

Overview

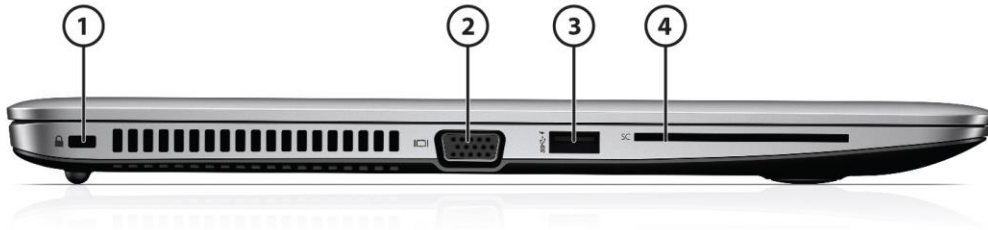
HP mt43 Mobile Thin Client



Front right

- | | | | |
|-----|-----------------------------------|-----|--|
| 1. | WLAN antennas (2) | 12. | USB 3.1 GEN 1 port |
| 2. | WWAN antennas (2) (select models) | 13. | Microphone/ headphones combo jack |
| 3. | Internal microphones (2) | 14. | DisplayPort™ |
| 4. | Webcam LED (select models) | 15. | USB-C™ port |
| 5. | Webcam (select models) | 16. | Touchpad |
| 6. | Wireless on/off button | 17. | Touchpad buttons (4) |
| 7. | Speaker mute button | 18. | Indicator LEDs: Wireless Light, Power Light, AC Adapter/Battery Light, Storage Usage Light |
| 8. | Power connector | 19. | Pointstick |
| 9. | SIM card slot | 20. | Power button |
| 10. | Docking connector | 21. | SD Card Reader (bottom) |
| 11. | Ethernet port | | |

Overview



Left

- | | |
|-----------------------|--------------------------------|
| 1. Security lock slot | 3. USB 3.1 GEN 1 Charging port |
| 2. VGA port | 4. Smart Card Reader |

Overview

AT A GLANCE

- Stylish, lightweight magnesium and aluminum chassis
- No dongles are needed with built-in VGA, drop-jaw RJ-45 Ethernet port, 2 USB 3.1 GEN 1, 1 USB Type-C™, and 1 DisplayPort™ for high resolution support
- Customer serviceable and upgradeable with component accessible design
- Accelerated Processing Unit (APU) and graphics from AMD
- Optimize your audio experience for remote collaboration with optional HD webcam, dual-microphone array, premium speakers, and audio by Bang & Olufsen
- Improved keyboard experience featuring HP Premium Keyboard
- Optional back-lit keyboard keeps you productive in all settings with HP DuraKeys to protect keys from fading
- Passed MIL STD testing¹
- Enhanced security features including TPM 2.0, SmartCard Reader
- LED-backlit display: 35.6 cm (14") diagonal Non-Touch
- Experience new vibrant color provided by AMD Vivid Color Technology
- Flexible wireless connectivity options including mobile broadband
- Easily dock with the HP UltraSlim Docking Station
- 128 GB M.2 2280 flash memory storage drive
- SDRAM system memory up to 8 GB
- Preinstalled with Windows 10 IoT Enterprise operating system

¹ MIL STD 810G testing is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Damage under the MIL STD test conditions or any accidental damage requires an optional HP Accidental Damage Protection Care Pack.

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

Features

OPERATING SYSTEM

Preinstalled: Windows 10 IoT Enterprise

NOTE: Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.windows.com>.

ACCELERATED PROCESSING UNIT

AMD PRO A8-9600B (1.6 GHz, up to 3.0 GHz, 2MB Cache, 4 Cores) with AMD Radeon™ R5 Graphics¹

¹ Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. AMD's numbering is not a measurement of clock speed.

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

GRAPHICS

Integrated Graphics:

AMD UMA Graphics - with shared video memory
Support dual-display ports through optional docking station¹

¹ Sold separately or as an optional feature.

DISPLAY

35.6 cm (14") diagonal LED backlight FHD Slim eDP SVA Anti-glare (1920 x 1080)¹

35.6 cm (14") diagonal LED backlight FHD Slim eDP SVA Anti-glare (1920 x 1080) with camera¹

External

Up to 32-bit per pixel color depth

VGA

Port supports resolutions up to 1900 x 1200 external resolution @60 Hz

DisplayPort™

Supports resolutions up to 4096 x 2160 @ 60Hz

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

Number of Displays supported with Docking

Supports 3 independent displays if used with optional HP Ultraslim Docking Station.²

¹ HD content required to view HD images.

² Sold separately or as an optional feature.

Features

STORAGE AND DRIVES

Primary Storage

128GB M.2 2280 SATA-3 flash memory storage drive

NOTE: For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less.

MEMORY

Standard

DDR4 PC4 - 1866 (Transfer rates up to 1866 MT/s)

Two SODIMM slots supporting dual-channel memory

Both slots are customer accessible / upgradeable

Supports the following configurations:

4096 MB Total System Memory (4096 MB x 1)

8192 MB Total System Memory (4096 MB x 2)

Maximum

Up to 8 GB

Dual-channel

Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory slots.

NOTE: Improved system performance when memory is added in pairs (dual channel).

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.

NETWORKING/COMMUNICATIONS

Broadband Wireless (WWAN)

HP lt4120 Qualcomm® Snapdragon™ X5 LTE Mobile Broadband Module^{1,2}

HP hs3210 HSPA Mobile Broadband^{1,2}

Wireless LAN (WLAN) Via MiniCard

Intel® Dual Band Wireless-AC 7265: 802.11 a/b/g/n/ac (2x2) Wi-Fi + Bluetooth® 4.2 Combo³

¹ Sold separately or as an optional feature

² WWAN module is optional, must be configured at the factory and requires separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions.

³ Wireless access point and Internet service is required and is not included. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN 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 802.11ac WLAN devices.

Gigabit Ethernet

Broadcom 5762 Gigabit Ethernet NIC with DASH support

NOTE: The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility 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

Features

AUDIO/MULTIMEDIA

Audio by Bang & Olufsen

Digital Microphones (Dual Array)
2 Premium Stereo Speakers

Webcam

Optional¹ 720p webcam

¹ Included on select models.

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

HP Premium Keyboard

Minor spill-resistant with drain using a thin layer of Mylar film under the keyboard
DuraKeys & Backlit
Dual Point

Pointing Devices

Glass Touchpad
On/Off button
Taps enabled as default
Gestures enabled by default - 2 Finger Scrolling, 2 Finger Zoom (Pinch)

Function Keys

F1 - Sleep
F2 - Blank
F3 - Backlit Toggle
F4 - Display Switching
F5 - Brightness Down
F6 - Brightness Up
F7 - Blank
F8 - Volume Down
F9 - Volume Up
F10 - Mic Mute
F11 - Blank
F12 - numlock

Hidden Function Keys

Fn+R - Break
Fn+S - Sys Rq
Fn+C - Scroll Lock
Fn+Up - PG UP
Fn+Down - PG Down
Fn+Left - Home
Fn+ Right - End

SOFTWARE AND SECURITY

Features

BIOS

HP BIOSphere¹
HP Sure Start Gen3
BIOS Update via Network
Master Boot Record Security
Power On Authentication
Secure Erase²
Pre-boot Authentication

Communication / Connectivity

Native Miracast Support³

HP Value Add Software

HP Easy Shell⁴
HP USB Port Manager
HP Velocity
HP RGS⁵
HP Hotkey Support

Manageability

HP Device Manager Agent
HP ThinUpdate
Microsoft SCCM Agent

For more information on HP Client Management Solutions refer to: <http://www.hp.com/go/clientmanagement>.

Client Security Software

Microsoft Defender

Security

Trusted Platform Module (TPM) 2.0
Integrated Smart Card Reader
Security lock slot (Lock sold separately)

¹ Available only on business PCs with HP BIOS.

² For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.

³ Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming media players that also support Miracast. You can use Miracast to share what you're doing on your PC and present a slide show. For more information: <http://windows.microsoft.com/en-us/windows-8/project-wireless-screen-miracast>.

⁴ HP Easy Shell is only available on HP Thin Clients with a Windows OS.

⁵ Requires network connection. Performance dependent on network latency and image frame content.

Features

POWER

Power Supply¹

HP 45W Smart AC Adapter

HP 45W 2-prong DC jack AC Adapter

HP 65W Smart AC Adapter (Supports HP Fast Charging)

HP 65W Smart AC Adapter EM (Supports HP Fast Charging)

¹ Availability may vary by country.

Power cord is configurable; either 3.2 feet or 6 feet (1.0 or 1.8 meter)

Total length including external AC adapter is 9.2 feet or 12 feet (2.86 or 3.66 meter)

Primary Battery

HP 3-cell Long Life Li-Ion (51 WHr) (Supports HP Fast Charging)

Battery Life

Up to 7h life

Power Conservation

Standby

ACPI Compliance

WEIGHTS & DIMENSIONS

Weight¹

Starting at 3.27 lbs (1.48 kg)

(3-cell battery (51WHr), UMA, no FPR, 1 SODIMM, WLAN, M.2 SSD, no camera, no WWAN, FHD screen)

Dimensions² (w x d x h)

13.3 x 9.3 x 0.74 in

33.8 x 23.7 x 1.89 cm

¹ Weight varies by configuration and components.

² Height varies depending upon where on the notebook the measurement is made.

Features

PORTS/SLOTS

Ports

- 1 USB 3.1 GEN 1 Charging Port
- 1 USB 3.1 GEN 1 Port
- 1 USB Basic Type-C™ (Up to 5 Gbps data transfer and 15W power)
- 1 Display Port™
- 1 RJ-45 / Ethernet
- 1 Docking connector
- 1 Headphone/Microphone Combo
- 1 AC Port

NOTE: Cables are not included.

Slots

- External Micro SIM Slot(3FF)
- 15 x 12 mm
- SD Media Reader Slot Supports SD, SDHC, SDXC
- Smart Card Reader

SERVICE AND SUPPORT

HP Services offers a 1-year limited warranty. On-site service varies by country. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at Tool at: <http://www.hp.com/go/cpc>.^{1,2}

¹ Sold separately or as an optional feature.

² 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. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product. 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/cpc>.

Technical Specifications

SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	Nominal Operating Voltage	19.5 V
	Average Operating Power	Windows 10 (64-bit)
	Integrated graphics	12.9W
Temperature	Max Operating Power	UMA < 65W
	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		10% to 90%, non-condensing
		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 15,000 ft (-15.24 to 12,192 m)
Planned Industry Standard Certifications	UL	Yes
	CSA	Yes
	FCC Compliance	Yes
	ENERGY STAR®	Select models*
	EPEAT®	Registered Gold in United States**
	ICES	Yes
	Australia / NZ RCM Compliance	Yes
	CCC	Yes
	Japan VCCI Compliance	Yes
	KC	Yes
	BSMI	Yes
	CE Marking Compliance	Yes
	CIT	Yes
	EAC	Yes
	Saudi Arabian Compliance (SASO)	Yes
	SABS	Yes
UKRSERTCOMPUTER	Yes	

* Configurations of the HP mt43 Mobile Thin Client that are ENERGY STAR qualified are identified as HP mt43 Mobile Thin Client ENERGY STAR on HP websites and on <http://www.energystar.gov>.

** EPEAT registration varies by country. See <http://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

35.56 cm (14") diagonal LED backlight FHD Slim eDP SVA Anti-glare non-touch (1920 x 1080)	Outline Dimensions (W x H x D)	320.9 x 205.6 (max) x 3.0(max) mm		
	Active Area	309.40 x 173.95 (mm)		
	Weight	270 g max		
	Diagonal Size	14"		
	Surface Treatment	Anti-Glare (AG)		
	Contrast Ratio	300:1 (typ)		
	Refresh Rate	60Hz		
	Response time	16ms typ.		
	Pixel Per Inch (PPI)	157		
	Brightness	300nits		
	Pixel Resolution	Format	1920 x 1080 (FHD)	
		Configuration	RGB	
	Interface	eDP 1.2		
	LCD Mode	TN		
Viewing Angle	SVA 45/45/25/35			

NOTE: All specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

NETWORKING*

HP lt4120 Qualcomm® Snapdragon™ X5 LTE Mobile Broadband Module

Technology/Operating bands LTE: 2100 (Band 1), 1900 (Band 2), 1800 (Band 3), 1700/2100 (Band 4), 850 (Band 5), 2600 (Band 7), 900 (Band 8), 700 (Band 12 lower), 700 (Band 13 upper), 700 (Band 17 lower), 800 (Band 20), 700 (Band 28).
 HSPA+: 2100 (Band 1), 1900 (Band 2), 1700/2100 (Band 4), 850 (Band 5), 900 (Band 8) MHz
 EV-DO: 850 (BC0), 1900 (BC1) MHz (Only work with Verizon network)
 E-GPRS: 1900 (Band 2), 1800 (Band 3), 850 (Band 5), 900MHz (Band 8)

Wireless protocol standards 3GPP Release 10 LTE Specification CAT.4, 20MHz BW
 WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification
 1xEVDO Release 0, A and B.
 E-GPRS: Class B, Multi-slot class 12, coding schemes CS1 - CS4 and MSC1 - MSC9

GPS Standalone, A-GPS (MS-A, MS-B and XTRA)

GPS bands 1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz

Maximum data rates LTE: 150 Mbps (Download), 50 Mbps (Upload)
 DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload)
 HSPA+: 21Mbps (Download), 5.76 Mbps (Upload)

Technical Specifications

	CDMA 1xRTT: 153.6 kbps (Download), 153.6 kbps (Upload) EVDO Rel.A: 3.1 Mbps (Download), 1.8 Mbps (Upload) EVDO Rel.B: 14.7 Mbps (Download), 5.4Mbps (Upload) EDGE: 236.8 kbps (Download), 236.8 kbps (Upload) GPRS: 85.6 kbps(Download), 85.6 kbps (Upload)
Maximum output power	LTE: 23 dBm HSPA+: 23.5 dBm 1xRTT/EVDO: 24dBm E-GPRS 1900/1800: 26 dBm E-GPRS 900/850: 27 dBm GPRS 1900/1800: 29.5 dBm GPRS 900/850: 32.5 dBm
Maximum power consumption	LTE: 1,200 mA (peak); 900 mA (average) HSPA+: 1,100 mA (peak); 800 mA (average) 1xRTT/EVDO: 1,000 mA (peak); 700 mA (average) E-GPRS: 2,800 mA (peak); 500 mA (average)
Form Factor	M.2, 3042-S3 Key B
Weight	6.2 g
Dimensions (Length x Width x Thickness)	42 x 30 x 2.3 mm
<p>* Mobile Broadband is an optional feature. Connection requires wireless data service contract, network support, and is not available in all areas. Contact service provider to determine the coverage area and availability. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products or in all countries.</p>	
HP hs3210 HSPA+ Mobile Broadband	
Technology/Operating bands	HSPA+: 2100 (Band1), 1900 (Band 2), 850 (Band 5), 900 (Band 8) MHz E-GPRS: 1900 (Band 2), 1800 (Band 3), 850 MHz (Band 5), 900 (Band 8) MHz
Wireless protocol standards	WCDMA R99, 3GPP Release 5, 6 and 7 UMTS Specification E-GPRS: Class B, Multi-slot class 33, coding schemes CS1 - CS4 and MSC1 - MSC9
Maximum data rates	HSPA+: 21.6 Mbps (Download), 5.76 Mbps (Upload) E-GPRS: 296 kbps (Download), 236.8 kbps (Upload) GPRS: 107 kbps (Download), 85.6 kbps (Upload)
Maximum output power	HSPA+: 24 dBm E-GPRS 1800/1900: 26 dBm E-GPRS 850/900: 27 dBm GPRS 1800/1900: 30 dBm GPRS 850/900: 33 dBm
Maximum power consumption	HSPA+: 1,100 mA (peak); 800 mA (average) E-GPRS: 2,800 mA (peak); 700 mA (average)
Form Factor	M.2, 2242-S3 Key B
Weight	6 g

Technical Specifications

Dimensions 1.65 x 8.66 x 0.09 in (42 x 22 x 2.38 mm)
(Length x Width x Thickness)

* Mobile Broadband is an optional feature. Connection requires wireless data service contract, network support, and is not available in all areas. Contact service provider to determine the coverage area and availability. Connection speeds will vary due to location, environment, network conditions, and other factors.

Note: Wireless access point and Internet service required. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN 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 802.11ac WLAN devices.

HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology

Bluetooth Specification 4.0/4.1/4.2 Compliant

Frequency Band 2402 to 2480 MHz

Number of Available Channels Legacy : 0~79 (1 MHz/CH)
BLE : 0~39 (2 MHz/CH)

Data Rates and Throughput Legacy : 3 Mbps data rate; throughput up to 2.17 Mbps
BLE : 1 Mbps data rate; throughput up to 0.2 Mbps
Legacy : Synchronous Connection Oriented links up to 3, 64 kbps, voice channels
Legacy : Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric (3-DH5) or 864 kbps symmetric (3-EV5)

Transmit Power The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.

	Modulation	0.01% BER	0.001% BER
Receiver Sensitivity Legacy	GFSK	-80 dBm	-70 dBm
	$\pi/4$ -DQPSK	-80 dBm	-70 dBm
	8DPSK	-80 dBm	-70 dBm

Power Consumption Peak (Tx) 330 mW
Peak (Rx) 230 mW
Selective Suspend 17 mW

Range Legacy Up to 33 ft (10 m)
BLE Up to 99 ft (30 m)

Electrical Interface USB 2.0 compliant

Bluetooth Software Supported Link Topology Microsoft Windows Bluetooth Software

Electrical Interface Point to Point, Multipoint Pico Nets up to 7 slaves

Bluetooth Software Supported Security Full support of Bluetooth Security Provisions

Power Management Microsoft Windows ACPI, and USB Bus Support

Certifications Self-configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff

Security All necessary regulatory approvals for supported countries, including:

Certifications FCC (47 CFR) Part 15C, Section 15.247 & 15.249

Bluetooth Profiles Supported

Technical Specifications

Power Management	ETS 300 328, ETS 300 826
Certifications	Low Voltage Directive IEC950 UL, CSA, and CE Mark Serial Port Profile (SPP) ¹ Service Discovery Application Profile (SDAP) Dial-Up Networking (DUN) ^{1,2} Generic Object Exchange Profile (GOEP) ^{1,2} Object Push Profile (OPP) ^{1,2} Hard Copy Cable Replacement (HCRP) ^{1,2} Personal Area Networking Profile (PAN) ^{1,2} Human Interface Device Profile (HID) ^{1,2} Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP) Audio Video Remote Control Profile (AVRCP)
Certifications	
Bluetooth Profiles Supported	
Bluetooth V4.1/V4.2 support feature	V4.1: ESR5/6/7 compliant V4.2: ESR8 compliant, LE Secure Connection – Basic.

STORAGE AND DRIVES

128 GB M.2 2280 SATA-3 Flash Memory Drive

Drive Weight	0.01 lb (6 g) ~ 0.02 lb (10 g)	
Capacity	128 GB	
Height	0.09 in (2.3 mm)	
Width	0.87 in (22 mm)	
Interface	ATA-8, SATA 3.0	
Performance	Maximum Sequential Read	Maximum Sequential Write
	Up To 535 MB/s	Up To 515 MB/s
Logical Blocks	250,069,680	
Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]	
Features	DIPM; TRIM; DEVSLP	

Technical Specifications

POWER

HP 45W Smart AC Adapter	Dimensions (H x W x D)	9.5 x 4.0 x 2.65 cm}	
	Weight	unit: 200g +/- 10g	
	Input	90 to 265 VAC	
		Input Efficiency	87.74% at 115Vac and 88.4% at 230Vac
		Input frequency range	47 to 63 Hz
		Input AC current	Max. 1.4 A at 90 Vac
	Output	Output power	45W
		DC output	19.5V
		Hold-up time	5 ms at 115 Vac input
		Output current limit	<8.0A
	AC Connector (Ac Inlet)	C6 (3pin/with grounded, with Smart ID DC connector)	
	Environmental Design	Operating temperature	32° to 95° F (0° to 35° C)
		Non-operating (storage) temperature	-4° to 185° F (-20° to 85° C)
		Altitude	0 to 16,400 ft (0 to 5,000 m)
Humidity		20% to 95%	
	Storage Humidity	10% to 95%	
EMI and Safety Certifications	<p>*CE Mark - full compliance with LVD and EMC directives</p> <p>* 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.</p> <p>* MTBF - over 200,000 hours at 25°C ambient condition.</p>		

HP 45W Smart AC Adapter (2 Prong)	Dimensions (H x W x D)	95.0x40.0x26.5mm	
	Weight	unit: 200g +/- 10g	
	Input	90 to 265 VAC	
		Input Efficiency	87.74% at 115Vac and 88.4% at 230Vac
		Input frequency range	47 to 63 Hz
		Input AC current	Max. 1.4 A at 90 Vac
	Output	Output power	45W
		DC output	19.5V
		Hold-up time	5 ms at 115Vac input
		Output current limit	<8.0A
	AC Connector (Ac Inlet)	C8 (2 pin/non-grounded, with Smart ID DC connector)	
	Environmental Design	Operating temperature	32° to 95° F (0° to 35° C)
		Non-operating (storage) temperature	-4° to 185° F (-20° to 85° C)
		Altitude	0 to 16,400 ft (0 to 5,000 m)

Technical Specifications

EMI and Safety Certifications	Humidity	20% to 95%
	Storage Humidity	10% 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.	
	* MTBF - over 200,000 hours at 25°C ambient condition.	

HP 65W Smart AC Adapter

Dimensions	107.0x47.0x30.0mm
Weight	unit: 250g +/- 10g
Input	90 to 265 VAC
	Input Efficiency 88.0 % at 115 Vac and 89.0 % at 230 Vac
	Input frequency range 47 to 63 Hz
	Input AC current 1.7 A at 90 Vac
Output	Output power 65W
	DC output 19.5V
	Hold-up time 5 ms at 115 Vac input
	Output current limit <11.0A
AC Connector (Ac Inlet)	C6 (3pin/with grounded, with Smart ID DC connector)
Environmental Design	Operating temperature 32° to 95° F (0° to 35° C)
	Non-operating (storage) temperature -4° to 185° F (-20° to 85° C)
	Altitude 0 to 16,400 ft (0 to 5,000 m)
	Humidity 20% to 95%
	Storage Humidity 10% to 95%
EMI and Safety Certifications	Eg: *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.

Technical Specifications

HP 65W Smart AC Adapter EM	Dimensions	102.0x55.0x30.0mm	
	Weight	unit: 350g +/- 10g	
	Input	90 to 265 VAC	
		Input Efficiency	87.0% min at 115 VAC and 230Vac
		Input frequency range	47 to 63 Hz
		Input AC current	1.7 A at 90 VAC
	Output	Output power	65W
		DC output	19.5V
		Hold-up time	5 ms at 115 Vac input
		Output current limit	<11.0A
	AC Connector (Ac Inlet)	C6 (3pin/with grounded, with Smart ID DC connector)	
	Environmental Design	Operating temperature	32° to 95° F (0° to 35° C)
		Non-operating (storage) temperature	-4° to 185° F (-20° to 85° C)
		Altitude	0 to 16,400 ft (0 to 5,000 m)
		Humidity	20% to 95%
	Storage Humidity	10% to 95%	
EMI and Safety Certifications	<p>*CE Mark - full compliance with LVD and EMC directives</p> <p>* 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.</p> <p>* MTBF - over 200,000 hours at 25°C ambient condition.</p>		

HP 3-cell Long Life Li-Ion (51 WHr)	Dimensions (H x W x L)	6.8mm x 102.8mm x 198mm	
	Weight	235g	
	Cells/Type	3cell Lithium-Ion Polymer cell / 506480	
	Energy	Voltage	11.55V
		Amp-hour capacity	4420mAh
		Watt-hour capacity	51wh
	Temperature	Operating (Charging)	0~45 C
		Operating (Discharging)	-10~60 C
	Fuel Gauge LED	NA	
	Warranty	1000 cycles > 65% (at 23°C)	
Optional Travel Battery Available	No		

Technical Specifications

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® Gold 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, 50Hz
Normal Operation (Short idle)	8.78 W	9.59 W	8.76 W
Normal Operation (Long idle)	5.64 W	6.37 W	6.47 W
Sleep	0.73 W	0.74 W	0.73 W
Off	0.50 W	0.52 W	0.49 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, 50Hz
Normal Operation (Short idle)	30 BTU/hr	33 BTU/hr	30 BTU/hr
Normal Operation (Long idle)	19 BTU/hr	22 BTU/hr	22 BTU/hr
Sleep	2 BTU/hr	3 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	21
Fixed Disk – Random writes	3.4	24

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

Technical Specifications

- 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 than 1ppm by weight
- Cadmium greater than 20ppm by weight

Battery size: CR2032 (coin cell)

Battery type: Lithium

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 gold 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 94.6% recycle-able when properly disposed of at end of life.

Packaging Materials

External:	PAPER/Corrugated	323 g
Internal:	PLASTIC/Expanded Polyethylene - EPE	38 g
	PLASTIC/Polyethylene low density - LDPE	15 g
	PLASTIC/Polypropylene - PP	4 g

The plastic packaging material contains at least 50% recycled content.

The corrugated paper packaging materials contains at least 70% 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/gse.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.

Technical Specifications

- 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)

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

HP Inc. 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.

HP Inc. 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://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842>
and

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

Technical Specifications

COUNTRY OF ORIGIN

China

Options and Accessories (Sold separately and availability may vary by country.)

Type	Description	Part Number
Docking	HP UltraSlim Docking Station	D9Y32AA#xxx
Input/Output	HP UC Wired Headset	K7V17AA
Memory	HP 4GB 2133MHz DDR4 Memory	T7B76AA
	HP 8GB 2133MHz DDR4 Memory	T7B77AA
Power	HP 65W Slim AC Adapter	H6Y82AA#xxx
	HP 45W Smart AC Adapter	H6Y88AA#xxx
	HP 65W Smart AC Adapter	H6Y89AA#xxx
	HP Notebook Power Bank	N9F71AA#xxx
Security	HP Combination Lock	T0Y15AA
Misc	HP 14" Notebook PC Privacy Filter	J6E65AA
	USB-C™ to USB 3.0 dongle	N2Z63AA

Summary of Changes

Date of change:	Version History:	Type of change	Description of change:
January 16, 2017	From v1 to v2	Added	Battery life
		Changed	Windows OS note, HP hs3210 naming, Spill resistant to Minor spill-resistant, service and support wording and warranty statement
		Remove	storage note for windows, System Standby Time
February 27, 2017	From v2 to v3	Changed	Memory support, Software and Productivity list and footnotes, Battery life and starting weight and component list.
		Removed	Optional security and storage in ata a glance, discrete graphics,
June 9, 2017	From v3 to v4	Changed	Callout for the front right view, changed the AT A GLANCE section, changed the Maximum Memory up to 8GB, the AUDIO/MULTIMEDIA section, the BIOS section, SOFTWARE AND SECURITY section, the WEIGHTS & DIMENSIONS section, the PORTS/SLOTS section and the SERVICE AND SUPPORT section

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