

### Overview

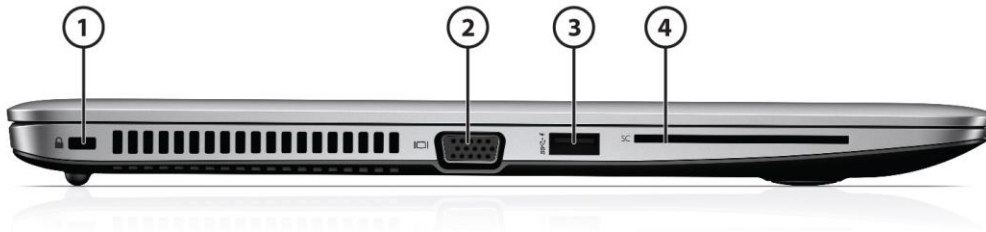
### HP mt43 Mobile Thin Client



#### 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                 |     |  |
| 11. | Ethernet port                     |     |  |

### Overview



#### Left

- |    |                    |    |                             |
|----|--------------------|----|-----------------------------|
| 1. | Security lock slot | 3. | USB 3.1 GEN 1 Charging port |
| 2. | VGA port           | 4. | Smart Card Reader           |
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### 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
- Pending MIL STD testing<sup>1</sup>
- 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

<sup>1</sup> MIL STD 810G testing is pending and 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**

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## 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 Graphics<sup>1</sup>

<sup>1</sup> 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 station<sup>1</sup>

<sup>1</sup> Sold separately or as an optional feature.

### DISPLAY

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

35.6 cm (14") diagonal LED backlight FHD Slim eDP SVA Anti-glare (1920 x 1080) with camera<sup>1</sup>

#### 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.<sup>2</sup>

<sup>1</sup> HD content required to view HD images.

<sup>2</sup> 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 16 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 It4120 Qualcomm® Snapdragon™ X5 LTE Mobile Broadband Module<sup>1,2</sup>

HP hs3210 HSPA Mobile Broadband<sup>1,2</sup>

##### Wireless LAN (WLAN) Via MiniCard

Intel® Dual Band Wireless-AC 7265: 802.11 a/b/g/n/ac (2x2) Wi-Fi + Bluetooth® 4.2 Combo<sup>3</sup>

<sup>1</sup> Sold separately or as an optional feature

<sup>2</sup> 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.

<sup>3</sup> 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<sup>1</sup>

Optional<sup>2</sup> 720p webcam

<sup>1</sup> Internet access required.

<sup>2</sup> 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 BIOSphere<sup>1</sup>
- HP Sure Start Gen3
- HP DriveLock | HP Automatic DriveLock
- BIOS Update via Network
- Master Boot Record Security
- Power On Authentication
- Secure Erase<sup>2</sup>
- Pre-boot Authentication

#### **Communication / Connectivity**

- Native Miracast Support<sup>4</sup>

#### **HP Value Add Software**

- HP Easy Shell<sup>5</sup>
- HP USB Port Manager
- HP Velocity
- HP RGS<sup>6</sup>
- 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 (Windows OS only)

#### **Security**

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

<sup>1</sup> Available only on business PCs with HP BIOS.

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

<sup>3</sup> Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: <http://www.absolute.com/company/legal/agreements/computrace-agreement>. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.

### Features

<sup>4</sup> 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>.

<sup>5</sup> HP Easy Shell is only available on HP Thin Clients with a Windows OS.

<sup>6</sup> Requires network connection. Performance dependent on network latency and image frame content.

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### Features

#### POWER

##### Power Supply<sup>1</sup>

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)

<sup>1</sup> 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

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#### WEIGHTS & DIMENSIONS

##### Weight<sup>1</sup>

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)

##### Dimensions<sup>2</sup> (w x d x h)

13.3 x 8.9 x 0.74 in

33.8 x 22.7 x 1.89 cm

<sup>1</sup> Weight varies by configuration and components.

<sup>2</sup> Height varies depending upon where on the notebook the measurement is made.

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### 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

#### 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>.

<sup>1</sup> Sold separately or as an optional feature.

<sup>2</sup> 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

<b>Stand-Alone Power Requirements</b> (AC Power)	<b>Nominal Operating Voltage</b>	19.5 V
	<b>Average Operating Power</b>	<b>Windows 10 (64-bit)</b>
	<b>Integrated graphics</b>	12.9W
<b>Temperature</b>	<b>Max Operating Power</b>	UMA < 65W
	<b>Operating</b>	32° to 95° F (0° to 35° C) (not writing optical) 41° to 95° F (5° to 35° C) (writing optical)
	<b>Non-operating</b>	-4° to 140° F (-20° to 60° C)
<b>Relative Humidity</b>		10% to 90%, non-condensing
		5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
<b>Shock</b>	<b>Operating</b>	40 G, 2 ms, half-sine
	<b>Non-operating</b>	200 G, 2 ms, half-sine
<b>Random Vibration</b>	<b>Operating</b>	0.75 grms
	<b>Non-operating</b>	1.50 grms
<b>Altitude</b> (unpressurized)	<b>Operating</b>	-50 to 10,000 ft (-15.24 to 3,048 m)
	<b>Non-operating</b>	-50 to 15,000 ft (-15.24 to 12,192 m)
<b>Planned Industry Standard Certifications</b>	<b>UL</b>	Yes
	<b>CSA</b>	Yes
	<b>FCC Compliance</b>	Yes
	<b>ENERGY STAR®</b>	Select models*
	<b>EPEAT®</b>	Registered Gold in United States**
	<b>ICES</b>	Yes
	<b>Australia / NZ RCM Compliance</b>	Yes
	<b>CCC</b>	Yes
	<b>Japan VCCI Compliance</b>	Yes
	<b>KC</b>	Yes
	<b>BSMI</b>	Yes
	<b>CE Marking Compliance</b>	Yes
	<b>CIT</b>	Yes
	<b>EAC</b>	Yes
	<b>Saudi Arabian Compliance (SASO)</b>	Yes
	<b>SABS</b>	Yes
<b>UKRSERTCOMPUTER</b>	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

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

\* 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.

**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.

	<b>Modulation</b>	<b>0.01% BER</b>	<b>0.001% BER</b>
<b>Receiver Sensitivity Legacy</b>	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

<b>Power Management</b>	ETS 300 328, ETS 300 826
<b>Certifications</b>	Low Voltage Directive IEC950 UL, CSA, and CE Mark Serial Port Profile (SPP) <sup>1</sup> Service Discovery Application Profile (SDAP) Dial-Up Networking (DUN) <sup>1,2</sup> Generic Object Exchange Profile (GOEP) <sup>1,2</sup> Object Push Profile (OPP) <sup>1,2</sup> Hard Copy Cable Replacement (HCRP) <sup>1,2</sup> Personal Area Networking Profile (PAN) <sup>1,2</sup> Human Interface Device Profile (HID) <sup>1,2</sup> Hands Free Profile (HFP) Advanced Audio Distribution Profile (A2DP) Audio Video Remote Control Profile (AVRCP)
<b>Certifications</b>	
<b>Bluetooth Profiles Supported</b>	
<b>Bluetooth V4.1/V4.2 support feature</b>	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

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

### Technical Specifications

#### POWER

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

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



### Technical Specifications

<b>EMI and Safety Certifications</b>	<b>Humidity</b>	20% to 95%
	<b>Storage Humidity</b>	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.	

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

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

<b>HP 3-cell Long Life Li-Ion (51 WHr)</b>	<b>Dimensions (H x W x L)</b>	6.8mm x 102.8mm x 198mm	
	<b>Weight</b>	235g	
	<b>Cells/Type</b>	3cell Lithium-Ion Polymer cell / 506480	
	<b>Energy</b>	<b>Voltage</b>	11.55V
		<b>Amp-hour capacity</b>	4420mAh
		<b>Watt-hour capacity</b>	51wh
	<b>Temperature</b>	<b>Operating (Charging)</b>	0~45 C
		<b>Operating (Discharging)</b>	-10~60 C
	<b>Fuel Gauge LED</b>	NA	
	<b>Warranty</b>	1000 cycles > 65% (at 23°C)	
<b>Optional Travel Battery Available</b>	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 <sub>WAd</sub> , bels)	Sound Pressure (L <sub>pAm</sub> , 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

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- 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

#### 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](http://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

<b>External:</b>	PAPER/Corrugated	323 g
<b>Internal:</b>	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

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

Type	Description	Part Number
<b>Docking</b>	HP UltraSlim Docking Station	D9Y32AA#xxx
<b>Input/Output</b>	HP UC Wired Headset	K7V17AA
<b>Memory</b>	HP 4GB 2133MHz DDR4 Memory	T7B76AA
	HP 8GB 2133MHz DDR4 Memory	T7B77AA
<b>Power</b>	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
<b>Security</b>	HP Combination Lock	TOY15AA
<b>Misc</b>	HP 14" Notebook PC Privacy Filter	J6E65AA
	USB-C™ to USB 3.0 dongle	N2Z63AA

### Summary of Changes

<b>Date of change:</b>	<b>Version History:</b>	<b>Type of change</b>	<b>Description of change:</b>
January 16, 2017	From v1 to v2	<b>Added</b>	Battery life
		<b>Changed</b>	Windows OS note, HP hs3210 naming, Spill resistant to Minor spill-resistant, service and support wording and warranty statement
		<b>Remove</b>	storage note for windows, System Standby Time
February 27, 2017	From v2 to v3	<b>Changed</b>	Memory support, Software and Productivity list and footnotes, Battery life and starting weight and component list.
		<b>Removed</b>	Optional security and storage in ata a glance, discrete graphics,



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