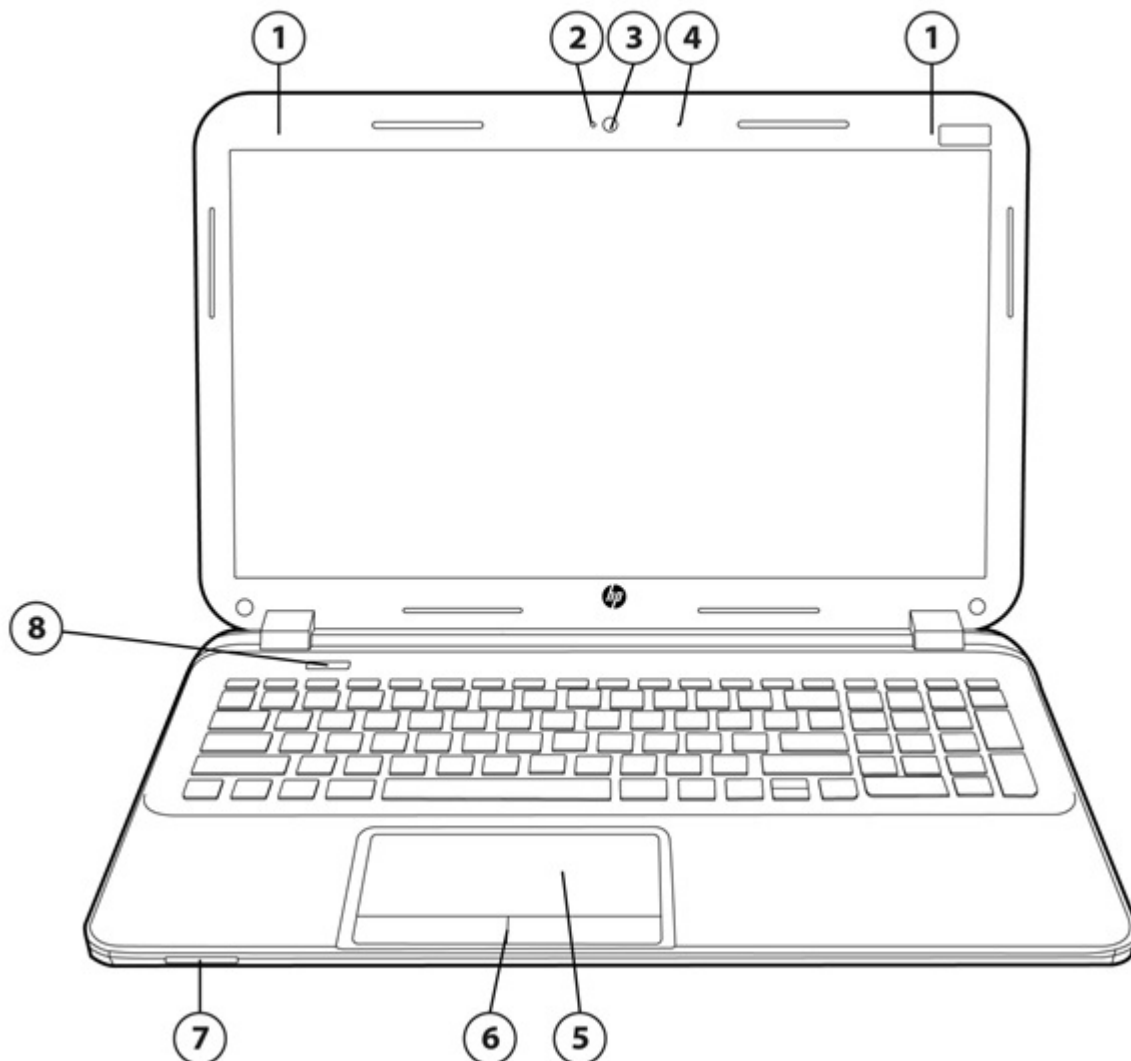


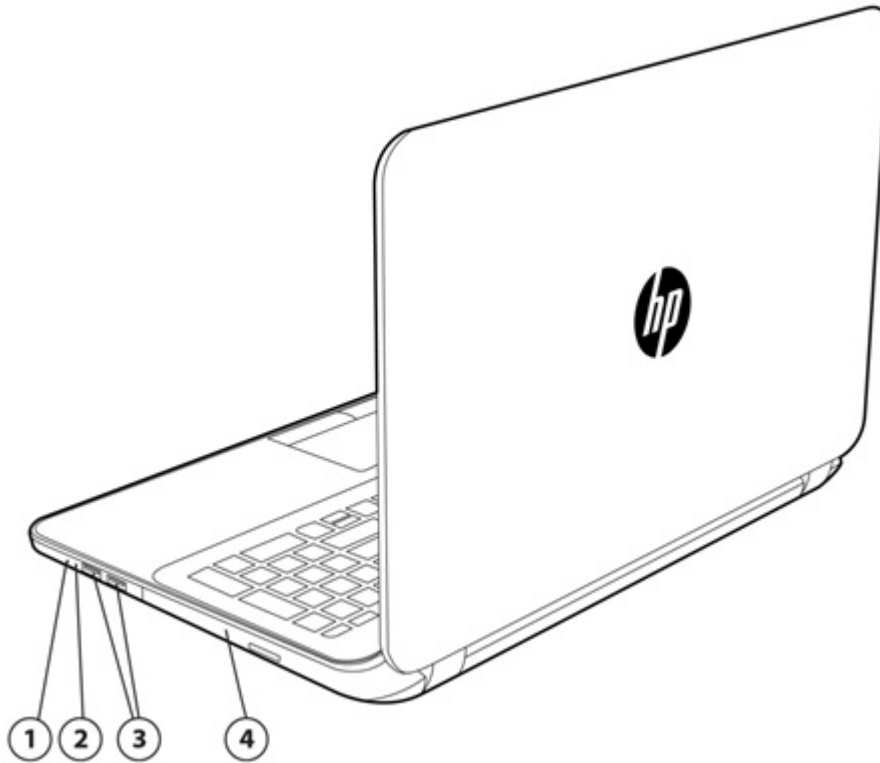
Overview



Front View

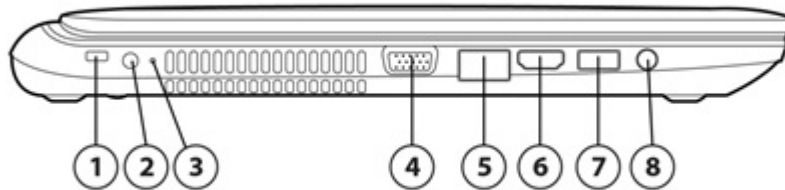
- | | |
|---------------------------------------|------------------------------|
| 1. WLAN antennas (select models only) | 5. Touchpad with scroll zone |
| 2. Internal microphone | 6. TouchPad buttons |
| 3. Webcam light | 7. Speaker |
| 4. Webcam | 8. Power button |

Overview



Right/Rear View

- 1. Duplicate power LED
- 2. Hard drive LED
- 3. USB 2.0 ports (2)
- 4. Optical drive door



Left View

- 1. Security cable slot
- 2. Power connector
- 3. AC adaptor LED
- 4. VGA port
- 5. RJ-45 (Ethernet)
- 6. HDMI port
- 7. USB 3.0 port
- 8. Headphone / Microphone-in combo jack

Overview

At A Glance

- Windows 8.1 versions, Windows 7 Professional, FreeDOS 2.0
- Intel® HD Graphics Family with shared memory
- VISION Technology with Nvidia 820M Graphics with dedicated memory
- Durable, sophisticated design with textured surfaced black licorice color
- Full-sized keyboard with numeric keypad
- VGA port and HDMI port (for connecting to high-resolution displays)
- Integrated HD webcam, integrated microphone
- 802.11 b/g/n 1x1 wireless LAN module + Bluetooth™ 4.0 combo
- Optional Bluetooth™ 2.1 or Bluetooth™ 4.0
- 15.6" diagonal LED-backlit HD anti-glare display

NOTE: See important legal disclosures for all listed specs in their respective features sections

Features

PRODUCT NAMES

HP 250 G2 Notebook PC

OPERATING SYSTEM

Preinstalled

Windows 8.1 64*

Windows 8.1 Pro 64*

Windows 7 Professional 64 (available through downgrade rights from Windows 8.1 Pro 64) (Available January 2013)**

FreeDOS 2.0

* Not all features are available in all editions of Windows 8.1. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows 8.1 functionality. See <http://www.microsoft.com> for details.

** This system is preinstalled with Windows® 7 Pro software and also comes with a license and media for Windows 8 Pro software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.

PROCESSOR

3rd Generation Intel® Core™ i5-3230M (2.6 GHz, 3 MB L3 cache, 2 cores)*

Up to 3.2GHz with Intel Turbo Boost Technology

3rd Generation Intel® Core™ i3-3110M (2.4 GHz, 3 MB L3 cache, 2 cores)*

Intel® Pentium® N3510 (2.0 GHz, 2 MB L3 cache, 4 cores)*

Intel® Celeron® N2810 (2.0 GHz, 1 MB L3 cache, 2 cores)*

* Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel® 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel's numbering is not a measurement of higher performance.

CHIPSET

Intel® HM76 Express Chipset (3rd generation Intel® Core processors)

Intel® Bay Trail - M SoC (Intel® Pentium and Celeron processors)

GRAPHICS

Integrated: Intel® HD Graphics

Intel® HD Graphics (Intel® Pentium® or Intel® Celeron® processor)

Intel® HD Graphics 4000 (3rd Generation Intel® Core™ i3, i5 processors)

Discrete:

Nvidia 820M Graphics with 1024MB of dedicated video memory (Switchable Graphics)

Features

DISPLAY

HP 250 G2 Notebook PC

Internal

15.6" diagonal LED-backlit HD 16:9 widescreen anti-glare (1366 x 768)

External

Up to 32-bit per pixel color depth

VGA

Port supports resolutions up to 2048 x 1536 external resolution @75 Hz (Intel® HM76 Express Chipset)

Port supports resolutions up to 2560 x 1600 external resolution @ 60Hz (Intel® Bay Trail - M SoC)

HDMI*

1.4 port supports up to 1080p, 1920 x 1200 at 60Hz

*HDMI cable sold separately.

NOTE: Resolutions are dependent upon monitor capability, and resolution and color depth settings.

STORAGE AND DRIVES

Primary Storage Bay

Hard Drives

500/750 GB/1 TB 5400 rpm SMART SATA II

NOTE: For hard drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 8.1) of system disk is reserved for the system recovery software.

OPTICAL DRIVES

Fixed 12.7 mm SATA Optical Drive

DVD+/-RW SuperMulti DL* Drive

* Double-layer discs can store more data than single layer discs. However, double-layer discs burned with this drive may not be compatible with many existing single-layer DVD drives and players. Note that DVD-RAM cannot read or write to 2.6 GB single-sided/5.2 GB double-sided - version 1.0 media. Don't copy copy-right protected materials.

Features

MEMORY

Standard

DDR3L SDRAM (1600 MHz)

Two SODIMM slots supporting dual-channel memory*

Standard memory up to 8192 MB**

Maximum

Upgradeable to 16384 MB with optional 8192 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.

* Maximum of 1 slot available for units with Intel® Bay Trail - M SoC.

** Maximum memory capacities assume Windows 64-bit operating systems or Linux.

NETWORKING/COMMUNICATIONS

Wireless

HP 250 G2 Notebook PC

Qualcomm Atheros 802.11 b/g/n (1x1) + Bluetooth™ 4.0 Combo^{1,2}

Communications

Realtek Ethernet (10/100 NIC) (Intel® Bay Trail - M SoC)

Realtek Ethernet (10/100/1000 NIC) (Intel® HM76 Express Chipset, only with Core i3)

1. Sold separately or as an optional feature.

2. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited.

AUDIO/MULTIMEDIA

Audio

High Definition Audio support

Integrated Stereo Speaker

Headphone / Microphone in Combo Jack

Integrated microphone

Webcam

Integrated HD* Webcam**

- Supports videoconferencing and still image capture
- Improved quality for video streaming and still image capture (1280x720 resolution)
- Up to 30 frames/sec
- Fixed focus lens

* HD content required to view HD images.

** Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited.

Features

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

The 101/102-key compatible keyboard features a full-pitch key layout with desktop keyboard features, such as editing keys, both left and right control and alt keys, and function keys. US and International key layouts are available. Includes a separate numeric keypad.

Pointing Devices

Touchpad with 2-piece pick button with left and right click functions
Multi-touch gestures supported

Buttons and Function Keys

On/off button

SOFTWARE AND SECURITY

Preinstalled Software with Windows Operating System

Buy Office
Recovery Manager Installer
Cyberlink Youcam DE
Cyberlink Power DVD (available on select models)
McAfee™ Internet Security *
Getting Started with Windows 8.1

Security

Security Lock slot (lock must be purchased separately)

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

* Internet access required. First 60 days included. Subscription required for live updates afterwards.

POWER

Power Supply

HP 250 G2 Notebook PC

External 45W AC adapter (BTM UMA only)
External 65W AC adapter

Primary Battery

HP 4-cell (41 WHr) Li-Ion battery
HP 3-cell (31 WHr) Li-Ion battery

Battery life*

Configurations with Intel® HM76 Express Chipset

HP 250 G2 Notebook PC Up to 5 hours 10 minutes

Configurations with Intel® Bay Trail - M SoC

Up to 7 hours 25 minutes

* Windows 7 battery life will vary depending on numerous factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.

Features

System Standby Time**

Up to 1 week

* Standby life will vary depending on various factors including battery, Memory, CPU, EC and LAN chip. The maximum capacity of the battery will naturally decrease with time and usage.

Power Conservation

Hibernation*

Standby*

ACPI compliance*

* Only Linux will feature power conservation.

WEIGHTS & DIMENSIONS

HP 250 G2 Notebook PC

Weight

Starting at < 5.51 lb (2500 g) (Non-Touch) (Weight will vary by configuration)

Dimensions (w x d x h)

Non-Touch

14.90 x 10.2 x 1.11 in

378.4 x 259.2 x 28.1 mm

Touch

14.90 x 10.2 x 1.17 in

378.4 x 259.2 x 29.8 mm

NOTE: Height varies depending upon where on the notebook the measurement is made. Weight varies by configuration and components.

PORTS/SLOTS

VGA – One

HDMI* – One

Headphone / Microphone in Combo Jack – One

Power Connector – One

RJ-45 (Ethernet) – One

USB 3.0 – One

USB 2.0 – Two

Digital Media Slots

Supports SD (Secure Digital)

Supports mini versions with adapter

* HDMI cable sold separately.

Features

SERVICE AND SUPPORT

HP Services offers limited 1-year warranty options depending on country; 1-year limited warranty on primary battery. On-site service and warranty upgrades are also available. Optional* HP Care Pack Services** are extended service contracts which go beyond your standard warranties. For more details visit: <http://www.hp.com/go/lookuptool>.

*Sold separately or as an optional feature.

** Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. Consult the HP Customer Support Center for details. <http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp>

Technical Specifications

SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	Nominal Operating Voltage	18.5/19.5V
	Average Operating Power	Integrated graphics: 12.741 W
Temperature	Max Operating Power	< 65 W
	Operating	32° to 95° F (0° to 35° C) (not writing optical) 41° to 95° F (5° to 35° C) (writing optical)
Relative Humidity	Non-operating	-4° to 140° F (-20° to 60° C)
	Operating	10% to 90%, non-condensing
Shock	Non-operating	5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
	Operating	40 G, 2 ms, half-sine
Random Vibration	Non-operating	200 G, 2 ms, half-sine
	Operating	0.75 grms
Altitude (unpressurized)	Non-operating	1.50 grms
	Operating	-50 to 10,000 ft (-15.24 to 3,048 m)
Planned Industry Standard Certifications	Non-operating	-50 to 40,000 ft (-15.24 to 12,192 m)
	UL	Yes
	CSA	Yes
	FCC Compliance	Yes
	ENERGY STAR®	Select models*
	EPEAT	Registered Silver in United States**
	ICES	Yes
	Australia / NZ A-Tick Compliance	Yes
	CCC	Yes
	Japan VCCI Compliance	Yes
	KC	Yes
	BSMI	Yes
	CE Marking Compliance	Yes
	BNCI or BELUS	Yes
	CIT	Yes
	GOST	Yes
	Saudi Arabian Compliance (ICCP)	Yes
SABS	Yes	
UKRSERTCOMPUTER	Yes	

Technical Specifications

* Configurations of the HP 240 G2 and HP 250 G2 Notebook PCs that are ENERGY STAR qualified are identified as HP 240 G2 ENERGY STAR and HP 250 G2 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.

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

DISPLAYS

**15.6-inch LED HD
(1366 x 768)
Anti-glare**

Active Area (w x h)	13.54 x 7.59 in (34.4 x 19.4 cm)	
Diagonal Size	15.6 in (39.6cm)	
Surface Treatment	Anti-glare	
Contrast Ratio	300:1 (min)	
Refresh Rate	60 Hz	
Brightness	200 nit (typical)	
Pixel Resolution	Pitch	0.252 mm
	Format	1366 x 768
	Configuration	RGB Stripe
Backlight	LED	
PPI	101 ppi	
Viewing Angle	±40° Horizontal, ±10°/-30° Vertical (minimum) 40/40/30/10 (Left/Right/Down/Up)	

STORAGE AND DRIVES

Internal Storage

Technical Specifications

1 TB* 5400 rpm SATA Hard Drive

Drive Weight	0.254 lb (115 g)
Capacity	1 TB
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) 300 MB/s (Drive Capability)
Seek Time (typical reads, including settling)	Single Track 3 ms
	Average 13 ms
	Maximum 24 ms
Rotational Speed	5400 rpm
Logical Blocks	1,953,525,168
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
Features	ATA Security

750 GB* 5400 rpm SATA Hard Drive

Drive Weight	0.22 lb (101 g)
Capacity	750 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) 300 MB/s (Drive Capability)
Seek Time (typical reads, including settling)	Single Track 3 ms
	Average 13 ms
	Maximum 24 ms
Rotational Speed	5400 rpm
Logical Blocks	1,465,149,168
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
Features	ATA Security

Technical Specifications

500 GB* 5400 rpm SATA Hard Drive

Drive Weight	0.22 lb (101 g)
Capacity	500 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) 150 MB/s (Drive Capability)
Seek Time (typical reads, including settling)	Single Track 3 ms
	Average 13 ms
	Maximum 24 ms
Rotational Speed	5400 rpm
Logical Blocks	976,773,168
Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
Features	ATA Security

* For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 8.1) of system disk is reserved for the system recovery software.

Optical Drives

DVD+/-RW SuperMulti DL Drive

Access Times	Random	<140ms CD (typical) < 160 ms DVD (typical)
Max Data Transfer Rate	24X CD-ROM 8X DVD 24X CD-R 24X CD-RW 8X DVD+R 8X DVD+RW 8X DVD-R 6X DVD-RW 5X DVD-RAM	
Transfer Mode	UDMA Mode 5	
Interface	Gen 1 SATA	
Supported Media (read)	CD-DA, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM	
Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+RW, DVD-R, DVD-RW, DVD-RAM, DVD+R DL, DVD-R DL	
Max Media Capacity (read)	8.5 GB	
Max Media Capacity (write)	8.5 GB	
Transport	Tray Loading	

Technical Specifications

NETWORKING/COMMUNICATIONS

Networking

Networking

Integrated Realtek 10/100 NIC

Ethernet Features

10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14)
100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30)
Auto-Negotiation (Automatic Speed Selection)
Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s
IEEE 802.1p QoS (Quality of Service) Support
IEEE 802.1q VLAN 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
Advanced link down power saving for reducing link down power consumption

Performance Features

TCP/IP/UDP Checksum Offload (configurable)
Large send offload and Giant send offload
Receiving Side Scaling

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
Virtual Cable Doctor for Ethernet cable status

Interface

PCI Express 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ

NIC Device Driver Name

Realtek PCIe FE Ethernet Family Controller

Integrated Realtek 10/100/1000 NIC

Ethernet Features

10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14)
100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30)
1000 Mbit/s operation (100BASE-T; IEEE 802.3ab; IEEE 802.3 clauses 21-30) (Support in RTL8161FH-CG only)
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 802.1q VLAN 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
Advanced link down power saving for reducing link down power consumption

Performance Features

TCP/IP/UDP Checksum Offload (configurable)
Large send offload and Giant send offload
Receiving Side Scaling

Manageability

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

Technical Specifications

	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
	Virtual Cable Doctor for Ethernet cable status
Interface	PCI Express 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ
NIC Device Driver Name	Realtek PCIe FE Ethernet Family Controller

Communications

Atheros 802.11b/g/n WiFi Adapter*, **

Wireless LAN Standards	IEEE 802.11b IEEE 802.11g IEEE 802.11n
Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Win7, (details at: http://www.hp.com/go/notebooks/WLAN)
Frequency Band	2.402 - 2.482 GHz
Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n150Mbps for MCS7
Frequency Support	20 MHz: 2.4 GHz bands
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 5) with Microsoft Windows 7 only.
Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.
Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power²	13.5 dBm, minimum
Power Consumption	Idle associated: 250 mW avg (CLKREQ enabled) Idle unassociated: 100 mW avg Transmit/Receive channel: 2.0 /1.6 W
Power Management	ACPI compliant power management 802.11 compliant power saving mode
Receiver Sensitivity³	11b:-88dBm@11Mbps, 11g:-74 dBm@54Mbps, 11n:-70dBm@72.Mbps.

Technical Specifications

Antenna type	High efficiency dual antenna with spatial diversity, usually mounted in the display enclosure	
Form Factor	PCI-Express Half-MiniCard	
Weight	4 g	
Dimensions	3.3 x 26.65 x 29.85 mm	
Operating Voltage	3.3v +/- 9%	
Temperature	Operating	-10° to 70° C
	Non-operating	-40° to 80° C
Humidity	Operating	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
Altitude	Operating	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)
LED Activity	Amber LED on-Radio OFF; White LED on-Radio ON	
	<ol style="list-style-type: none"> 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). 	

NOTE: 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 and Win7.
 * Wireless access point and internet service required. Availability of public wireless access points limited.
 ** Sold separately or as an optional add-on feature.

Qualcomm 802.11b/g/n WiFi Adapter*, **

Wireless LAN Standards	IEEE 802.11b IEEE 802.11g IEEE 802.11n
Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Win7, (details at: http://www.hp.com/go/notebooks/WLAN)
Frequency Band	2.402 - 2.482 GHz
Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n150Mbps for MCS7
Frequency Support	20 MHz: 2.4 GHz bands
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 5) with Microsoft Windows 7 only.
Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.

Technical Specifications

Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK	
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)	
Roaming	IEEE 802.11 compliant roaming between access points	
Output Power²	13.5 dBm, minimum	
Power Consumption	Idle associated: 250 mW avg (CLKREQ enabled) Idle unassociated: 100 mW avg Transmit/Receive channel: 2.0 /1.6 W	
Power Management	ACPI compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity³	11b:-88dBm@11Mbps, 11g:-74 dBm@54Mbps, 11n:-70dBm@72.Mbps.	
Antenna type	High efficiency dual antenna with spatial diversity, usually mounted in the display enclosure	
Form Factor	PCI-Express Half-MiniCard	
Weight	4 g	
Dimensions	3.3 x 26.65 x 29.85 mm	
Operating Voltage	3.3v +/- 9%	
Temperature	Operating	-10° to 70° C
	Non-operating	-40° to 80° C
Humidity	Operating	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
Altitude	Operating	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)
LED Activity	Amber LED on-Radio OFF; White 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).

NOTE: 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 and Win7.

* Wireless access point and internet service required. Availability of public wireless access points limited.

** Sold separately or as an optional add-on feature.

AUDIO/MULTIMEDIA

Audio

Technical Specifications

Hardware	Implementation	Realtek ALC3201-GR High Definition audio
	Volume Controls	Up, down, and mute function keys
	Full Duplex	Yes
	Microphone In	Stereo
	Headphone/Line Out	Stereo
	Integrated Microphone	Yes
Audio Output Quality	Frequency Response	10 Hz ~ 22 KHz
	Signal to Noise Ratio	Typical 95 dB FSA (DAC)
	Total Harmonic Distortion	Typical -88 dB FS (DAC)
	Noise Floor	-110 dB
	Play/Record Sampling Rate(s)	Up to 192 KHz
	DAC	24 bits
	ADC	24 bits
Internal Stereo Speakers	Power Rating	1.5 W
	Impedance	4 ohms
Multimedia		
Integrated HD Webcam	Supports videoconferencing and still image capture Improved quality for video streaming and still image capture (1280x720 resolution) Up to 30 frames/sec Fixed focus lens	

POWER

Technical Specifications

HP 65W AC Adapter (Integrated for all models)	Dimensions	4.21 x 1.85 x 1.18 in (10.7 x 4.7 x 3.0 cm)	
	Weight	0.62 lb (280 g)	
	Input		100 to 240 VAC
		Input Efficiency	87% min at 115 VAC
	Output	Input frequency range	47 to 63 Hz
		Input AC current	1.7 A at 90 VAC
		Output power	65W
		DC output	18.5/19.5V
		Hold-up time	5 msec at 115 VAC input
		Output current limit	<11A, Over voltage protection- 29V max automatic shutdown
		Connector	3 pin/grounded, mates with interchangeable cords
		Environmental Design	Operating temperature
	Non-operating (storage) temperature		-4° to 185° F (-20° to 85° C)
	Altitude		0 to 5,000 ft (0 to 1,524 m)
Humidity	20% to 95%		
Storage Humidity	10% to 95%		
EMI and Safety Certifications	CE Mark - full compliance with LVD and EMC directives; Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE; MTBF - over 200,000 hours at 25°C ambient condition.		
4-Cell (41 WHr) Lithium-Ion battery	Cells/Type	4-cell Lithium-Ion	
	Energy Temperature	Watt-hour capacity	41 WHr
		Operating (Charging)	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 140° F (-10° to 60° C)
	Battery Re-Charge Time	Non-operating	-4° to 140° F (-20° to 60° C)
		System in OFF or Standby Mode	2.5 hours
		System ON	3 to 5 hours (depending on system power consumption)

Technical Specifications

HP 3-cell (31 WHr) Lithium-Ion Primary battery	Dimensions (h x w x l)	0.8 x 1.2 x 8.1 in (2 x 3 x 20.5cm)		
	Weight	0.37 lb, (0.166 kg)		
	Cells/Type	3-cell Lithium-Ion		
	Energy	Voltage	11.1V	
		Amp-hour capacity	2.8Ah	
		Watt-hour capacity	31Wh	
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)	
		Operating (Discharging)	14° to 122° F (-10° to 50° C)	
		Non-operating	-4° to 122° F (-20° to 50° C)	
	Battery Re-Charge Time	System in OFF or Standby Mode	2.5 hours	
		System ON	3 to 5 hours	
Fuel Gauge LED	No			
Warranty	1 year			

Environmental Data

Eco-Label Certifications & Declarations

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

- IT ECO declaration
- US ENERGY STAR®
- EPEAT Silver registered in the United States. See <http://www.epeat.net> for registration status in your country.

HP 250 G2 Notebook PC

System Configuration

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

Energy Consumption (in accordance with US ENERGY STAR® test method)

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation	5.61 W	5.79 W	5.61 W
Sleep	0.92 W	1 W	0.89 W
Off	0.37 W	0.47 W	0.35 W

NOTE:

Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.

Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 60Hz
Normal Operation	19 BTU/hr	20 BTU/hr	19 BTU/hr
Sleep	3 BTU/hr	3 BTU/hr	3 BTU/hr



Technical Specifications

Off	1 BTU/hr	2 BTU/hr	1 BTU/hr
<i>* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.</i>			

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

	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Typically Configured - Idle	3.1	27
Fixed Disk - Random writes	4.5	4.5

Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:
Mercury greater than 1ppm by weight
Cadmium greater than 20ppm by weight

Battery size: CR2032 (coin cell)

Additional Information

- This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC.
- This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.
- This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).
- This product is in compliance with the IEEE 1680 (EPEAT) standard at the <Silver> level, see www.epeat.net
- Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.
- This product contains 0.0% post-consumer recycled plastic (by wt.)
- This product is 96.4% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
 - PAPER/Corrugated 433 g
- Internal:
 - PLASTIC/EPE (Expanded Polyethylene) 33 g
 - PLASTIC/Polyethylene low density 33.4 g
 - PLASTIC/Polypropylene 24.5 g
- The PAPER/Corrugated packaging material is made from 74 % recycled content.
- The PLASTIC/EPE (Expanded Polyethylene) packaging materials contains at least 0% recycled content.
- The PLASTIC/Polyethylene low density packaging materials contains at least 0% recycled content.
- The PLASTIC/Polypropylene packaging materials contains at least 0% recycled content.

ALL MODELS

MATERIAL USAGE

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

Technical Specifications

- 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
- 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)
- Nickel finishes that release greater than 0.5 µgrams/cm²/week, measured according to EN 1811:1998, are not used on any product surface designed to be frequently handled or touched by users.

END-OF-LIFE MANAGEMENT AND RECYCLING

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

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

HEWLETT-PACKARD CORPORATE ENVIRONMENTAL INFORMATION

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

Global Citizenship Report

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

Environment website

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

Eco-label certifications

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

ISO 14001 certificates:

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

Technical Specifications

COUNTRY OF ORIGIN

China

Options and Accessories (sold separately and availability may vary by country)

NOTE: Options/capabilities listed in the QuickSpecs represent those capabilities available through Base Units or Build to Order configurations. The various product features and capabilities will vary in terms of configurable vs. aftermarket options (AMOs). There may be options and capabilities available through CTO that are not available as AMOs.

Type	Description	Part #
Docking	HP USB 3.0 Port Replicator	H1L08AA#xxx
	HP Dual Hinge II Notebook Stand	E8F99AA#xxx
Carrying Cases	HP Essential Top Load Case (up to 15.6")	H2W17AA#xxx
	HP Professional Series Carrying Case (up to 15.6")	H4J90AA
	HP Business Backpack (up to 17.3")	H5M90AA
	HP Business 4 Wheel Roller Case	H5M93AA
Input/Output	HP USB Essential Keyboard/Mouse	H6L29AA
	HP Ultra Mobile Wireless Mouse	H6F25AA
	HP Stylish USB Keyboard/Mouse	H4B80AA
Adapters	HP 65W Slim Adapter	AX727AA#XXX
	65W Smart AC Adapter	ED494AA#xxx
	90W Smart AC Adapter	ED495AA#xxx
	90W Slim Adapter	BT796AA#xxx
	HP 65W Smart AC Adapter	H6Y89AA
	HP 90W Smart AC Adapter	H6Y90AA
	HP 65W Slim AC Adapter	H6Y82AA
	HP 90W Slim AC Adapter	H6Y83AA
Health and Education	20 Notebook Managed Charging Cart	QL489AA#xxx
	30 Notebook Managed Charging Cart	QL490AA
Security	HP UltraSlim Keyed Cable Lock	H4D73AA
Storage	HP Mobile USB DVDRW Non-LS	A2U57AA
Monitors	HP EliteDisplay E271i 27-inch IPS LED Monitor	D7Z72AA/A8/AS/AT
	HP EliteDisplay E231 23-inch LED Monitor	C9V75AA/A8/AS/AT
	HP EliteDisplay E201 20-inch LED Monitor	C9V73AA/A8/AS/AT
	HP ProDisplay P221 21.5" LED Monitor	C9E49AA/A8/AS/AT
	HP ProDisplay P201 20" LED Monitor	C9F26AA/A8/AS/AT

Options and Accessories (sold separately and availability may vary by country)

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