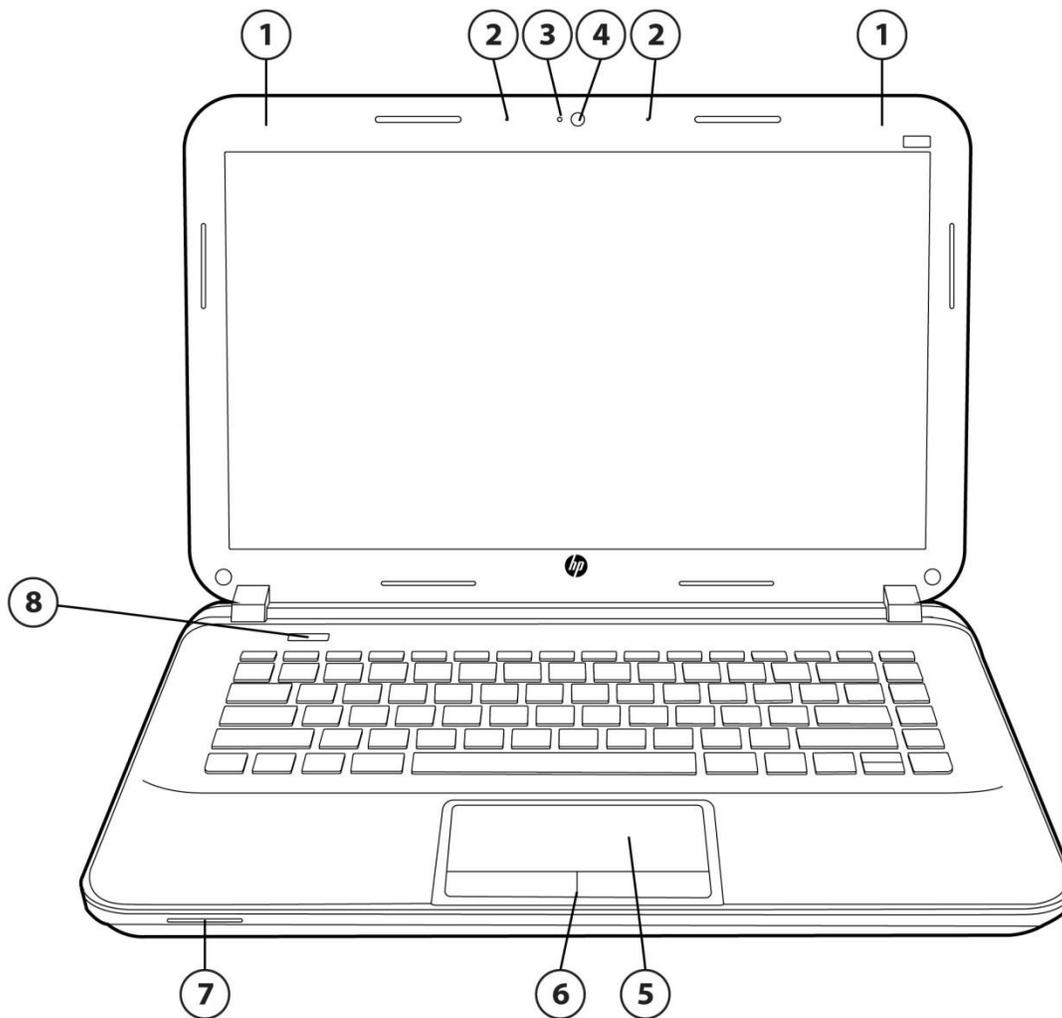


Overview

HP 245 G3 Notebook PC



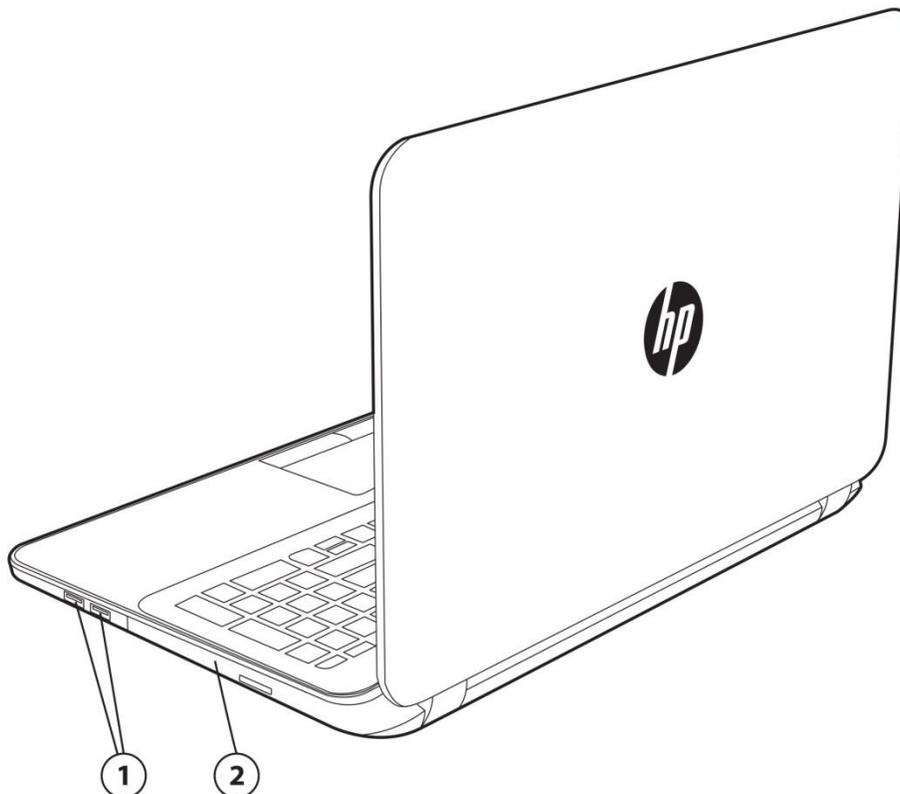
- 1. WLAN antennas (select models only)
- 2. Internal microphone
- 3. Webcam light
- 4. Webcam

Front View

- 5. Touchpad with scroll zone
- 6. TouchPad buttons
- 7. Speaker
- 8. Power button

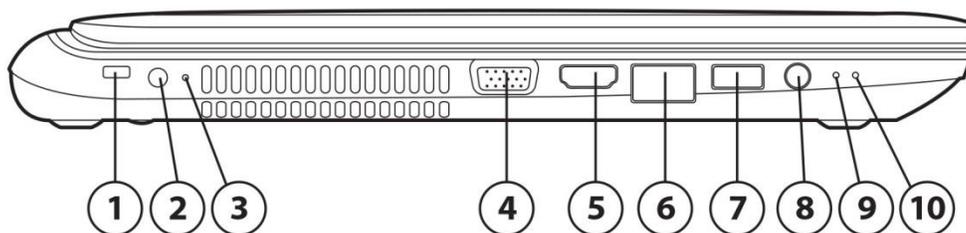


Overview



Right/Rear View

1. USB 2.0 ports (2)
2. Optical drive door



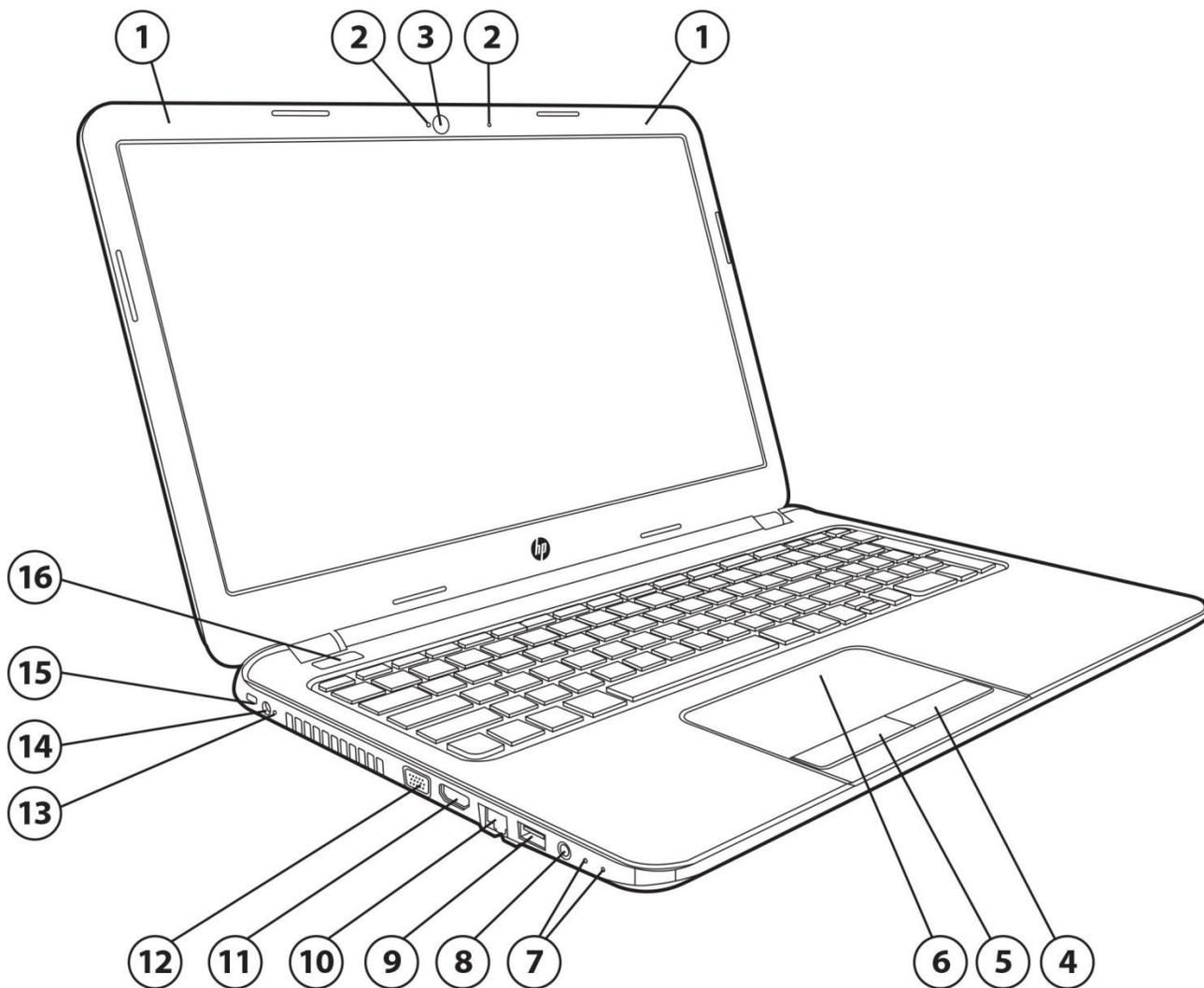
Left View

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



Overview

HP 255 G3 Notebook PC

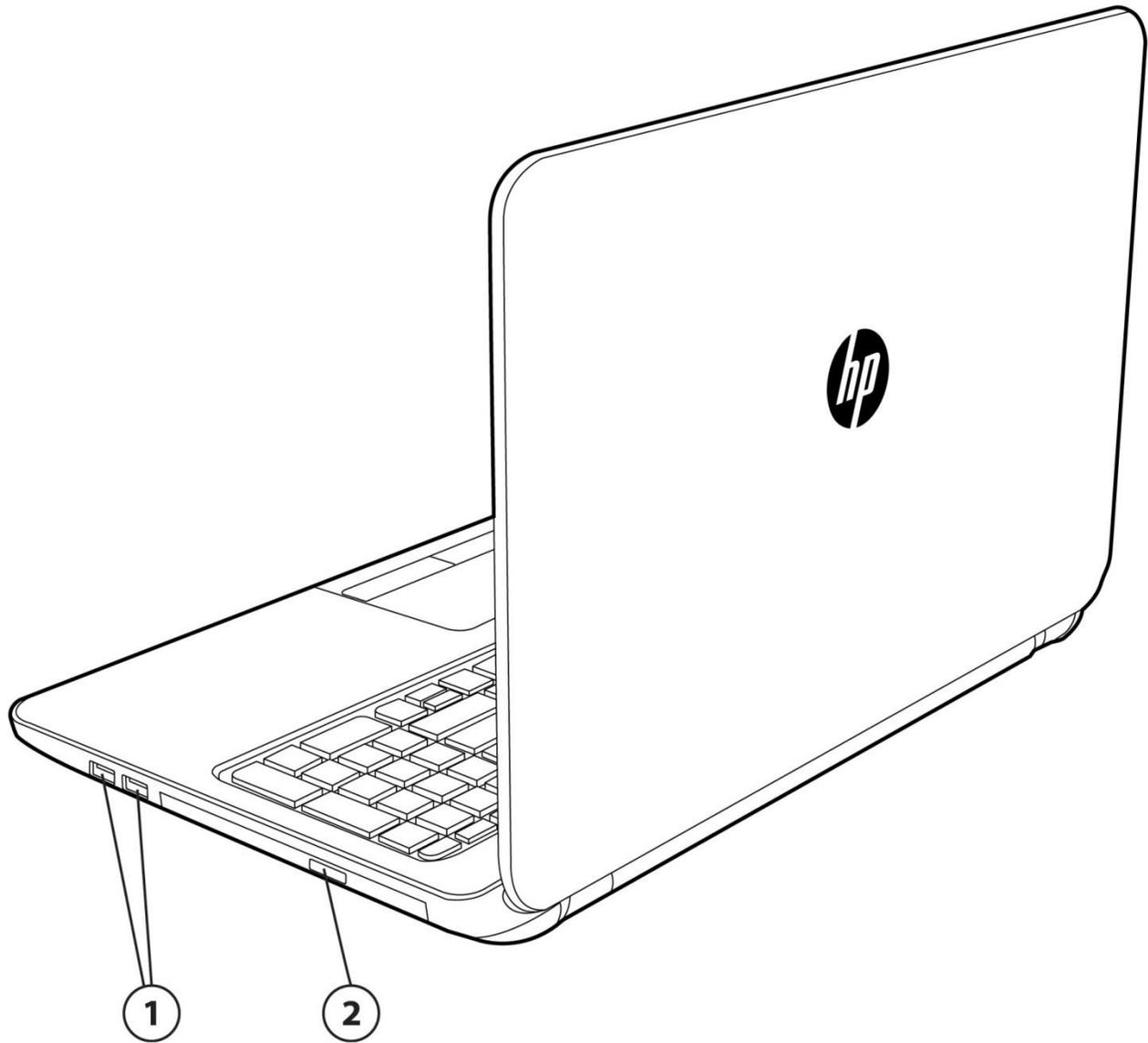


Front View

- | | |
|---|-------------------------|
| 1. WLAN antennas (select models only) | 9. USB 3.0 port |
| 2. Internal microphones | 10. RJ-45 (Ethernet) |
| 3. Webcam | 11. HDMI port |
| 4. Right TouchPad button | 12. VGA port |
| 5. Left TouchPad button | 13. AC adaptor LED |
| 6. Touchpad with scroll zone | 14. Power connector |
| 7. Duplicate power LED and Hard drive LED | 15. Security cable slot |
| 8. Headphone / Microphone-in combo jack | 16. Power button |



Overview



- Right/Rear View**
1. USB 2.0 ports (2)
 2. Optical drive door



Overview

AT A GLANCE

- Windows 8.1 versions, Ubuntu, FreeDOS 2.0
- VISION Technology with AMD Mobility Radeon™ HD
- Durable, sophisticated design with textured-surfaced black licorice color.
- Full-sized keyboard with numeric keypad (HP 255 G3 only) and action keys enabling functions directly
- VGA port and HDMI port (for connecting to high-resolution displays)
- Integrated HD webcam, integrated microphone
- Flexible wireless connectivity options
 - Optional 802.11 b/g/n wireless LAN module
 - Optional 802.11 b/g/n + Bluetooth® 4.0 Combo
- 14.0" (HP 245 G3 Notebook PC) or 15.6" (HP 255 G3 Notebook PC) diagonal LED-backlit HD anti-glare display, models with touchscreens are available

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



Features

PRODUCT NAMES

HP 245 G3 Notebook PC
HP 255 G3 Notebook PC

OPERATING SYSTEM

Preinstalled

Windows 8.1 64*
Windows 7 Professional (available through downgrade rights from Windows 8 Pro 64) **
Ubuntu
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 8.1 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.

ACCELERATED PROCESSING UNIT

AMD

AMD Quad Core A6-5200 APU with Radeon™ HD 8400 Graphics (2.0 GHz, 4 MB L2 cache, 4 cores)*
AMD Quad Core A4-5050 APU with Radeon™ HD 8330 Graphics (1.5 GHz, 2 MB L2 cache, 4 cores)*
AMD Quad Core E2-3800 APU with Radeon™ HD 8280 Graphics (1.3 GHz, 2 MB L2 cache, 4 cores)*
AMD Dual Core E1-2100 APU with Radeon™ HD 8210 Graphics (1.0 GHz, 1 MB L2 cache, 2 cores)*

* This system requires a separately purchased 64-bit operating system and 64-bit software products to take advantage of the 64-bit processing capabilities of AMD technology. Multi-core processing with AMD technology is designed to improve performance of this system. Given the wide range of SW applications available, performance will vary. AMD's numbering is not a measurement of clock speed.

CHIPSET

AMD Kerala (Kabini SoC APU, BGA)

GRAPHICS

Integrated:

AMD Radeon™ HD 8400 (AMD Quad Core A6-5200 APU)
AMD Radeon™ HD 8330 (AMD Quad Core A4-5050 APU)
AMD Radeon™ HD 8280 (AMD Quad Core E2-3800 APU)
AMD Radeon™ HD 8210 (AMD Dual Core E1-2100 APU)

Discrete:

AMD Radeon™ HD 8570M Graphics with up to 1024MB of dedicated video memory (Switchable Graphics)

DISPLAY



Features

HP 245 G3 Notebook PC

Internal

14.0" diagonal HD* (1366 x 768) Anti-Glare LED-backlit SVA (Flat, 3.6 mm)

14.0" diagonal HD* WLED BrightView (1366 x 768) slim (3.2 mm) SVA (touch-enabled) (not available at launch)

External

Up to 32-bit per pixel color depth

VGA

Port supports resolutions up to 2048 x 1536 external resolution @75 Hz

HDMI

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

HP 255 G3 Notebook PC

Internal

15.6" diagonal HD* (1366 x 768) Anti-Glare LED-backlit SVA (Flat, 3.6 mm)

15.6" diagonal HD* WLED BrightView (1366 x 768) slim (3.2 mm) SVA (touch-enabled)

External

Up to 32-bit per pixel color depth

VGA

Port supports resolutions up to 2048 x 1536 external resolution @ 75Hz

HDMI*

1.3 port supports up to 1080p, 1920 x1080 at 60Hz and 1920 x1200 @ 60Hz DVI Mode

*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

320/500/750 GB/1 TB 5400 rpm SMART SATA II

NOTE: For hard drives, GB = 1 billion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 8.1) of system disk is reserved for the system recovery software.

OPTICAL DRIVES

Fixed Optical Drive

DVD+/-RW SuperMulti DL Drive*

Weight saver

* 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.

MEMORY

Standard

DDR3L SDRAM (1600 MHz/1333 MHz)*



Features

One SODIMM slot supporting single channel* SODIMMs
Standard memory up to 8192MB

Maximum

Upgradeable to 8192 MB with optional 8192 MB* SODIMM in slot 1

* Maximum memory speed supported is 1600 MHz, but it will be downgraded to 1333 MHz for systems running the E1-2100 APU.

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

NETWORKING/COMMUNICATIONS

Wireless

Optional Qualcomm 802.11b/g/n (1x1) wireless LAN module^{1,2}
Optional Qualcomm 802.11 b/g/n (1x1) + Bluetooth® 4.0 Combo^{1,2}

Communications

Realtek Ethernet (10/100 NIC)

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 Speakers
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.

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 (HP 255 G3 only).

Pointing Devices



Features

Touchpad with 2-piece pick button with left and right click functions

Buttons and Function Keys

Multi-touch gestures supported

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 2013*

Getting Started with Windows 8.1

Security

Security Lock slot (lock must be purchased separately)

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

POWER

Power Supply

External 45W Smart AC adapter (UMA)

External 65W Smart AC adapter (discrete)

External 65W EM Smart AC adapter (for China and India)

Primary Battery

HP 3-cell (31 WHr) polymer battery

HP 4-cell (41 WHr) polymer battery

Battery Life

HP 245 G3 Notebook PC

Integrated graphics

Discrete graphics

MM12*

MM07**

MM12*

MM07**

3-cell (31 WHr) battery

Up to 4 hours 30 minutes

Up to 5 hours 45 minutes

Up to 4 hours 15 minutes

Up to 5 hours 45 minutes

4-cell (41 WHr) battery

Up to 6 hours

Up to 5 hours 45 minutes

Up to 5 hours 45 minutes

N/A

HP 255 G3 Notebook PC

Integrated graphics

Discrete graphics

MM12*

MM07**

MM12*

MM07**

3-cell (31 WHr) battery

Up to 4 hours 30 minutes

N/A

Up to 4 hours 15 minutes

N/A

4-cell (41 WHr) battery

Up to 6 hours

N/A

Up to 5 hours 45 minutes

N/A

System Standby Time

Up to TBD weeks***



Features

* Windows 8/mobilemark12 battery life will vary depending on the product model, configuration, loaded applications, features, wireless functionality and power management settings. The maximum capacity of the battery will decrease with time and usage. See www.bapco.com.

**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.

***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 245 G3 Notebook PC

Weight

Starting at < 4.15 lbs (1880 g) (Non-Touch) (Weight will vary by configuration)

Starting at < 4.81 lbs (2180 g) (Touch) (Weight will vary by configuration)

Dimensions (w x d x h)

Non-Touch

13.58 x 9.61 x 1.0 in

345 x 244 x 25.3 mm

Touch

13.58 x 9.61 x 1.01 in

345 x 244 x 25.6 mm

HP 255 G3 Notebook PC

Weight

Starting at < 4.83 lbs (2190 g) (Non-Touch) (Weight will vary by configuration)

Starting at < 5.49 lbs (2490 g) (Touch) (Weight will vary by configuration)

Dimensions (w x d x h)

Non-Touch

14.88 x 10.2 x 1.0 in

378.0 x 259.0 x 25.3 mm

Touch

14.88 x 10.2 x 1.0 in

378.0 x 259.0 x 25.6 mm

NOTE: Height varies depending upon where on the notebook the measurement is made. Weight varies by configuration and components. Weight includes 4-cell battery, hard drive, 1 GB memory, and optical drive.



Features

PORTS/SLOTS

Ports

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/SDHC/SDXC

Supports mini versions with adapter

* HDMI cable sold separately.

SERVICE AND SUPPORT

HP Services offers limited 1-year warranty options depending on country; 3-year options available With HP Care Pack Services**, 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>

NOTE: 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. For details, visit www.hp.com/go/cpc



Technical Specifications

SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	Nominal Operating Voltage	18.5/19.5V
	Average Operating Power	Integrated graphics: TBD W**AMD E-series platform < 65 W
	Max Operating Power	32° to 95° F (0° to 35° C) (not writing optical)
Temperature	Operating	41° to 95° F (5° to 35° C) (writing optical)
	Non-operating	-4° to 140° F (-20° to 60° C)
Relative Humidity	Operating	10% to 90%, non-condensing
	Non-operating	5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
Shock	Operating	40 G, 2 ms, half-sine
	Non-operating	200 G, 2 ms, half-sine
Random Vibration	Operating	0.75 grms
	Non-operating	1.50 grms
Altitude (unpressurized)	Operating	-50 to 10,000 ft (-15.24 to 3,048 m)
	Non-operating	-50 to 40,000 ft (-15.24 to 12,192 m)
Planned Industry Standard Certifications	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

* Configurations of the HP 245 G3 and HP 255 G3 Notebook PCs that are ENERGY STAR qualified are identified as HP 245 G3 ENERGY STAR and HP 255 G3 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>.



Technical Specifications

DISPLAYS

**14.0-inch LED HD anti-glare
(1366 x 768)**

Active Area (w x h)	12.16 x 6.85 in (30.9 x 17.4 cm)
Diagonal Size	14.0 in (35.6cm)
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)

**15.6" LED HD anti-glare
(1366 x 768)**

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) (minimum)

STORAGE AND DRIVES

Internal Storage

**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



Technical Specifications

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	Single Track 3 ms
	(typical reads, including settling)	Average 13 ms
	Rotational Speed	Maximum 24 ms
	Logical Blocks	5400 rpm
	Operating Temperature	1,465,149,168
	Features	32° to 140° F (0° to 60° C) [case temp] ATA Security

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	Single Track 3 ms
	(typical reads, including settling)	Average 13 ms
	Rotational Speed	Maximum 24 ms
	Logical Blocks	5400 rpm
	Operating Temperature	976,773,168
	Features	32° to 140° F (0° to 60° C) [case temp] ATA Security

320 GB* 5400 rpm SATA Hard Drive	Drive Weight	0.22 lb (101 g)
	Capacity	320 GB
	Height	0.37 in (9.5 mm)
	Width	2.75 in (70 mm)
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ
	Transfer Rate	Synchronous (maximum) 150 MB/s (Drive Capability)
	Seek Time	Single Track 3 ms
	(typical reads, including settling)	Average 13 ms
	Rotational Speed	Maximum 24 ms
	Logical Blocks	5400 rpm
	Operating Temperature	625,142,448
	Features	32° to 140° F (0° to 60° C) [case temp] ATA Security

* For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 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	



Technical Specifications

	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

NETWORKING/COMMUNICATIONS

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



Technical Specifications

	Interface NIC Device Driver Name	PCI Express 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ Realtek PCIe FE Ethernet Family Controller
Communications		
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 Windows 7, (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 802.11n: 150Mbps for MCS7
	Frequency Support Modulation	20 MHz: 2.4 GHz bands 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 Network Architecture Models	CSMA/CA (Collision Avoidance) with ACK 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



Technical Specifications

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). 	
<p>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 Windows 7.</p> <p>* Wireless access point and internet service required. Availability of public wireless access points limited.</p> <p>** Sold separately or as an optional add-on feature.</p>		

Qualcomm 802.11b/g/n Bluetooth 4.0 Combo Card*

Wireless LAN Standards	IEEE 802.11b IEEE 802.11g IEEE 802.11n
Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows 7 (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 802.11n: 150Mbps for MCS7
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. WAPI
	Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 5) 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	13.5dBm , minimum
Power Consumption	Idle associated: 250 mW Idle unassociated: 150 mW



Technical Specifications

Power Management	Transmit: 2.0 W (max) Receive: 2.0 W (max) 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, mounted in the display enclosure
Form Factor	PCI-Express Half-MiniCard v1.2
Weight	6 g
Dimensions	3.3 x 26.65 x 29.85 mm
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)
Altitude	Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m)

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

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 Windows 7.

Bluetooth Specification

V4.0 High Speed, V2.1+EDR, backwards compatible with V1.1, 1.2 and 2.0

Number of Available Channels 79 (1 MHz) available channels

Data Rates and Throughput

3 Mbps data rate; throughput up to 2.17 Mbps
Synchronous Connection Oriented links up to 3, 64 kbps, voice channels

Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric or 1306.9 kbps symmetric

Transmit Power

-6 dBm to 4 dBm (Bluetooth Class II)

Receiver Sensitivity

Better than -80 dBm at 0.1 % raw bit error rate

Power Consumption

Peak (Tx) 330 mW

Peak (Rx) 230 mW

Sleep <17 mW

Antenna

Internally integrated within module

Range

Up to 33 ft (10 m)

Electrical Interface

USB 2.0 compliant

Bluetooth Software Supported

Microsoft Windows Plug and Play compliant

Broadcom Bluetooth for Windows

Microsoft Windows Bluetooth Software

Link Topology

Point to Point, Multipoint Pico Nets up to 7 slaves

Security

Full support of Bluetooth Security Provisions



Technical Specifications

Power Management	Microsoft Windows ACPI, and USB Bus Support Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff
Certifications	All necessary regulatory approvals for supported countries, including: FCC (47 CFR) Part 15C, Section 15.247 & 15.249 ETS 300 328, ETS 300 826 Low Voltage Directive IEC950 UL, CSA, and CE Mark
Bluetooth Profiles Supported	Generic Access Profile (GAP) Service Discovery Application Profile (SDAP) Serial Port Profile (SPP) Dial_Up Networking Profile (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) Generic Audio/Video Distribution Profile (GAVDP) Advanced Audio/Video Distribution Profile (A2DP) FAX Profile (FAX) Basic Imaging Profile (BIP) Headset Profile (HSP) Hands Free Profile (HFP) Basic Printing Profile (BPP) VDP (Video Distribution Profile) AVRCP (Audio Video Remote Control Profile)

* 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 Hardware	Implementation Volume Controls Full Duplex Microphone In Headphone/Line Out Integrated Microphone	Realtek ALC3201-GR High Definition audio Up, down, and mute function keys Yes Stereo Stereo Yes
Audio Output Quality	Frequency Response Signal to Noise Ratio Total Harmonic Distortion Noise Floor Play/Record Sampling Rate(s) DAC ADC	10 Hz ~ 22 KHz Typical 95 dB FSA (DAC) Typical -88 dB FS (DAC) -110 dB Up to 192 KHz 24 bits 24 bits



Technical Specifications

Integrated 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
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POWER

HP 45W Smart AC Adapter	Dimensions	3.78 x 1.95 x 0.88 in (9.6 x 4.95 x 2.24 cm)		
	Input		90 to 265 VAC	
		Input Efficiency	87% min at 115 VAC	
		Input frequency range	47 to 63 Hz	
	Output	Input AC current	1.4 A at 90 VAC and maximum load	
		Output power	45W	
		DC output	19.5V	
		Hold-up time	5 msec at 115 VAC input	
		Output current limit	<8A, Over voltage protection- 29V max automatic shutdown	
	Connector	3 pin/grounded, mates with interchangeable cords		
	Environmental Design	Operating temperature	32° to 95° F (0° to 35° C)	
		Non-operating (storage) temperature	-4° to 121° F (-20° to 85° C)	
		Altitude	0 to 16,405 ft (0 to 5,000 m)	
Humidity		0% to 95%		
EMI and Safety Certifications	Storage Humidity	0% to 95%		
	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; Reliability - failure rate of less than 0.1% annually within the first three years of operation.			
HP 65W AC Adapter	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	
		Input frequency range	47 to 63 Hz	
	Output	Input AC current	1.7 A at 90 VAC	
		Output power	65W	
		DC output	18.5/19.5V	



Technical Specifications

	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	41° to 95° F (5° to 35° C)
	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.	

HP 65W Slim Smart AC Adapter Dimensions (H x W x D) EM

	Dimensions (H x W x D)	126.0 x 50.0 x 30.0 mm
Input	Input	90 to 265 VAC
	Input Efficiency	87% min at 115 VAC/230VAC
	Input frequency range	47 to 63 Hz
Output	Input AC current	1.7 A at 90 VAC and maximum load
	Output power	65W
	DC output	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 7.4mm barrel type Smart ID DC connector	
Environmental Design	Operating temperature	32° to 95° F (0° to 35° C)
	Non-operating (storage) temperature	-4° to 121° F (-20° to 85° C)
	Altitude	0 to 16,405 ft (0 to 5,000 m)
	Humidity	0% to 95%
	Storage Humidity	0% 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; Reliability - failure rate of less than 0.1% annually within the first three years of operation.	

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 (max)	0.37lb, (0.166kg)



Technical Specifications

Cells/Type	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

HP 245 G3 Notebook PC

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.

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 (Short idle)	8.58 W	8.82 W	8.76 W
Normal Operation (Long idle)	5.66 W	6.39 W	6.38 W
Sleep	0.61 W	0.66 W	0.61 W
Off	0.48 W	0.54 W	0.48 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



Technical Specifications

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 (Short idle)	29 BTU/hr	30 BTU/hr	30 BTU/hr
Normal Operation (Long idle)	19 BTU/hr	22 BTU/hr	22 BTU/hr
Sleep	2 BTU/hr	2 BTU/hr	2 BTU/hr
Off	2 BTU/hr	2 BTU/hr	2 BTU/hr

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

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	Sound Power (L_{WAd}, bels)	Sound Pressure (L_{pAm}, decibels)
Typically Configured – Idle	3.1	25
Fixed Disk – Random writes	3.2	26

Longevity and Upgrading This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the product may include:

- 3 USB ports
- 1 PC card slot (type I/II)
- 1 ExpressCard/54 slot
- 1 IEEE 1394 Port
- 2 SODIMM memory slots
- Optional expansion base docking station
- 1 multi-bay II storage port
- Interchangeable HDD

Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.

Batteries

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

Batteries used in the product do not contain:

Mercury greater the 1ppm by weight

Cadmium greater than 20ppm by weight

Battery size: CR2032 (coin cell)

Battery type: Lithium



Technical Specifications

Battery size: 6-cell high capacity Lithium-Ion battery (optional 8 cell available)

Battery type:

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% post-consumer recycled plastic (by wt.)
- This product is 96.2% recycle-able when properly disposed of at end of life.

Packaging Materials

External:	PAPER/Corrugated	380 g
Internal:	PLASTIC/EPE (Expanded Polyethylene)	40 g
	PLASTIC/Polyethylene low density	16 g

The plastic packaging material contains at least 0% recycled content.

The corrugated paper packaging materials contains at least 75% recycled content.

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/qse.pdf>):

- 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)



Technical Specifications

- 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)

Packaging Usage

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

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

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>

Eco-label certifications

<http://www8.hp.com/us/en/hp-information/environment/ecolabels.html>

ISO 14001 certificates:

http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/PC_GBU_Product_Design_ISO_14K_Certificate.pdf

and

<http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf>

COUNTRY OF ORIGIN

China



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

Type	Description	Part #
Carrying Cases	HP Business Nylon Backpack (up to 17.3")	BP849AA
	HP Business Nylon Case(up to 15.6")	BP848AA
	HP Essential Top Load Case (up to 15.6")	H2W17AA#xxx
	HP Essential Backpack (up to 15.6")	H1D24AA
	HP Essential Messenger Case (up to 17.3")	H1D25AA
Docking	HP USB 3.0 Port Replicator	H1L08AA#xxx
	HP Universal Port Replicator	E6D70AA#xxx
	HP 3001pr USB 3 Port Replicator	F3S42AA
	HP Dual Hinge Notebook Stand	AW661AA#xxx
	HP Dual Hinge II Notebook Stand	E8F99AA#xxx
Input/Output	HP Touch To Pair Mouse	H6E52AA
	HP Stylish Wireless KB/Mouse	H4B79AA
	HP USB Optical Travel mouse	RH304AA
	HDMI to VGA Adapter	H4F02AA
	HP HDMI to DVI Adapter	F5A28AA
Memory	HP 2GB DDR3 1600 PC3-12800 SODIMM	H2P63AA#xxx
	HP 4GB DDR3 1600 PC3-12800 SODIMM	H2P64AA#xxx
	HP 2GB DDR3L-1600 1.35V SODIMM	H6Y73AA#XXX
	HP 4GB DDR3L-1600 1.35V SODIMM	H6Y75AA#XXX
	HP 8GB DDR3L-1600 1.35V SODIMM	H6Y77AA#XXX
Adapters	HP 45W Smart AC Adapter (4.5mm) (PL MP only)	H6Y88AA#xxx
	HP 65W Smart AC Adapter (4.5mm)	H6Y89AA#xxx
	HP 65W Slim AC Adapter	H6Y82AA#xxx
	HP 90W Slim AC Adapter	H6Y83AA#xxx
	HP 90W Slim Combo Adapter w/ USB	H6Y84AA#xxx
Battery Chargers	HP Notebook Battery Charger (Single Battery Charger)	QL816AA#xxx
Security	HP Notebook Combo Lock	AY475AA#XXX
	HP Keyed Cable Lock	BV411AA
	HP UltraSlim Keyed Cable Lock	H4D73AA
	HP USB Smart Card Reader	F6V67AA
Storage	HP External USB Optical Drive	F2B56AA
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

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

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

Summary of Changes

Date of change:	Version	Added	Description of change:
June 9, 2014	History: From vMay 2014 to v June 9, 2014		245 environmental data, change log.

