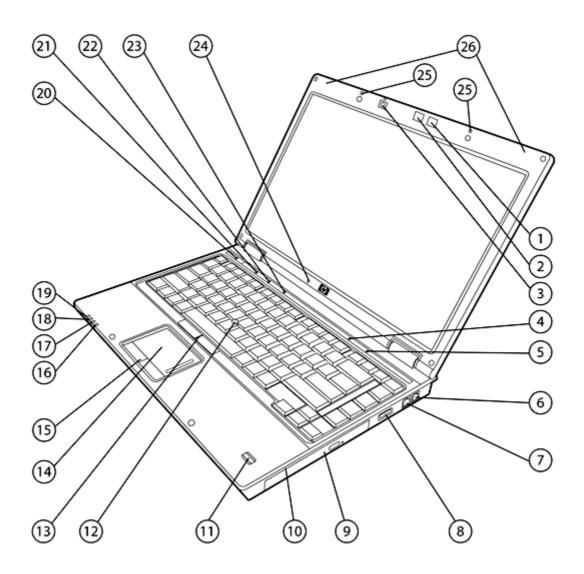
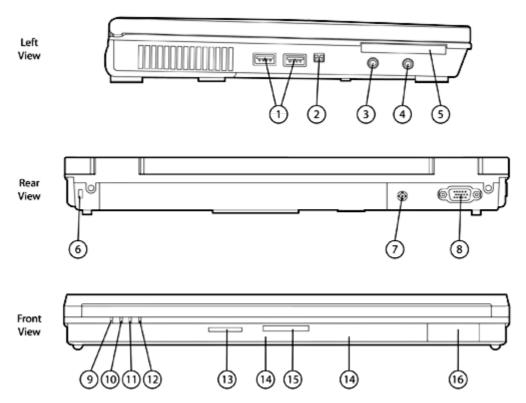
Overview



Overview

- 1. HP NightLight on/off button
- 2. HP NightLight
- 3. Optional 2 MP Webcam
- 4. Volume mute button with LED indicator
- 5. Volume scroll zone with up/down LED indicators
- 6. RJ-11/modem port
- 7. RJ-45/Ethernet port
- 8. USB 2.0 port
- 9. Upgrade Bay (optical drive, second hard drive)
- 10. Integrated Smart Card Reader
- 11. HP Fingerprint Sensor
- 12. Pointstick
- 13. Pointstick buttons

- 14. Touchpad with scroll zone
- 15. Touchpad buttons
- 16. Hard drive activity / HP 3D DriveGuard LED indicator
- 17. Battery charging LED indicator
- 18. Power/standby LED indicator
- 19 Wireless on/off LED indicator
- 20. Power button with LED indicator
- 21. HP Info / HP QuickLook 2 button with LED indicator
- 22. Wireless on/off button with LED indicator
- 23. HP Presentation button with LED indicator
- 24. Ambient Light Sensor
- 25. Dual-microphone array
- 26. WLAN and WWAN antennas



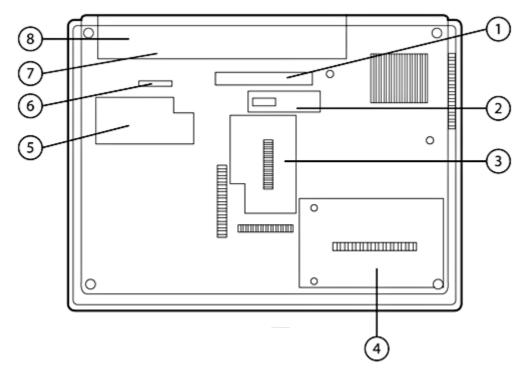
- 1. (2) USB 2.0 ports
- 2. 1394a port
- 3. Stereo microphone in
- 4. Stereo headphone/line out
- 5. ExpressCard/54 slot
- 6. Kensington Lock slot
- 7. Power connector

- 9. Wireless on/off LED indicator
- 10. Power/standby LED indicator
- 11. Battery charging LED indicator
- 12. Hard drive activity / HP 3D DriveGuard LED
- 13. Secure Digital (SD) slot
- 14. Integrated stereo speakers
- 15. Display release latch



Overview

- 8. VGA connector (external monitor/projector)
- 16. Bluetooth module compartment



Bottom View

- 1. Docking connector
- 2. Secondary battery connector
- 3. Memory module compartment
- 4. Hard drive bay

- 5. WWAN module compartment
- 6. Battery release latch
- 7. SIM slot for WWAN (select models) inside battery bay
- 8. Battery bay

NOTE: WLAN module connector is located under the keyboard (not shown)

Overview

At A Glance

- Genuine Windows 7 Professional 32, Genuine Windows 7 Home Premium 32, Genuine Windows 7 Home Basic 32,
 Genuine Windows Vista Business 32, Genuine Windows Vista Home Basic 32, Genuine Windows XP Professional available through downgrade rights from Windows Vista Business, or FreeDOS
- Business Rugged designed to meet the military standard Mil-Std-810F for dust, altitude, and high temperature operation*
- ATI Mobility Radeon™ HD 3450 graphics with 128 or 256 MB dedicated memory or Mobile Intel GMA 4500MHD graphics
- Flexible wireless connectivity options:
 - O Integrated HP un2400 EV-DO/HSDPA Mobile Broadband Module provides worldwide Gobi mobile Internet technology
 - O Integrated 802.11 a/b/g/n draft 2.0 or a/b/g wireless LAN module
 - O Bluetooth® 2.0
- Intel® Centrino® 2 with vPro™ technology capable, with Intel Core™2 Duo processors
- Optional HP Illumi-Lite LED 14.1-inch diagonal widescreen display with Ambient Light Sensor and optional HP Privacy Filter
- Upgrade Bay for easy optical drive upgrade or optional second hard drive for RAID 1 Mirroring or RAID 0 Striping
- Enhanced security features including integrated Smart Card Reader, HP ProtectTools, HP SpareKey, HP Fingerprint Sensor, TPM 1.2 Embedded Security Chip**
- 2 MP Webcam with Business Card Reader Software, HP Night Light
- HP QuickLook 2 for instant access to email, calendar, and contact information
- Enhanced reliability with HP DuraCase, HP DuraKeys and HP DuraFinish
- Up to 8 GB of 800 MHz DDR2 SDRAM supported, dual channel memory support
- Up to 320 GB 7200 rpm user-removable hard drive with HP 3D DriveGuard protection, or 128 GB Solid State Drive
- Integrated Intel Gigabit Network Connection (10/100/1000 NIC)
- Enhanced dual pointing devices (touchpad with scroll zone and pointstick)
- ExpressCard/54 slot, Secure Digital (SD) slot
- Designed for common image for corporate environments

** TPM module disabled where not permitted by law (for example, Russia and China).



^{*} Testing was not intended to demonstrate fitness for DOD contracts requirements or for military use. Test results are not a guarantee of future performance under these test conditions.

Standard Features

Processors

Intel Core 2 Duo Processor T9900 (3.06 GHz, 6 MB L2 cache, 1066 MHz FSB)*
Intel Core 2 Duo Processor T9600 (2.80 GHz, 6 MB L2 cache, 1066 MHz FSB)*
Intel Core 2 Duo Processor T9400 (2.53 GHz, 6 MB L2 cache, 1066 MHz FSB)*
Intel Core 2 Duo Processor P8800 (2.66 GHz, 3 MB L2 Cache, 1066 MHz FSB)*
Intel Core 2 Duo Processor P8700 (2.53 GHz, 3 MB L2 Cache, 1066 MHz FSB)*
Intel Core 2 Duo Processor P8600 (2.40 GHz, 3 MB L2 cache, 1066 MHz FSB)*
Intel Core 2 Duo Processor P8400 (2.26 GHz, 3 MB L2 cache, 1066 MHz FSB)*

NOTE: Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.

Operating System

Preinstalled Genuine Windows 7 Professional 32*

Genuine Windows 7 Home Premium 32* Genuine Windows 7 Home Basic 32* Genuine Windows Vista Business 32** Genuine Windows Vista Home Basic 32**

Genuine Windows XP Professional available through downgrade rights

from Windows Vista Busines**†

FreeDOS

Supported Genuine Windows Vista Business 64**

Genuine Windows Vista Enterprise**

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 XP Professional is preinstalled on this system and includes end user rights and media for Windows Vista Business. You may only use one version at a time. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.

Chipset

Mobile Intel PM45 Express Chipset with ICHM9-Enhanced, 1066 MHz front side bus (models with discrete graphics)

or

Mobile Intel GM45 Express Chipset with ICHM9-Enhanced, 1066 MHz front side bus (models with integrated graphics)

^{*} Intel's numbering is not a measurement of higher performance.

^{*} System may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See: http://www.microsoft.com/windows/windows-7/ for details.

Standard Features

technology capable

Intel Centrino 2 with vPro Intel Centrino 2 with vPro technology is a selectable feature that is available on units configured with an Intel WiFi Link 5300 or 5100. It provides advances in remote manageability, security, energy efficient performance, and wireless connectivity. Intel Active Management Technology (AMT) offers built-in manageability and proactive security for networked notebook PCs, even when they are powered off* or when the operating system is inoperable. It can help identify threats before they reach the operating system, isolate infected systems, and update PCs regardless of their power state.

> NOTE: Some functionality of Intel Centrino 2 with vPro technology, such as Intel Active Management technology and Intel Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel Centrino 2 with vPro technology is dependant on 3rd party software providers. Compatibility with future "virtual appliances" is yet to be determined.

Business Rugged

Meets the military standard Mil-Std-810F* for:

- Drop: Method 516.5 Proc. IV (26 drops from 30")
- Shock: Method 515.5 Proc. I (Functional)
- Vibration: Method 514.5, Proc I, Cat. 20 & 24
- High Temperature: Method 501.4, Proc I & II (140°F/60°C operational)
- Low Temperature: Method 502.4, Proc I & II (-20°F/-29°C operational)
- Sand and Dust: Method 510.4, Proc. I (Blowing Dust)
- Humidity: Method 507.4 (95% relative humidity)
- Altitude: Method 500.4 Low Pressure, Proc. I & II (15,000 feet operational)
- * Testing was not intended to demonstrate fitness for DOD contracts requirements or for military use. Test results are not a guarantee of future performance under these test conditions.

Graphics

Models with discrete graphics:

ATI Mobility Radeon HD 3450 with 128 MB or 256 MB dedicated video memory Microsoft DirectX 10.1 (Shader 4.1) and OpenGL 2.1 capable

Models with integrated graphics:

Mobile Intel Graphics Media Accelerator 4500MHD Microsoft DirectX 10 (Shader 4.0) and OpenGL 2.0 capable



Standard Features

Display Internal 14.1-inch diagonal WXGA anti-glare (1280 x 800 resolution)

14.1-inch diagonal Illumi-Lite LED WXGA anti-glare (1280 x 800 resolution)

14.1-inch diagonal WXGA+ anti-glare (1440 x 900 resolution)

Ambient Light Sensor Optional HP Privacy Filter

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

DVI-D (single link) video signal available through DVI port in optional HP

Docking Station (sold separately); supports resolutions up to

1600 x 1200 at both full and reduced blanking, and 1920 x 1200 at

reduced blanking

Supports 2 external displays (optional HP Docking Station required)

NOTE: Resolutions are dependent upon monitor capability, and resolution

and color depth settings.

Memory Standard 800 MHz DDR2 SDRAM; two slots supporting dual channel memory

1024 MB, 2048 MB, 4096 MB, or 8192 MB

Maximum Upgradeable to 8192 MB with 4096 MB SODIMMs in slots 1 and 2

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. Availability of 4 GB or more of memory requires Windows Vista Business 64-bit or Linux. With Windows 32-bit operating systems, memory above 3 GB may not all be available due to system resource requirements.

Communications

Integrated Intel Gigabit Network Connection (10/100/1000 NIC)*

56K V.92 modem**

* The term "10/100/1000" or "Gigabit" Ethernet indicates compliance with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.

** 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.



Standard Features

Wireless Devices

Support for a broad range of secure, integrated wireless LAN and wireless WAN options featuring support for the latest industry standards. Wireless LAN is factory configurable or available as an option to be added later. Broadband Wireless (WWAN) requires Windows Vista Business or Windows XP Professional and is available in select countries as a standard, factory configurable feature or as an option to be added later. Integrated Bluetooth is also available (factory configurable only) and can be combined with any of the supported wireless LAN and wireless WAN options.

HP un2400 EV-DO/HSPA Mobile Broadband Module Integrated WWAN module with Gobi global mobile Internet technology that provides worldwide connection to both CDMA (EVDO) and UMTS (HSPA) wireless networks.

NOTE: Separately purchased mobile network operator service is required. Two 850/900/1800/1900/2100 MHz antennas integrated in the top of the display panel support current and future WWAN technologies.

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 Three antennas integrated in the display enclosure

Intel WiFi Link 5300 Integrated support for 802.11a, b, g, and n draft 2.0*

Up to 450 mbps data rate

Broadcom 4322AGN Integrated support for 802.11a, b, g, and n draft 2.0*

802.11a/b/g/draft-n Wi- Up to 300 mbps data rate

Fi Adapter

HP Integrated Module with Bluetooth Wireless Technology

Bluetooth Specification v2.0 compliant Works with a wide range of Bluetooth devices

* The specificat

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 x 19 mm key pitch (center-to-center spacing), 2.5 mm stroke, and comfort-dished keycaps.

HP DuraKeys is a clear coating applied over the notebook keyboard that helps protect the finish and the printed characters on the keys. HP DuraFinish helps protect the finish on the keyboard deck, graphics, and icons from normal wear and tear.

HP Night Light shines directly on the keyboard for low-light conditions.



^{*} 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 (Intel 802.11a/b/g only).

Standard Features

Touch-sensitive controls Touch-sensitive controls provide easy access to the following features: HP Info Center, HP QuickLook 2,

wireless on/off, HP Presentation button, external volume up, volume down, and mute

Pointing device Enhanced dual pointing devices:

Reader

Touchpad with scroll zone, two pick buttons

and

Pointstick, two pick buttons

Expansion card slots ExpressCard/54 slot Supports ExpressCard/54 and ExpressCard/34

Integrated Smart Card

Compatible with ISO 7816 compliant Smart Cards PC/SC interface support

Secure Digital slot Supports SD (Secure Digital), MMC (MultiMedia Card)

Storage Internal Storage Device 120/160/250 GB 5400 rpm SMART SATA II Hard Drive

160/250/320 GB 7200 rpm SMART SATA II Hard Drive

128 GB Solid State Drive 80 GB Solid State Drive

NOTE: 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 away from 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.

Upgrade Bay Fixed 12.7 mm SATA Blu-ray R/RE DVD+/-RW SuperMulti DL Drive

optical drive

DVD+/-RW SuperMulti DL LightScribe Drive

DVD/CD-RW Combo Drive

DVD-ROM Drive

or

Second hard drive* 250 GB 5400 rpm SMART SATA II Hard Drive

160 GB 7200 rpm SMART SATA II Hard Drive

* For RAID configurations, both hard drive capacities must be equal.

Standard Features

Interfaces ExpressCard/54 slot One
Smart Card Reader One

External monitor One (VGA)

1394a One Stereo microphone in One Stereo headphone/line One

out

Power connector One

RJ-11/modem One

RJ-45/Ethernet One

USB 2.0 Three

Docking connector One

Secondary battery One

connector

LED status indicators Fifteen

Audio/Visual High Definition Audio support w/24-bit DAC

Integrated stereo speakers

Integrated dual-microphone array

Touch-sensitive controls for volume up, volume down, and mute

Stereo headphone/line out Stereo microphone in

Optional 2 MP Webcam with Business Card Reader Software

- Supports videoconferencing and still image capture
- Large image sensor for excellent color matching and good low light sensitivity
- Up to 30 frames/sec
- AutoMacro focus lens
- Video capture at VGA, 1.3 Mpixel, and 2 Mpixel resolutions
- 16-bit true color (camera sensors output YCrCb format among others)



Standard Features

Software

Preinstalled software with HP Recovery Manager (Vista only) Windows Vista or HP Help and Support Center

Windows XP HP QuickLook 2

HP Universal Print Driver

HP ProtectTools Security Manager:

BIOS Configuration for HP ProtectTools Credential Manager for HP ProtectTools Device Access 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 Special Edition Intervideo WinDVD - DVD Player

Roxio Creator Business (for optional DVD+/-RW and DVD/CD-RW drives)

McAfee Total Protection* Synaptics Touchpad Driver

Microsoft Windows Live Messenger (select models)

HP Webcam Software (select models)

Additional software available from the web

HP SoftPaq Download Manager HP Client Manager Software **HP Client Management Solutions** Java Card Security for HP ProtectTools

* 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 (Vista only)

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.

SMBIOS Version 2.4

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



Standard Features

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
- Device Access Manager for HP ProtectTools
- Drive Encryption for HP ProtectTools
- File Sanitizer for HP ProtectTools
- Set-up Wizard for HP ProtectTools
- Privacy Manager for HP ProtectTools (Chat & Sign)
- Embedded Security for HP ProtectTools
- Java Card Security for HP ProtectTools

Standard Features Security HP ProtectTools Security Manager

Enhanced Pre-Boot Security

HP SpareKey One-Step Logon **HP Fingerprint Sensor**

Integrated Smart Card Reader Configuration Control Hardware

Memory Change Alert Ownership Tag Setup Password

Power-On Password

TPM 1.2 Embedded Security Chip*

TPM Enhanced DriveLock*

HP Disk Sanitizer HP 3D DriveGuard Kensington Lock Slot

Support for Computrace / LoJack for Laptops (must be purchased

separately)

Optional Features HP Privacy Filter Narrows viewing area so that screen data is

visible only to persons directly in front of the

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

Power Supply

External 90-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. HP Fast Charge does not apply to 12cell Ultra-Capacity batteries.



^{*} TPM module disabled where use is restricted by law; for example, Russia and China.

Standard Features

Battery Primary battery 6-cell (55 WHr) Li-lon battery

Optional HP Extended

Life Battery

Optional HP Ultra-Capacity Battery 8-cell (52 WHr) high capacity Li-lon battery

12-cell (95 WHr) high capacity Li-lon battery

Battery Life 6-cell Primary with integrated 6-cell Primary with integrated

graphics and CCFL display

graphics and Illumi-Light LED display and Intel 80 GB Solid State Drive

Primary battery Up to 6 hours and 15 minutes Up to 8 hours and 45 minutes

Primary battery and Up to 13 hours Up to 17 hours and 30 minutes

optional HP Extended Life

Battery

Primary battery and Up to 17 hours and 15 minutes

Up to 24 hours

optional HP Ultra-Capacity Battery

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

Power Conservation Supports enhanced Intel SpeedStep technology with Intel Core 2 Duo (allows Battery Optimized Mode,

Maximum Performance Mode, or Automatic mode)

Intel Display Power Saving technology (models with integrated graphics)

ATI PowerPlay technology (models with discrete graphics)

Hibernation Standby

ACPI compliance

Docking and Stands HP Advanced Docking Station

HP Docking Station

HP Standard Monitor Stand HP Adjustable Notebook Stand

HP External MultiBay II

HP's shared docking solutions provide simple and convenient port replication and cable management. Features include Gigabit NIC pass through, modem pass through, legacy parallel and serial ports, USB 2.0 ports, integrated security mechanism*, integrated MultiBay II and ExpressCard** slots. These docking solutions are compatible across multiple Business Notebook platforms enabling a lower total cost of ownership.

- * HP/Kensington Cable Lock required (purchased separately)
- ** HP Advanced Docking Station only



Standard Features

Service and Support

HP Services offers limited 3-year warranty; 1-year limited warranty on primary battery. 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: 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.

Select Model(s)

HP's Global Product Offer includes Global Series Preconfigured (GS-P) and Configurable (GS-C) products. GPO delivers globally consistent products, services, and solutions with End-of-Life (EOL) transition management. These products reduce IT complexity, lower management costs, increase productivity, and simplify product transitions.

6930p

FL488AW#ABA

Global

(may vary based on local regulatory requirements)

Processor

Intel® Core™2 Duo Processor T8600 (2.4 GHz, 1066 MHz FSB, 3MB L2

cache)

Intel Centrino with vPro

technology

Enabled

Operating System Genuine Windows Vista® Business (note) w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM) Hard Drive 160GB 5400rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA anti-glare (1280 x 800 resolution)

Graphics Mobile Intel® GMA X4500 HD, with up to 384 MB of shared system

memory

Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Intel® WiFi Link 5300; Bluetooth 2.0 Integrated Wireless

Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded Integrated Security

> Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

External 90W adapter Power

Warranty 3/3/0



^{*} Intel's numbering system is not a measurement of higher performance.

^{**} TPM module disabled where use is restricted by law; for example, Russia and China.

Standard Features

FL490AW#ABA

Global

(may vary based on local regulatory requirements)

Processor Intel® Core™2 Duo Processor T9400* (2.53 GHz, 1066 MHz FSB, 6 MB L2

cache) Enabled

Intel Centrino with vPro

technology

Operating System

Genuine Windows Vista® Business (note) w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 250GB 5400rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA+ anti-glare (1440 x 900 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics Mobile Intel® GMA X4500 HD, with up to 384 MB of shared system

memory

Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-lon battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.

6930p

FL492AW#ABA

Global

(may vary based on local regulatory requirements)

Processor

Intel® Core™2 Duo Processor T8600 (2.4 GHz, 1066 MHz FSB, 3MB L2

cache)

Intel Centrino with vPro

technology

Enabled

Operating System Genuine Windows Vista® Business (note) w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 5400rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA anti-glare (1280 x 800 resolution)

Graphics ATI Mobility Radeon™ HD 3450 with 128 MB of dedicated video memory Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0



Standard Features

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

Power External 90W adapter

Warranty 3/3/0

6930p

FL494AW#ABA

Global

(may vary based on local regulatory requirements)

Processor

Intel® Core™2 Duo Processor T9400* (2.53 GHz, 1066 MHz FSB, 6 MB L2

cache)

Intel Centrino with vPro

technology

Enabled

Operating System Genuine Windows Vista® Business (note) w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 7200rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA+ anti-glare (1440 x 900 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics ATI Mobility Radeon™ HD 3450 with 256 MB of dedicated video memory Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-lon battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.



^{*} Intel's numbering system is not a measurement of higher performance.

^{**} TPM module disabled where use is restricted by law; for example, Russia and China.

Standard Features

6930p

KS081UT#ABA Smart Buy Processor Intel® Core™2 Duo Processor T8400* (2.26 GHz, 1066 MHz FSB, 3MB L2

cache)

Intel Centrino with vPro

technology

Not Enabled

Operating System Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 5400rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA anti-glare (1280 x 800 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics Mobile Intel® GMA X4500 HD, with up to 384 MB of shared system

memory

Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-lon battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.



Standard Features

6930p

KS082UT#ABA Smart Buy Processor Intel® Core™2 Duo Processor T8600* (2.4 GHz, 1066 MHz FSB, 3MB L2

cache)

Not Enabled

Intel Centrino with vPro

technology

Operating System Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 5400rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA anti-glare (1280 x 800 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics ATI Mobility Radeon™ HD 3450 with 128 MB of dedicated video memory Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.

6930p

KS083UT#ABA Smart Buy Processor Intel® Core™2 Duo Processor T8600* (2.4 GHz, 1066 MHz FSB, 3MB L2

cache)

Intel Centrino with vPro

technology

Not Enabled

Operating System Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 5400rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA anti-glare (1280 x 800 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics ATI Mobility Radeon™ HD 3450 with 128 MB of dedicated video memory

Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem



Standard Features

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0; HP Mobile Broadband (powered by

Gobi)

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.

6930p KS084UT#ABA Smart Buy

Processor Intel® Core™2 Duo Processor T8600* (2.4 GHz, 1066 MHz FSB, 3MB L2

cache)

Intel Centrino with vPro

technology

Not Enabled

Operating System Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 7200rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA anti-glare (1280 x 800 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics ATI Mobility Radeon™ HD 3450 with 256 MB of dedicated video memory Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-lon battery

Power External 90W adapter

Warranty 3/3/0



^{*} Intel's numbering system is not a measurement of higher performance.

^{**} TPM module disabled where use is restricted by law; for example, Russia and China.

Standard Features

6930p

KS085UT#ABA Smart Buy Processor Intel® Core™2 Duo Processor T8600* (2.4 GHz, 1066 MHz FSB, 3MB L2

cache)

Intel Centrino with vPro

technology

Not Enabled

Operating System Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 4096MB 800MHz DDR2 (2 DIMM)
Hard Drive 160GB 7200rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA+ anti-glare (1440 x 900 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics ATI Mobility Radeon™ HD 3450 with 256 MB of dedicated video memory Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.

6930p

KS086UA#ABA Regional Processor Intel® Core™2 Duo Processor T9400* (2.53 GHz, 1066 MHz FSB, 6MB L2

cache)

Intel Centrino with vPro

technology

Enabled

Operating System Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 4096MB 800MHz DDR2 (2 DIMM)
Hard Drive 160GB 7200rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA+ anti-glare (1440 x 900 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics ATI Mobility Radeon™ HD 3450 with 256 MB of dedicated video memory Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem



Standard Features

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded Integrated Security

> Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

DVD+/-RW SuperMulti DL LightScribe Drive Upgrade Bay

6-cell (55 WHr) Lithium-Ion battery **Battery**

Power External 90W adapter

3/3/0 Warranty

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.

6930p

KS087UA#ABA Regional

Intel® Core™2 Duo Processor T9400* (2.53 GHz, 1066 MHz FSB, 6MB L2 Processor

cache)

Intel Centrino with vPro

technology

Enabled

Operating System Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

4096MB 800MHz DDR2 (2 DIMM) System Memory Hard Drive 160GB 7200rpm SATA Hard Drive

14.1-inch diagonal WXGA+ anti-glare (1440 x 900 resolution); 2 MP Display

Webcam with Business Card Reader Software

ATI Mobility Radeon™ HD 3450 with 256 MB of dedicated video memory **Graphics** Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Intel® WiFi Link 5300; Bluetooth 2.0; HP Mobile Broadband (powered by Integrated Wireless

Gobi)

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

> Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

External 90W adapter Power

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.



Standard Features

6930p

KS008UA#ABA Regional cache)

Intel Centrino with vPro technology

Operating System

Processor

Enabled

Genuine Windows Vista® Business with downgrade to Windows® XP

Intel® Core™2 Duo Processor T8600* (2.4 GHz, 1066 MHz FSB, 3MB L2

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 7200rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA+ anti-glare (1440 x 900 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics ATI Mobility Radeon™ HD 3450 with 256 MB of dedicated video memory Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0; HP Mobile Broadband (powered by

Gobi)

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-lon battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.



Standard Features

6930p

KS007UA#ABA Regional Processor Intel® Core™2 Duo Processor T8600* (2.4 GHz, 1066 MHz FSB, 3MB L2

cache) Enabled

Intel Centrino with vPro

technology

Operating System

Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 7200rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA+ anti-glare (1440 x 900 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics ATI Mobility Radeon™ HD 3450 with 256 MB of dedicated video memory Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.

6930p

KS107UA#ABA Regional Processor Intel® Core™2 Duo Processor T8600* (2.4 GHz, 1066 MHz FSB, 3MB L2

cache)

Intel Centrino with vPro

technology

Not Enabled

Operating System Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 7200rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA+ anti-glare (1440 x 900 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics ATI Mobility Radeon™ HD 3450 with 128 MB of dedicated video memory

Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem



Standard Features

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.

6930p

KS108UA#ABA Regional Processor Intel® Core™2 Duo Processor T8600* (2.4 GHz, 1066 MHz FSB, 3MB L2

cache)

Intel Centrino with vPro

technology

Not Enabled

Operating System Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 7200rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA+ anti-glare (1440 x 900 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics ATI Mobility Radeon™ HD 3450 with 128 MB of dedicated video memory

Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0; HP Mobile Broadband (powered by

Gobi)

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-lon battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.



Standard Features

6930p

KS134UA#ABA Regional Processor Intel® Core™2 Duo Processor T8600* (2.4 GHz, 1066 MHz FSB, 3MB L2

cache) Enabled

Intel Centrino with vPro

technology

Operating System

Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 5400rpm SATA Hard Drive

Display 14.1-inch diagonal Illumi-Lite WXGA (1280 x 800 resolution)

Graphics Mobile Intel® GMA X4500 HD, with up to 384 MB of shared system

memory

Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.

6930p

KS135UA#ABA Regional Processor Intel® Core™2 Duo Processor T9400* (2.53 GHz, 1066 MHz FSB, 6MB L2

cache)

Intel Centrino with vPro

technology

Enabled

Operating System Genuine Windows Vista® Business with downgrade to Windows® XP

Professional custom installed *+ w/MS Office 2007 (Trial)

System Memory 3072MB 800MHz DDR2 (1 DIMM)
Hard Drive 160GB 7200rpm SATA Hard Drive

Display 14.1-inch diagonal Illumi-Lite WXGA (1280 x 800 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics ATI Mobility Radeon™ HD 3450 with 256 MB of dedicated video memory

Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem



Standard Features

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.

6930p

NP905AW#ABA

Global

(may vary based on local regulatory requirements)

Processor

Intel® Core™2 Duo Processor P8700 (2.53 GHz, 1066 MHz FSB, 3MB L2

cache)

Intel Centrino with vPro

technology

Enabled

Operating System Genuine Windows Vista® Business (note) w/MS Office 2007 (Trial)

System Memory 4096MB 800MHz DDR2 (2 DIMM)
Hard Drive 160GB 7200rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA anti-glare (1280 x 800 resolution)

Graphics Mobile Intel® GMA X4500 HD, with up to 384 MB of shared system

memory

Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.



Standard Features

NP907AW#ABA

Global

(may vary based on local regulatory requirements)

Processor Intel® Core™2 Duo Processor P8700* (2.53 GHz, 1066 MHz FSB, 3 MB L2

cache) Enabled

Intel Centrino with vPro

technology

Operating System Genuine Windows Vista® Business (note) w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 250GB 5400rpm SATA Hard Drive

Display 14.1-inch diagonal Illumi-Lite WXGA (1280 x 800 resolution); 2 MP

Webcam with Business Card Reader Software

Graphics Mobile Intel® GMA X4500 HD, with up to 384 MB of shared system

memory

Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.

6930p

NP909AW#ABA

Global

(may vary based on local regulatory requirements)

Processor

Intel® Core™2 Duo Processor P8700 (2.53 GHz, 1066 MHz FSB, 3MB L2

cache)

Intel Centrino with vPro

technology

Enabled

Operating System Genuine Windows Vista® Business (note) w/MS Office 2007 (Trial)

System Memory 2048MB 800MHz DDR2 (1 DIMM)
Hard Drive 250GB 7200rpm SATA Hard Drive

Display 14.1-inch diagonal WXGA+ anti-glare (1440 x 900 resolution)

Graphics ATI Mobility Radeon™ HD 3450 with 256 MB of dedicated video memory Audio High Definition Audio, stereo speakers, stereo headphone/line out, stereo

microphone in, integrated dual-microphone array

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel® WiFi Link 5300; Bluetooth 2.0



Standard Features

Integrated Security Integrated Smart Card Reader, HP ProtectTools, TPM** 1.2 Embedded

Security Chip, Enhanced Pre-Boot Security, HP Spare Key, HP Disk Sanitizer, Enhanced Drive Lock, HP Fingerprint Sensor, Drive Encryption for HP ProtectTools, Credential Manager for HP ProtectTools, File Sanitizer for HP

ProtectTools

Pointing Device Enhanced dual pointing devices (touchpad with scroll zone and pointstick)

Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive

Battery 6-cell (55 WHr) Lithium-Ion battery

Power External 90W adapter

Warranty 3/3/0

* Intel's numbering system is not a measurement of higher performance.

** TPM module disabled where use is restricted by law; for example, Russia and China.

6930p

NU836AW#ABA

Global

(may vary based on local regulatory requirements)

Processor Intel Core 2 Duo Processor T9550 (2.66 GHz, 6 MB L2 cache, 1066 MHz

FSB)

Intel Centrino 2 with vPro Enabled

technology

Operating System Genuine Windows Vista Business 32 with Office Ready

System Memory 4096 MB 800 MHz DDR2 (2 DIMM)

Hard Drive 250 GB 7200 rpm SMART SATA Hard Drive Upgrade Bay DVD+/-RW SuperMulti DL LightScribe Drive Display 14.1-inch diagonal WXGA+ anti-glare Graphics ATI Mobility Radeon HD 3450 with 256 MB

Webcam 2 MP Webcam

Audio ADI High Definition CODEC

Stereo headphone/line out and microphone in

Integrated microphone

Communications Integrated Intel Gigabit Network Connection (10/100/1000 NIC)

56K V.92 modem

Integrated Wireless Intel WiFi Link 5300 (802.11 a/b/g/n draft 2.0)

Integrated Security Drive Encryption for HP ProtectTools

HP Fingerprint Sensor

TPM 1.2*

Pointing Device Dual pointing devices (Touchpad and Pointstick)

Battery 6-cell (55 WHr) Li-Ion
Power External 90W adapter

Warranty 3/3/0 or 3/3/3 depending on country

* TPM module disabled where use is restricted by law; for example, Russia and China.



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 120 GB 5400 rpm Hard Drive	RT080AA
	HP Primary SATA 120 GB 7200 rpm Hard Drive	AH920AA
	HP Primary SATA 250 GB 5400 rpm Hard Drive	AK072AA
	HP Upgrade Bay SATA 250 GB 5400 rpm Hard Drive	AK868AA
	HP Upgrade Bay SATA DVD+/-RW SuperMulti DL LightScribe Drive	AK869AA
MultiBay II Storage (9.5-mm)	HP MultiBay II DVD-ROM Drive	PA849A
NOTE: Requires HP Advanced Docking Station or HP External MultiBay II	HP MultiBay II DVD+/-RW SuperMulti DL Drive	PA851A
Expansion Solutions	HP 2008 120W Docking Station	KP080AA#ABA
Expansion solutions	HP 2008 150W Docking Station	KQ751AA#ABA
	HP 2008 150W Advanced Docking Station	KP081AA#ABA
	HP 2008 180W Advanced Docking Station	KQ752AA#ABA
	HP External MultiBay II	PA509A#ABA
	HP Standard Monitor Stand	PA507A
	HP Adjustable Notebook Stand	PA508A
Communications	Intel WiFi Link 5300	KM591AA#ABA
	HP un2400 EVDO/HSUPA Mobile Broadband Module	FN556AA
Power	HP 1-Bay Battery Charging Station	RW635AA#ABA
	HP 5-Bay Battery Charging Station	RW636AA#ABA
	HP Battery Adapter Kit	RW637AA
	HP 90W Smart AC Adapter	ED495AA#ABA
	HP 90W Smart Auto Adapter	ED493AA
	Primary 6-cell Battery pack	KU531AA
	HP Extended Life Battery	AJ359AA



Options		
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 ExpressCard Smart Card Reader with Java Card	AJ451AA
,	HP ProtectTools Java Card – 10 units	EL348AA
	HP/Kensington MicroSaver Security Lock	PC766A
	HP Privacy Filter	AJ357AA
Input/Output Devices	HP PS/2 Keyboard & Mouse Bundle	RC464AA#ABA
•	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, 2048 MB, and 4096 MB

Standard Memory

- 1024 MB (1024 MB x 1)
- 2048 MB (2048 MB x 1 or 1024 MB x 2)
 4096 MB (4096 MB x 1 or 2048 MB x 2)
- 8192 MB (4096 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. Availability of 4 GB or more of memory requires Windows Vista Business 64-bit or Linux. With Windows 32-bit operating systems, memory above 3 GB may not all be available due to system resource requirements.

			1		
Mei	mor	, , ,	na	rac	les

 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

Upgrade Bay Drive Support

	Quantity Supported	Drive Bay
Blu-ray R/RE DVD+/RW SuperMulti DL Drive		Upgrade Bay
DVD+/-RW SuperMulti DL LightScribe Drive	One	Upgrade Bay
DVD/CD-RW Combo Drive	One	Upgrade Bay
DVD-ROM Drive	One	Upgrade Bay
250 GB 5400 rpm SMART SATA Hard Drive	One	Upgrade Bay
160 GB 7200 rpm SMART SATA Hard Drive	One	Upgrade Bay

Internal Storage Device

	Quantity Supported	Drive Bay
Hard Drives		
250 GB 5400 rpm SMART SATA Hard Drive	One	Dedicated hard drive bay
160 GB 5400 rpm SMART SATA Hard Drive	One	Dedicated hard drive bay
120 GB 5400 rpm SMART SATA Hard Drive	One	Dedicated hard drive bay
320 GB 7200 rpm Smart SATA Hard Drive	One	Dedicated hard drive bay
250 GB 7200 rpm Smart SATA Hard Drive	One	Dedicated hard drive bay
160 GB 7200 rpm SMART SATA Hard Drive	One	Dedicated hard drive bay
Solid State Drive		
128 GB Solid State Drive	One	Dedicated hard drive bay
80 GB Solid State Drive	One	Dedicated hard drive bay



Technical Specifications

System Unit Dimensions (HxWxD) 1.23 in (at front) x 13.03 in x 9.57 in

31.3 mm (at front) x 331.0 mm x 243.0 mm

Weight with Upgrade Bay weight- Starting at 4.7 lb (2.1 kg)

saver and 4-cell battery

with Upgrade Bay optical Starting at 5.1 lb (2.3 kg)

drive and 6-cell battery

NOTE: Height varies depending upon where on the notebook the measurement is made. Starting weight includes integrated graphics, hard drive, one memory DIMM, 802.11 wireless communications module. Weight varies by configuration and components.

Stand-Alone Power Nominal Operating 18.5 V Requirements Voltage

(AC Power) Average Operating Power 20.0 W (integrated graphics)

23.0 W (discrete graphics)

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 125 G, 2 ms, half-sine Operating

Non-operating 200 G, 2 ms, half-sine

Random Vibration* Operating 0.75 grms 1.50 grms Non-operating

Altitude* -50 to 10,000 ft (-15.24 to 3,048 m) Operating (unpressurized) Non-operating -50 to 40,000 ft (-15.24 to 12,192 m)

Industry Standard UL Yes Certifications **CSA** Yes

FCC Compliance Yes **ENERGY STAR®** Yes* **EPEAT** Gold** **ICES** Yes Yes Australia / NZ A-Tick Yes

Compliance

CCC Yes Japan VCCI Compliance Yes MIC Yes **BSMI** Yes



^{*} These ranges represent the recommended operating conditions. Although this notebook meets the military standard MIL-STD 810F for vibration, dust, humidity, altitude, and high temperature, HP does not guarantee future performance under those extreme conditions.

Technical Specifications

CE Marking Compliance Yes **BNCI or BELUS** Yes CIT Yes **GOST** Yes Saudi Arabian Yes Compliance (ICCP)

SABS Yes **UKRSERTCOMPUTER** Yes

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

ΗP	90W	Smart AC
Add	apter	

Dimensions 5.00 x 1.97 x 1.1 in (12.7 x 5.0 x 2.9 cm)

Weight 0.82 lb (370 g) 100 to 240 VAC Input

> Input Efficiency 83% min at 115 VAC

47 to 63 Hz Input frequency range

1.5 A at 90 VAC, 0.75 A at 180 VAC PFC Input AC current

Version

2.4 A at 90 VAC, 1.2 A at 180 VAC NON PFC

Version

90W Output Output power 65W

> DC output 19.0V

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)

> -4° to 149° F (-20° to 65° C) Non-operating (storage)

temperature

Altitude 0 to 10,000 ft (0 to 3,048 m)

20% to 80% Humidity Storage Humidity 10% to 90%

EMI and Safety Certifications

CE Mark – full compliance with LVD and EMC directives; Worldwide safety standards - IEC60950, EN60950, UL60950, Class 1, 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.



^{*} Configurations of the HP EliteBook 6930p that are ENERGY STAR qualified are identified as HP EliteBook 6930p ENERGY STAR on HP websites and on www.energystar.gov.

^{**} EPEAT registration varies by country. See www.epeat.net for registration status by country. EPEAT status listed above applies to U.S.

Technical Specifications

Optional HP Ultra-Capacity Battery

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 Li-lon

Energy Watt-hour Capacity 95 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 Smart Adapter 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

Optional HP Extended Life Dimensions (H x W x L)

Weight

1.0 x 3.9 x 8.7 in (2.5 x 10.0 x 22.0 cm) 1.00 lb (0.455 kg)

Cells/Type 8-cell Li-lon

Energy Watt-hour Capacity 52 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 3 hours

Standby

System ON 3 to 5 hours (depending on system power

consumption)

HP Fast Charge Charges the battery up to 90% within 90 minutes

Technology when system is OFF

Fuel Gauge When pressed, LEDs light indicating level of charge remaining on battery

6-Cell (55 WHr) Li-lon battery

Dimensions $(H \times W \times L)$

0.8 x 2.1 x 8.0 in (2.0 x 5.3 x 20.3 cm)

Weight 0.737 lb (0.335 kg)

Cells/Type 6-cell Li-lon

Energy Watt-hour Capacity 55 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 2.5 hours

Standby

System ON 3 to 5 hours (depending on system power

consumption)

HP Fast Charge Charges the battery up to 90% within 90 minutes

Technology when system is OFF



Technical Specifications

Displays

14.1-inch Illumi-Lite	
WXGA anti-alare	

Active Area (W x H) $11.9 \times 7.5 \text{ in } (30.3 \times 19.0 \text{ cm})$

Diagonal Size 14.1 in (35.7 cm)

Surface Treatment Anti-glare
Contrast Ratio 400:1 (typical)

Refresh Rate 60 Hz

Brightness 200 nit (typical)

Pixel Resolution Pitch 0.237 mm

Format 1280 x 800 Configuration RGB Stripe

Backlight LED PPI 107

Viewing Angle $\pm 30^{\circ}$ Horizontal, $\pm 10^{\circ}$ Vertical (minimum)

30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)

14.1-inch WXGA antiglare

Active Area $(W \times H)$

11.9 x 7.5 in (30.3 x 19.0 cm)

Diagonal Size Surface Treatment 14.1 in (35.7 cm) Anti-glare

Contrast Ratio

300:1 (typical)

200 nit (typical)

Refresh Rate

60 Hz

Brightness Pixel Resolution

Pitch 0.237 mm

Format 1280 x 800

Configuration RGB Stripe

Backlight CCFL **PPI** 107

Viewing Angle $\pm 30^{\circ}$ Horizontal, $\pm 10^{\circ}$ Vertical (minimum)

30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)

Technical Specifications

14.1-inch WXGA+ anti-

glare

Active Area (W x H) 11.9 x 7.5 in (30.3 x 19.0 cm)

Diagonal Size 14.1 in (35.7 cm)

Surface Treatment Anti-glare
Contrast Ratio 300:1 (typical)

Refresh Rate 60 Hz

Brightness 200 nit (typical)

 Pixel Resolution
 Pitch
 0.210 mm

 Format
 1440 x 900

Configuration RGB Stripe

Backlight CCFL PPI 121

Viewing Angle $\pm 30^{\circ}$ Horizontal, $\pm 10^{\circ}$ 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 7200 rpm SATA Drive Weight

Hard Drive

Orive Weight 0.25 lb (115 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 TimeSingle Track1 ms(typical reads, including settling)Average10 msMaximum18 ms

Rotational Speed 7200 rpm

Logical Blocks 625,142,448

Operating Temperature 32° to 140° F (0° to 60° C) [case temp]

Features ATA Security

Technical Specifications

250 GB 7200 rpm SATA

Hard Drive

Drive Weight 0.25 lb (115 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 TimeSingle Track1 ms(typical reads, including settling)Average10 msMaximum18 ms

Rotational Speed 7200 rpm Logical Blocks 488,397,168

Operating Temperature 32° to 140° F (0° to 60° C) [case temp]

Features ATA Security

160 GB 7200 rpm SATA Drive Weight

Hard Drive

Orive Weight 0.25 lb (115 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 TimeSingle Track1.5 ms(typical reads, including settling)Average11 msMaximum22 ms

Rotational Speed 7200 rpm Logical Blocks 312,581,808

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) 250 GB Capacity

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 Single Track 3 ms (typical reads, including Average 13 ms settling) 24 ms Maximum

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 Drive Weight

Hard Drive

0.22 lb (101 g) 160 GB Capacity

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 Single Track 3 ms (typical reads, including Average 13 ms settling) 24 ms Maximum

Rotational Speed 5400 rpm Logical Blocks 312,581,808

Operating Temperature 32° to 140° F (0° to 60° C) [case temp]

Features ATA Security

Technical Specifications

120 GB 5400 rpm SATA Drive Weight

Hard Drive

0.22 lb (101 g) 120 GB Capacity

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 Single Track 3 ms (typical reads, including Average 13 ms 24 ms

settling) Maximum

5400 rpm **Rotational Speed**

Logical Blocks 234,441,648

Operating Temperature 32° to 140° F (0° to 60° C) [case temp]

Features ATA Security

128 GB 2.5-inch SATA Solid State Drive

Weight 80.1 Grams 128 GB Capacity

Height 0.37 in (9.5 mm) Width 2.75 in (70 mm)

Interface **SATA**

Performance Maximum Sequential Read Maximum Sequential Write

> 220 MB/s 200 MB/s

Logical Blocks 250,069,680

 32° to 158° F (0° to 70° C) [case temp] Operating Temperature **Features** ATA Security; ATA-7; SATA 2.6; DIPM

80 GB 2.5-inch SATA

Solid State Drive

Weight 0.19 lbs (86 g)

Capacity 80 GB

Height 0.37 in (9.5 mm) Width 2.75 in (70 mm) Interface ATA-7 / SATA 2.6

Performance Maximum Sequential Read Maximum Sequential Write

> 250 MB/s 70 MB/s

Logical Blocks 156,301,488

Operating Temperature 32° to 158°F (0° to 70°C) [case temp]

Features ATA Security

Removable Storage Drives



Technical Specifications

DVD-ROM Drive Access Times Random <116 ms CD (typical)

<125 ms DVD (typical)

Max Data Transfer Rate 24X CD-ROM Up to 3,600 KB/s

8X-DVD Up to 10,800 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)

Max Media Capacity

(read)

None 4.7 GB

Transport Tray Loading

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

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)

Max Media Capacity

(read)

CD-R, CD-RW

8.5 GB

Max Media Capacity

(write)

700 MB

Transport Tray loading

Technical Specifications

rechnical Specificant) I I S			
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	
	Max Dala Translet Rale	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	ορ 10 ο,7 30 kb/s	
	Interface	Gen 1 SATA		
	Supported Media (read)			
	Supported Micula (read)	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		
Blu-ray R/RE DVD+/-RW SuperMulti DL Drive	Access Times	Random	<140 ms CD-ROM (typical)	
			<160 ms DVD-ROM (typical)	
			<300 ms BD-ROM (typical)	
	Max Data Transfer Rate	24X CD-ROM	Up to 3,600 KB/s	
		8X DVD-ROM	Up to 10,800 KB/s	
		8X CD-R	Up to 1,200 KB/s	
		8X CD-RW	Up to 1,200 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	
		1X BD-ROM	Up to 4,500 KB/s	



1X BD-R

Up to 4,500 KB/s

Technical Specifications

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, BD-ROM, BD-R, BD-RE

Supported Media (write) CD-R, CD-RW, DVD+R, DVD+R(9), DVD+RW, DVD-R, DVD-R(9), DVD-R

RW, DVD-RAM, BD-R, BD-RE

Max Media Capacity

(read)

50.0 GB

Max Media Capacity

(write)

50.0 GB

Transport Tray Loading

Security

HP Fingerprint Sensor Mobile Voltage 3.0V-3.6V Single Supply

Operation

Operating Temperature $32^{\circ} - 158^{\circ}F (0^{\circ} - 70^{\circ}C)$

Current Consumption @

3.3V

Less than 70 mA peak imaging and scrolling Less than 25 mA hardware finger detection

Advanced Power Management

High-Rate Image Capture Up to 240 image frames /sec

ESD Resistance IEC 61000-4-2 Level 4 (±15KV)

Detection Matrix 192 x 16 Pixels

9.7 mm x 0.81 mm

500 ppi High-Resolution Images

Audio

Hardware Implementation ADI1981HD High Definition CODEC

Touch-Sensitive Volume

Volume up, volume down, and mute

Controls

Full Duplex Yes
Microphone In Stereo
Headphone/Line Out Stereo

Integrated Microphone Yes, dual-microphone array

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

Communications

(10/100/1000 NIC)

82567LM

Integrated Intel Gigabit Ethernet Features 10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14)

Network Connection 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-

30)

1000 Mbit/s operation (1000BASE-T; IEEE 802.3z and 802.3ab; IEEE

802.3 clauses 34-42)

Auto-Negotiation (Automatic Speed Selection)

Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100

Mbit/s

IEEE 802.1p QoS (Quality of Service) Support

IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable)

Power Management ACPI compliant -- multiple power modes

Situation-sensitive features reduce power consumption

Performance Features TCP/IP/UDP Checksum Offload (configurable)

Manageability Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft

Wake-Up Frame); Wake-on-LAN from off (Magic Packet only)

PXE 2.1 Remote Boot

Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x,

clause 30))

Comprehensive diagnostic and configuration software suite

Intel Advanced Management Technology (iAMT)

Interface PCI Express x1

NIC Device Driver Name Intel 82567 Gigabit Network Connection



Technical Specifications

V.92 56K Data/Fax Modem Form Factor MDC 1.5 Daughtercard Power Management APM Revision 1.2, ACPI

Support

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

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

Technical Specifications

HP un2400 EV-DO/HSPA Mobile Broadband Module Technology/Operating

Bands

GSM/GPRS/EDGE: 850MHz(Cell), 900MHz(EGSM), 1800MHz(DCS),

1900MHz (PCS)

UMTS/WCDMA with receive diversity: 2100MHz (UTRA FDD Band I), 1900MHz (UTRA FDD Band II), 850MHz (UTRA FDD Band V) 1xEVDO/1xRTT with receive diversity: 850MHz (Band Class0-Cell),

1900MHz (Band Class 1-PCS)

Wireless Protocol

Standards

GSM/GPRS/EDGE: Class B, Multi-slot operation, coding schemes CS1 -

CS4 and MSC1 – MSC9.

UMTS/WCDMA: Release 99 and Release 5

CDMA: 1xEVDO Release 0 and Release A, IS-95A, IS-95B, IS-2000

Wireless Parametric

Standards

Meets or exceeds TIA/EIA IS-98-D

Maximum Data Rates UMTS (HSPA) – 7.2 Mbps (Download), 2.0 Mbps (Upload)

CDMA (EVDO Release A) – 3.1 Mbps (Download), 1.8Mbps (Upload)

Maximum Output Power GSM/GPRS/EDGE: 32dBm (+/-1)

WCDMA: 24dBm (+/-1) CDMA: 24dBm (+/-1)

Maximum Power Consumption

2500mA (peak); 1000mA (average)

Power Consumption,

Sleep Mode

5 mA

Power Management USB selective suspend

Integrated notebook wireless button

Antenna Type Dual high efficiency 5 band antennae with spatial diversity, mounted in the

display enclosure

Form Factor PCI-Express MiniCard

Weight 11.5 g

Dimensions (Length x Width x Thickness)

2.01 x 1.18 x 0.18 in (51 x 30 x 4.5 mm)

Voltage, Operating 3.3v +/- 10%

Temperature, Operating –22° to 140° F (–30° to 60° C) (full RF performance) (from TIA/EIA/IS-98-D) –22° to 167° F (–30° to 75° C) (reduced RF performance)

Temperature, Non- -40° to 185° F (-40° to 85° C)

operating, 96 hours (from MIL-STD 202 Method

108)

Humidity, Non-operating 85% relative humidity for 48 hours @ 185° F (85° C) (non-condensing)

Configuration Utilities HP Connection Manager

LED Activity LED Off – Radio Off;

Solid LED On - Radio On

Intel WiFi Link 5300 Wireless LAN Standards IEEE 802.11a

IEEE 802.11b

IEEE 802.11n draft 2.0*



Technical Specifications

* 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.

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

Antenna Structure 3 transmit; 3 receive (3x3)

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): 66 possible data rates, ranging from 6 Mbps to 450 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n (draft) specification

Modulation Direct Sequence Spread Spectrum

DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM

Security¹ Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES

(support for key sizes of 128, 192, and 256 bits), 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 Ad-hoc (Peer to Peer)

Models Infrastructure (Access Point Required)

Roaming IEEE 802.11 compliant roaming between access points

Output Power (for CCK)² 15 dBm Output Power (for OFDM; 15 dBm

power varies by data

rate)2

Power Consumption Transmit: 2.3 Watts (average, with three spatial streams)

Receive: 1.9 Watts (average with three receive chains)

Idle mode³: 30 mW (average) Radio off: 20 mW (max)

Power Management ACPI compliant power management

802.11 compliant power saving mode

Receiver Sensitivity⁴ 300 Mbps: -68 dBm, 54 Mbps: -74 dBm, 6 Mbps: -90 dBm

Antenna Connections 3 U.FL type connectors, 50 ohm nominal impedance

Range 802.11 a – Typical 600 feet – Outdoor Open Area

(@6 Mbps) 150 feet – Indoor, Office environment



Technical Specifications

802.11 b – Typical 1200 feet – Outdoor Open Area (@1 Mbps) 300 feet – Indoor, Office environment 1200 feet – Outdoor Open Area (@1 Mbps) 1200 feet – Outdoor Open Area 300 feet – Indoor, Office environment

Form Factor PCI-Express MiniCard

Weight 0.013 lb (6 g)

Dimensions 0.19 x 1.2 x 2.0 in (4.75 x 29.85 x 50.8 mm)

Operating Voltage 3.3V +/- 9%, 1.5V +/- 5%

Temperature Operating 32° to 176° F (0° to 80° C)
Non-operating -40° to 176° F (-40° to 80° C)

Humidity Operating 10% to 90% (non-condensing)
Non-operating 5% to 90% (non-condensing)

Altitude Operating 0 to 10,000 ft (3,048 m)

Non-operating 0 to 50,000 ft (15,240 m)

Configuration Utility⁵ Microsoft Windows XP

Choice of Configuration Utility:

• Microsoft Windows XP Wireless Network Connection Manager

 Intel PROSet for Microsoft Windows XP (required for Cisco Compatible Extensions support)

Microsoft Windows Vista

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

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. In Power Save Polling mode and on battery power.
- 4. 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).
- 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 Wire 802.11a/b/g/draft-n WiFi Adapter

Wireless LAN Standards IEEE 802.11a

IEEE 802.11b 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)



Technical Specifications

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

20 MHz: 2.4 GHz and 5 GHz bands Frequency Support

40 MHz: 2.4 GHz and 5 GHz band

Modulation Direct Sequence Spread Spectrum

DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM

Security¹ 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

Ad-hoc (Peer to Peer)

Models

Infrastructure (Access Point Required)

Roaming IEEE 802.11 compliant roaming between access points

Output Power (for CCK)² 17 dBm Output Power (for OFDM; 15 dBm

power varies by data

rate)2

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 Sensitivity³ 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 600 feet – Outdoor Open Area

> 150 feet - Indoor, Office environment (@6 Mbps) 802.11 b - Typical 1200 feet – Outdoor Open Area 300 feet - Indoor, Office environment (@1 Mbps) 1200 feet – Outdoor Open Area

> 802.11 g - Typical 300 feet - Indoor, Office environment (@1 Mbps)

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)



Technical Specifications

Operating Voltage 3.3v +/- 10%

Temperature Operating 14° to 149° F (-10° to 65° C)

Non-operating -40° to 176° F (-40° to 80° C)

Humidity Operating 10% to 90% (non-condensing)
Non-operating 5% to 95% (non-condensing)

Operating 0 to 10,000 ft (3,048 m)

Non-operating 0 to 50,000 ft (15,240 m)

Configuration Utility⁴ 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

Altitude

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 79 (1 MHz) available channels

Channels

or realizable or a realizable charmon

Data Rates and 3 Mbps data rate; throughput up to 2.17 Mbps

Throughput 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)

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)



Technical Specifications

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

Broadcom Bluetooth for Windows

Supported Microsoft Windows XP Bluetooth Software

Link Topology Point to Point, Multipoint Pico Nets up to 7 slaves Security Full support of Bluetooth Security Provisions

Microsoft Windows ACPI, and USB Bus Support **Power Management**

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)

> 40,000 ft (12,192 m) Non-operating

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)

Advanced Audio Distribution Profile (A2DP)



^{*} indicates the profile is also supported by Microsoft Windows XP SP2

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:

- US Energy Star
- Taiwan Green Mark
- China Energy Conservation Program
- IT ECO declaration
- EPEAT Gold with Illumi-Lite LED display
- EPEAT Silver without Illumi-Lite LED display

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	10.614 W	11.826 W	10.792 W
Sleep (Energy Star low power mode)	1.8621 W	1.9193 W	1.8764 W
Off	0.8042 W	0.8435 W	0.8106 W
Heat Dissipation*	115 VAC	230 VAC	100 VAC
Normal Operation	36 BTU/hr	40 BTU/hr	36 BTU/hr
Sleep	6 BTU/hr	6 BTU/hr	6 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	Sound Pressure
	(LWAd, bels)	(LpAm, decibels)
ldle	3.3	25
Operation	3.3	26

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: Battery type – CR2032 (coin cell) Battery Chemistry – Lithium, Li Ion



Technical Specifications

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 Gold level when configured with Illumi-lite LED Display, see: www.epeat.net

This product is in compliance with the IEEE 1680 (EPEAT) standard at the Silver level when configured with CCFL Display, 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 95.4% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
 - O Corrugated Carton 182 g
- Internal:
 - O EPE-Expanded Polyethylene 33 g
 - O Corrugated Carton 488 g
- The EPE foam packaging material is made from 100% recycled content.
- The corrugated paper packaging materials contains at least 80% 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



Technical Specifications

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 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



Technical Specifications

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

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