storage	HP Notebooks USB Diskette Drive	DC361B
	HP Primary SATA 250 GB 5400 rpm Hard Drive	AK072AA

Power	HP 65W Smart AC Adapter	ED494AA#ABA
	HP 90W Smart Auto Adapter	ED493AA
	65W Air/Auto/AC Smart Combo Adapter	ED993AA#ABA
	HP 6800s/6700s Series 8-cell Primary Battery	KU532AA

Carrying Cases	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

Security	HP/Kensington MicroSaver Security Lock	PC766A

Input/Output Devices	HP USB Keyboard & Mouse Bundle	RC465AA#ABA
	HP USB/PS2 Optical 2-Button Scroll Mouse	DC369A
	HP USB Optical Travel Mouse	RH304AA

Memory

800 MHz DDR2 SDRAM
Two DIMM slots supporting dual channel memory
DIMM sizes supported: 1024 MB and 2048 MB

Standard Memory

- 1024 MB (1024 MB x 1)
- 2048 MB (2048 MB x 1 or 1024 MB x 2)
- 3072 MB (2048 MB x 1024 MB)
- 4096 MB (2048 MB x 2)

Optional Memory Upgrades

Support for up to 8192 MB of memory with the installation of optional DDR2 SDRAM memory kits. Both memory slots are user accessible. Please refer to the Hardware and Software Guide for installation procedures. Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory slots.

Up to	Slot 1	Slot 2
1024 MB	1024 MB	Empty
2048 MB	1024 MB	1024 MB
3072 MB	2048 MB	1024 MB
4096 MB	2048 MB	2048 MB
8192 MB	4096 MB	4096 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. If you mix memory speeds, the system will perform at the lower memory speed. Full availability of 4 GB or more of memory requires Windows Vista Business 64-bit or Linux. With Windows 32-bit operating systems, the amount of usable memory is dependent upon your configuration, so that above 3 GB all memory may not be available due to system resource requirements.

Memory Upgrades

HP 1 GB (DDR2 800 MHz) SODIMM	KT292AA
HP 2 GB (DDR2 800 MHz) SODIMM	KT293AA
HP 4 GB (DDR2 800 MHz) SODIMM	KT294AA

QuickSpecs

Storage

Removable Media Drive Support

	Quantity Supported	Drive Bay
DVD+/-RW SuperMulti DL LightScribe Drive	One	Fixed optical drive bay
DVD/CD-RW Combo Drive	One	Fixed optical drive bay

Internal Storage Device

	Quantity Supported	Drive Bay
Hard Drives		
320 GB 5400 rpm SMART SATA II Hard Drive	One	Dedicated hard drive bay
250 GB 5400 rpm SMART SATA II Hard Drive	One	Dedicated hard drive bay
160 GB 5400 rpm SMART SATA II Hard Drive	One	Dedicated hard drive bay
120 GB 5400 rpm SMART SATA II Hard Drive	One	Dedicated hard drive bay

QuickSpecs

Technical Specifications

System Unit	Dimensions (HxWxD)	1.27 in (at front) x 14.1 in x 10.5 in 32.3 mm (at front) x 358 mm x 266.8 mm	
	Weight	Starting at 5.5 lb (2.5 kg)	

NOTE: Height varies depending upon where on the notebook the measurement is made. Weight varies by configuration and components. Weight includes 6-cell battery, hard drive, and optical drive. Weight varies by configuration and components.

	Stand-Alone Power Requirements (AC Power)	Nominal Operating Voltage	18.5 V
		Average Operating Power	22.89 W
		Max Operating Power	< 90 W
	Temperature	Operating	32° to 95° F (0° to 35° C) (not writing optical)
			41° to 95° F (5° to 35° C) (writing optical)
		Non-operating	–4° to 140° F (–20° to 60° C)
	Relative Humidity	Operating	10% to 90%, non-condensing
		Non-operating	5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
	Shock	Operating	125 G, 2 ms, half-sine
		Non-operating	200 G, 2 ms, half-sine
	Random Vibration	Operating	0.75 grms
		Non-operating	1.50 grms
	Altitude (unpressurized)	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)
	Industry Standard Certifications	UL	Yes
		CSA	Yes
		FCC Compliance	Yes
		ENERGY STAR®	Yes
		EPEAT	Silver
		ICES	Yes
		Australia / NZ A-Tick Compliance	Yes
		CCC	Yes
		Japan VCCI Compliance	Yes
		MIC	Yes
		BSMI	Yes
		CE Marking Compliance	Yes
		BNCI or BELUS	Yes
		CIT	Yes
		GOST	Yes
		Saudi Arabian Compliance (ICCP)	Yes
		SABS	Yes
		UKRSERTCOMPUTER	Yes

QuickSpecs

Technical Specifications

For accessibility information on HP products, please visit: http://www.hp.com/accessibility.

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	100 to 240 VAC	
		Input Efficiency	83% min at 115 VAC
		Input frequency range	47 to 63 Hz
		Input AC current	1.7 A at 90 VAC, 0.85 A at 180 VAC
	Output	Output power 65W	65W
		DC output	18.5V
		Hold-up time	5 msec at 115 VAC inputOutput current limit
		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%
		Storage Humidity	10% to 90%
	EMI and Safety Certifications	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.	

8-Cell (63 WHr) Li-Ion 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	0.980 lb (0.445 kg)	
	Cells/Type	8-cell Li-Ion	
	Energy	Watt-hour Capacity	63 WHr
	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

Technical Specifications

6-Cell (47 WHr) Li-Ion battery	Dimensions (H x W x L)	0.8 x 2.1 x 8.0 in (2.0 x 5.3 x 20.3 cm)	
	Weight	0.690 lb (0.313 kg)	
	Cells/Type	6-cell Li-Ion	
	Energy	Watt-hour Capacity	47 WHr
	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 90 minutes when system is OFF

Displays

15.4-inch WXGA anti-glare	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	
	Number of Colors	Up to 16M	
	Contrast Ratio	300:1 (typical)	
	Refresh Rate	60 Hz	
	Brightness	200 nit (typical)	
	Pixel Resolution	Pitch	0.259 mm
		Format	1280 x 800
		Configuration	RGB stripe
	Backlight	CCFL	
	PPI	98	
	Viewing Angle	±30° Horizontal, ±10° Vertical (minimum) 30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)	

QuickSpecs

Technical Specifications

15.4-inch WXGA BrightView	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	BrightView	
	Number of Colors	Up to 16M	
	Contrast Ratio	300:1 (typical)	
	Refresh Rate	60 Hz	
	Brightness	200 nit (typical)	
	Pixel Resolution	Pitch	0.259 mm
		Format	1280 x 800
		Configuration	RGB stripe
	Backlight	CCFL	
	PPI	98	
	Viewing Angle	±30° Horizontal, ±10° Vertical (minimum) 30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)	

Hard Drives

320 GB 5400 rpm SATA Hard Drive	Drive Weight	0.22 lb (101 g)	
	Capacity	320 GB	
	Height	0.37 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	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	488,397,168	
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]	
	Features	ATA Security	

Technical Specifications

250 GB 5400 rpm SATA Hard Drive			
Drive Weight	0.22 lb (101 g)		
Capacity	250 GB		
Height	0.37 in (9.5 mm)		
Width	2.75 in (70 mm)		
Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ		
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	488,397,168		
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]		
Features	ATA Security		

160 GB 5400 rpm SATA Hard Drive			
Drive Weight	0.22 lb (101 g)		
Capacity	160 GB		
Height	0.37 in (9.5 mm)		
Width	2.75 in (70 mm)		
Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ		
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	312,581,808		
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]		
Features	ATA Security		

QuickSpecs

Technical Specifications

120 GB 5400 rpm SATA Hard Drive	Drive Weight	0.22 lb (101 g)	
	Capacity	120 GB	
	Height	0.37 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	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	234,441,648	
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]	
	Features	ATA Security	

Removable Storage Drives

DVD/CD-RW Combo Drive	Access Times	Random	<110 ms CD (typical)
			<130 ms DVD (typical)
	Max Data Transfer Rate	24X CD-ROM	Up to 3,600 KB/s
		8X DVD	Up to 10,800 KB/s
		24X CD-R	Up to 3,600 KB/s
		24X CD-RW	Up to 3,600 KB/s
	Transfer Mode	UDMA Mode 5	
	Interface	Gen 1 SATA	
	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	
	Max Media Capacity (read)	8.5 GB	
	Max Media Capacity (write)	700 MB	
	Transport	Tray loading	

Technical Specifications

DVD+/-RW SuperMulti DL LightScribe Drive	Access Times	Random	<175 ms CD (typical)
			<230 ms DVD (typical)
	Max Data Transfer Rate	24X CD-ROM	Up to 3,600 KB/s
		8X DVD	Up to 10,800 KB/s
		24X CD-R	Up to 3,600 KB/s
		16X CD-RW	Up to 2,400 KB/s
		8X DVD+R	Up to 10,800 KB/s
		4X DVD+RW	Up to 5,400 KB/s
		8X DVD-R	Up to 10,800 KB/s
		4X DVD-RW	Up to 5,400 KB/s
		2.4X DVD+R(9)	Up to 2,700 KB/s
		5X DVD-RAM	Up to 6,750 KB/s
	Transfer Mode	UDMA Mode 5	
	Interface	Gen 1 SATA	
	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, DVD-RAM	
	Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+RW, DVD-R, DVD-RW, DVD-RAM, LightScribe	
	Max Media Capacity (read)	8.5 GB	
	Max Media Capacity (write)	8.5 GB	
	Transport	Tray Loading	

Audio

Hardware	Implementation	ADI 1984AJCPZ High Definition CODEC
	Touch-Sensitive Volume Controls	Volume up, volume down, and mute
	Full Duplex	Yes
	Microphone In	Stereo
	Headphone/Line Out	Stereo
	Integrated Microphone	Yes

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Technical Specifications

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

Integrated Stereo Speakers	Power Rating	2 Watts
	Impedance	4 Ohms

Communications

V.92 56K Data/Fax Modem	Form Factor	MDC 1.5 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	V.92 data
		V.8bis
		V.80
		V44, V.42bis, MNP5 (Compression)
		V.42 (LAPM, MNP2-4) (Error Correction)
		Optional symbol rates: 2800, 3429 Asymmetric Symbol rates
		Synchronous primary channel data signaling rates: 3600, 31200 Automatic rate re-negotiation V.34 V.32bis V.32 V.23 V.22bis V.22 V.21 Bell 212A Bell 103J

Technical Specifications

Fax Mode Capabilities	TIA/EIA-578-B (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

Broadcom 4312G 802.11b/g WiFi Adapter	Wireless LAN Standards	IEEE 802.11b IEEE 802.11g
	Interoperability	Wi-Fi certified (802.11abg only) Cisco Compatible Extensions Program compliant (802.11abg only) with Microsoft Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN) Tested with wireless access points from several major manufacturers (details at: http://www.hp.com/go/notebooks/WLAN/draft-n)
	Frequency Band	2.4 GHz
	Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
	Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM
	Security[1]	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. Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only.
	Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.
	Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power (for CCK)[2]	17 dBm
	Output Power (for OFDM; power varies by data rate)[2]	15 dBm

Technical Specifications

Power Consumption	Idle associated: 250 mW Idle unassociated: 150 mW Transmit: 2.0 W (max) Receive: 2.0 W (max)	
Power Management	ACPI compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[3]	54 Mbps: -71 dBm, 11 Mbps: -85 dBm , 1 Mbps: -95 dBm	
Antenna type	High efficiency dual band antenna with spatial diversity, mounted in the display enclosure	
Range	802.11 b – Typical (@1 Mbps)	1200 feet – Outdoor Open Area 300 feet – Indoor, Office environment
	802.11 g – Typical (@1 Mbps)	1200 feet – Outdoor Open Area 300 feet – Indoor, Office environment
Form Factor	PCI-Express MiniCard	
Weight	0.026 lb (12 g)	
Dimensions	0.19 x 1.2 x 2.0 in (4.75 x 29.85 x 50.8 mm)	
Operating Voltage	3.3v +/- 10%	
Temperature	Operating Non-operating	14° to 149° F (–10° to 65° C) –40° to 176° F (–40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)

Configuration Utility[4]   Microsoft Windows XP
   Choice of Configuration Utility:

- Microsoft Windows XP Wireless Network Connection Manager
- Broadcom Wireless Configuration Utility (required for Cisco Compatible Extensions support)

Microsoft Windows Vista

- Microsoft Windows Vista Wireless Network Connection Manager
- Broadcom IHV extensions for Windows Vista available to support Cisco Compatible Extensions.

LED Activity   LED Off – Radio OFF; Solid LED On – Radio ON

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
4. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.

Broadcom 4322AGN 802.11a/b/g/draft-n WiFi	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b

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Technical Specifications

Adapter		IEEE 802.11g IEEE 802.11n (draft 2.0)
	Interoperability	Wi-Fi certified (802.11abg only) Cisco Compatible Extensions Program compliant (802.11abg only) with Microsoft Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN) Tested with wireless access points from several major manufacturers (details at: http://www.hp.com/go/notebooks/WLAN/draft-n)
	Frequency Band	2.4 GHz and 5 GHz
	Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n (draft): 6, 6.5, 9, 12, 13, 13.5, 18, 19.5, 24, 26, 27, 36, 39, 40.5, 48, 52, 54, 58.5, 65, 78, 81, 104, 108, 117, 121.5, 130, 135, 162, 216, 243, 270, 300 Mbps
	Frequency Support	20 MHz: 2.4 GHz and 5 GHz bands 40 MHz: 2.4 GHz and 5 GHz band
	Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
	Security[1]	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. Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only.
	Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.
	Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power (for CCK)[2]	17 dBm
	Output Power (for OFDM; power varies by data rate)[2]	15 dBm
	Power Consumption	Idle associated: 250 mW Idle unassociated: 150 mW Transmit/Receive 20 MHz channel: 2.0 W (max) Transmit/Receive 40 MHz channel: 2.0 W (max)
	Power Management	ACPI compliant power management 802.11 compliant power saving mode
	Receiver Sensitivity[3]	270 Mbps: -66dBm, 162 Mbps: -72 dBm, 54 Mbps: -72 dBm, 11 Mbps: -85 dBm , 1 Mbps: -94 dBm
	Antenna type	High efficiency dual band antenna with spatial diversity, mounted in the display enclosure
	Range	802.11 a – Typical (@6 Mbps) 600 feet – Outdoor Open Area 150 feet – Indoor, Office environment

Technical Specifications

	802.11 b – Typical (@1 Mbps)	1200 feet – Outdoor Open Area 300 feet – Indoor, Office environment
	802.11 g – Typical (@1 Mbps)	1200 feet – Outdoor Open Area 300 feet – Indoor, Office environment
Form Factor	PCI-Express MiniCard	
Weight	0.026 lb (12 g)	
Dimensions	0.19 x 1.2 x 2.0 in (4.75 x 29.85 x 50.8 mm)	
Operating Voltage	3.3v +/- 10%	
Temperature	Operating Non-operating	14° to 149° F (–10° to 65° C) –40° to 176° F (–40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)

Configuration Utility[4]   Microsoft Windows XP
Choice of Configuration Utility:

- Microsoft Windows XP Wireless Network Connection Manager
- Broadcom Wireless Configuration Utility (required for Cisco Compatible Extensions support)

Microsoft Windows Vista

- Microsoft Windows Vista Wireless Network Connection Manager
- Broadcom IHV extensions for Windows Vista available to support Cisco Compatible Extensions.

LED Activity   LED Off – Radio OFF; Solid LED On – Radio ON

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
4. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.

HP Integrated Module with Bluetooth Wireless Technology	**Bluetooth Specification**	2.0 Compliant
	Dimensions	1.02 x 0.55 x 0.22 in (26 x 14 x 5.7 mm)
	Frequency Band	2402 to 2480 MHz
	Number of Available Channels	79 (1 MHz) available channels
	Data Rates and Throughput	3 Mbps data rate; throughput up to 2.17 Mbps
		Synchronous Connection Oriented links up to 3, 64 kbps, voice channels
		Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric or 1306.9 kbps symmetric
	Transmit Power	-6 dBm to 4 dBm (Bluetooth Class II)

Technical Specifications

Receiver Sensitivity	Better than -80 dBM at 0.1 % raw bit error rate
Power Consumption	Peak (Tx) 264 mW
	Peak (Rx) 231 mW
	Sleep <1 mW
Antenna	Internally integrated within module
Range	Up 33 ft (10 m)
Electrical Interface	USB 2.0 compliant
	Microsoft Windows Plug and Play compliant
OS Support	Microsoft Windows XP Professional and Home
	Microsoft Windows 2000
Bluetooth Software Supported	Broadcom Bluetooth for Windows
	Microsoft Windows XP Bluetooth Software
Link Topology	Point to Point, Multipoint Pico Nets up to 7 slaves
Security	Full support of Bluetooth Security Provisions
Power Management	Microsoft Windows ACPI, and USB Bus Support
	Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
Certifications	All necessary regulatory approvals for supported countries, including:
	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
	ETS 300 328, ETS 300 826
	Low Voltage Directive IEC950
	UL, CSA, and CE Mark

Temperature	Operating	–4° to 158° F (–20° to 70° C)
	Non-operating	–40° to 176° F (–40° to 80° C)
Humidity	Operating	10% to 90%
	Non-operating	5% to 95%
Altitude	Operating	15,000 ft (4,572 m)
	Non-operating	40,000 ft (12,192 m)

Bluetooth Profiles Supported	(with Bluetooth for Windows 4.0 software)
	Serial Port Profile (SPP)*
	Dial-Up Networking (DUN)*
	Generic Object Exchange Profile (GOEP)
	Object Push Profile (OPP)*
	File Transfer Profile (FTP)
	Synchronization Profile (SYNC)
	Hard Copy Cable Replacement (HCRP)*
	Personal Area Networking Profile (PAN)*
	Human Interface Device Profile (HID)*
	FAX Profile (FAX)
	Basic Imaging Profile (BIP)
	Headset Profile (HSP)
	Hands Free Profile (HFP)

QuickSpecs

Technical Specifications

Advanced Audio Distribution Profile (A2DP)

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:

- US Energy Star
- IT ECO declaration
- EPEAT – SILVER

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	12.82 W	12.91 W	13.09 W
Sleep (Energy Star low power mode)	1.469 W	1.535 W	1.477 W
Off	0.746 W	0.767 W	0.733 W

Heat Dissipation*	115 VAC	230 VAC	100 VAC
Normal Operation	44 BTU/hr	44 BTU/hr	45 BTU/hr
Sleep	5 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)

System Fan Off	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Idle	4.3	28
Fixed Disk (random writes)	4.4	30

System fan is usually off except when charging the battery

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

Technical Specifications

	The battery type and chemistry used in the product is: CR2032 (Coin cell), Li-Ion 8-cell high capacity Li-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 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).

This product is in compliance with the IEEE 1680 (EPEAT) standard at the SILVER level, see www.epeat.net

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 96.0% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
    - CANON bags – several layers – 15 g
    - Corrugated carton & Cardboard & misc. – 685 g
- Internal:
    - EPE-Expanded Polyethylene – 80 g

- The CANON bags – several layers packaging material is made from 100% recycled content.
- The Corrugated carton & Cardboard & misc packaging material contains 100% recycled content.
- The EPE-Expanded Polyethylene packaging material is made from 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

Technical Specifications

        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/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

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

Technical Specifications

Information	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