HP 255 G7 Notebook PC

**Overview** 

### HP 255 G7 Notebook PC



- 1. Webcam LED
- 2. Webcam
- 3. Internal microphone
- 4. Touchpad
- 5. Touchpad button
- 6. Audio combo jack

- Left
  - 7. USB 3.1 Gen 1 port
  - 8. USB 3.1 Gen 1 port
  - 9. HDMI port (Cable not included)
  - 10. RJ-45/Ethernet port
  - 11. AC Smart Pin adapter plug
  - 12. Power button



### Overview



#### Right

- 1. Security lock slot (Lock sold separately)
- 2. Optical drive (optional)
- 3. USB 2.0 port

- 4. SD Card slot
- 5. Hard drive indicator LED
- 6. Power indicator LED



## HP 255 G7 Notebook PC

### **Overview**

## AT A GLANCE

- Preinstalled with Windows 10 versions or FreeDOS
- Choice of AMD Ryzen<sup>™</sup> processors
- 15" (39.6 cm) diagonal FHD/HD Anti-Glare Display
- Choice of Integrated Intel<sup>®</sup> UHD Graphics 620, HD Graphics 620 or Switchable Discrete Graphics NVIDIA Geforce MX110
- Dark Ash Silver or Asteroid Silver color with texture pattern (Color options available in select countries)
- Up to 1TB Hard Drive or 256 GB M.2 PCIe Value Solid State Drive
- Weight starting at 1.78Kgs (3.91 lbs)
- Security features including FW TPM 2.0 and security lock slot (Lock not included)
- Keyboard Full size textured island-style keyboard with numeric pad
- Touchpad with gestures support
- HP webcam with single digital microphone and HD (supporting WDR- Wide Dynamic Range) or VGA camera
- Two USB 3.1 (Gen 1) ports and One USB 2.0 port
- Wireless LAN (WLAN) up to 802.11ac to keep you connected

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

Features

HP 255 G7 Notebook PC

## **OPERATING SYSTEM**

Preinstalled OS

Windows 10 Pro 64<sup>1</sup> Windows 10 Home 64<sup>1</sup> Windows 10 Home Single Language 64<sup>1</sup> Windows 10 Pro 64 (National Academic only)<sup>2</sup> FreeDOS

1. 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. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com/.

2. Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see https://aka.ms/ProEducation for Windows 10 Pro Education feature information.

## PROCESSOR

AMD Ryzen<sup>™</sup> 5 2500U APU with Radeon<sup>™</sup> Vega Graphics (2 GHz base frequency, up to 3.6 GHz burst frequency, 6 MB cache, 4 cores)<sup>3,4,5</sup> AMD Ryzen<sup>™</sup> 3 2200U APU with Radeon<sup>™</sup> Vega Graphics (2.5 GHz base frequency, up to 3.4 GHz burst frequency, 5 MB cache, 2 cores)<sup>3,4,5</sup> AMD A9-9425 APU with Radeon<sup>™</sup> R5 Graphics (3.1 GHz base frequency, up to 3.7 GHz burst frequency, 1 MB cache, 2 cores)<sup>3,4,5</sup> AMD A6-9225 APU with Radeon<sup>™</sup> R4 Graphics (2.6 GHz base frequency, up to 3 GHz burst frequency, 1 MB cache, 2 cores)<sup>3,4,5</sup> AMD A4-9125 APU with Radeon<sup>™</sup> R3 Graphics (2.3 GHz base frequency, up to 2.6 GHz burst frequency, 1 MB cache, 2 cores)<sup>3,4,5</sup>

#### **Processor Family**

AMD Ryzen<sup>™</sup> 5 Mobile Processors<sup>5</sup> AMD Ryzen<sup>™</sup> 3 Mobile Processors<sup>5</sup> 7th Generation AMD A9 APU processor (A9-9425)<sup>5</sup> 7th Generation AMD A6 APU processor (A6-9225)<sup>5</sup> 7th Generation AMD A4 APU processor (A4-9125)<sup>5</sup>

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

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



### Features

5. In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on http://www.support.hp.com.

## CHIPSET

Chipset is integrated with processor

## GRAPHICS

#### Integrated

AMD Radeon Vega 8 Mobile Graphics AMD Radeon Vega 3 Mobile Graphics AMD Radeon™ R5 Graphics AMD Radeon™ R4 Graphics AMD Radeon™ R3 Graphics

#### **Supports**

Support HD decode, DX12, HDMI 1.4b<sup>6</sup>

6. HDMI cable sold separately.

## DISPLAY

#### Internal

**Non-Touch** 

39.6 cm (15.6") diagonal HD SVA eDP anti-glare WLED-backlit slim, 220 cd/m², 67% sRGB (1366 x 768)<sup>7,8</sup> 39.6 cm (15.6") diagonal FHD SVA eDP anti-glare WLED-backlit slim, 220 cd/m², 67% sRGB (1920 x 1080)<sup>7,8</sup>

#### HDMI

Port supports resolutions up to 1920 x 1200 external resolution @60 Hz

7. HD content required to view HD images.8. Resolutions are dependent upon monitor capability, and resolution and color depth settings.

## **STORAGE AND DRIVES**

#### **Primary Storage**

1 TB 5400 rpm SATA<sup>9</sup> 500 GB 7200 rpm SATA<sup>9</sup> 500 GB 5400 rpm SATA<sup>9</sup>

#### Primary M.2 Storage

128 GB SATA-3 TLC Solid State Drive<sup>9</sup> 256 GB SATA-3 TLC Solid State Drive<sup>9</sup> 256 GB PCIe Gen3x4 NVMe Value Solid State Drive<sup>9</sup>



### Features

9. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10) is reserved for system recovery software.



### MEMORY

#### **Maximum Memory**

16 GB DDR4-2400 SDRAM<sup>10</sup> 8 GB DDR4-1866 SDRAM<sup>10</sup>

#### Memory

8 GB DDR4-2400 SDRAM (1 x 8 GB) 8 GB DDR4-2400 SDRAM (2 x 4 GB) <sup>10</sup> 4 GB DDR4-2400 SDRAM (1 x 4 GB) 8 GB DDR4-1866 SDRAM (1 x 8 GB) 4 GB DDR4-1866 SDRAM (1 x 4 GB)

#### **Memory Slots**

2 SODIMM (AMD Ryzen<sup>™</sup> Mobile Processors) DDR4 PC4 SODIMMS, system runs at 2400 (AMD Ryzen<sup>™</sup> Mobile Processors) 1 SODIMM (7th Generation AMD APU processor) Supports Dual Channel Memory<sup>11</sup> DDR4 PC4 SODIMMS, system runs at 1866 (7th Generation AMD APU processor) All slots are customer non-accessible / non-upgradeable

10. 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. 11.Dual channel memory support only for AMD Ryzen<sup>™</sup> APU processors.

### **NETWORKING/COMMUNICATIONS**

#### WLAN

Realtek 802.11ac (1x1) and Bluetooth® 4.2 Combo<sup>12</sup>

#### Miracast

Compatible with Miracast-certified devices<sup>13</sup>

#### Ethernet

Integrated 10/100/1000 GbE NIC

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

13. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.

## AUDIO/MULTIMEDIA

#### Audio 2 Integrated stereo speakers

**Camera** HP TrueVision HD Camera<sup>7,14</sup>

Webcam VGA webcam<sup>14</sup> Optical Drive



Optional DVD-Writer<sup>15,16</sup>

7. HD content required to view HD images.

14. Sold separately or as an optional feature.

15. Unit shipped with either "DVD+/-RW SuperMulti DL" or "DVD Writer Drive." Units undergoing repairs may be returned with a "DVD+/-RW SuperMulti DL."

16. HD-DVD disks cannot be played on this drive. No support for DVDRAM. Actual speeds may vary. Don't copy copyright protected materials. Double Layer discs can store more data than single layer discs; discs burned with this drive may not be compatible with many existing single-layer DVD drives and players.

## **KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS**

#### Keyboard

Keyboard - Full size textured island-style keyboard with numeric pad

#### **Pointing Device**

Touchpad with multi-touch gesture support

#### **Function Keys**

- F1 Open " How to get help in Windows 10" webpage
- F2 Brightness Down
- F3 Brightness Up
- F4 Display Switching
- F5 Blank
- F6 Mute
- F7 Volume Down
- F8 -Volume Up
- F9 Previous
- F10 Play/Pause
- F11 Next
- F12 Airplane mode

## SOFTWARE AND SECURITY

#### **Preinstalled Software**

HP JumpStart HP Documentation HP Setup Integrated OOBE HP SSRM HP Audio Switch HP Support Assistant<sup>17</sup> McAfee LiveSafe™

#### **Security Management**

TPM 2.0<sup>18</sup> Security lock slot (Lock sold separately)

17. HP Support Assistant requires Windows and Internet access.



18. Firmware TPM is version 2.0. Hardware TPM is v1.2, which is a subset of the TPM 2.0 specification version v0.89 as implemented by Intel Platform Trust Technology (PTT). TPM is version 2.0. Hardware TPM is v1.2, which is a subset of the TPM 2.0 specification version v0.89 as implemented by Intel Platform Trust Technology (PTT).

### POWER

**Power Supply** 65 W EM Smart AC adapter<sup>19</sup> 45 W Smart AC adapter<sup>19</sup>

**Primary Battery** 3-cell, 41 Wh Li-ion Battery<sup>20</sup>

**Power Cord** 1M (3.28 feet) length power cord<sup>19</sup>

Battery Weight 0.18 kg 0.39 lb

Availability may vary by country.
 Battery is internal and not replaceable by customer. Serviceable by warranty.

### **WEIGHTS & DIMENSIONS**

**Product Weight** Starting at 3.91 lbs<sup>21</sup> Starting at 1.78 kgs<sup>21</sup>

**Product Dimensions (w x d x h)** 14.8 x 9.68 x 0.89 in 37.6 x 24.6 x 2.25 cm

21. Weight will vary by configuration.

## **PORTS/SLOTS**

#### Ports

2 USB 3.1 Gen 1 1 USB 2.0 1 HDMI v1.4b<sup>6</sup> 1 RJ-45 1 AC power 1 Headphone/microphone combo jack

#### **Expansion Slots**

1 multi-format digital media reader



Supports SD, SDHC, SDXC

6. HDMI cable sold separately.

## **SERVICE AND SUPPORT**

HP Services offers 1-year limited warranties and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty except for Long Life batteries which will have same 1-year or 3-year limited warranty as the platform. Refer to http://www.hp.com/support/batterywarranty/ for additional battery information. Onsite service and extended coverage is also available. 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: http://www.hp.com/go/cpc.<sup>22</sup>

22. HP Care Packs are sold separately. 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 <a href="http://www.hp.com/go/cpc">http://www.hp.com/go/cpc</a>. 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.



## SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	
Nominal Operating Voltage	19.5 V
Average Operating Power	Win 10
Integrated graphics	6.87W
Max Operating Power	Discrete < 65W
	UMA < 45W
Temperature	
Operating	32° to 95° F (0° to 35° C) (not writing optical)
	41° to 95° F (5° to 35° C) (writing optical)
Non-operating	-4° to 140° F (-20° to 60° C)
Relative Humidity	
Operating	10% to 90%, non-condensing
Non-operating	5% to 95%
Shock	
Operating	40 G, 2 ms duration, half-sine
Non-operating	240 G, 2 ms duration, half-sine
Random Vibration	
Operating	1.043 grms
Non-operating	3.5 grms
Planned Industry Standard	
Certifications	
UL	Yes
CSA	No
FCC Compliance	Yes
ENERGY STAR <sup>®</sup>	Yes <sup>23</sup>
EPEAT	EPEAT Silver <sup>24</sup>
ICES	Yes
Australia /	Yes
NZ A-Tick Compliance	Yes
CCC	Yes
Japan VCCI Compliance	Yes
КС	Yes
BSMI	Yes
CE Marking Compliance	Yes
BNCI or BELUS	Yes
CIT	Yes
GOST	Yes
Saudi Arabian Compliance (ICCP)	Yes
SABS	Yes
$-12$ i optiguratione of the UU $1 \in [7, 7]$	T are ENERGY STARW corrected are identified as UD 7E

23. Configurations of the HP 255 G7 that are ENERGY STAR<sup>®</sup> certified are identified as HP 255 G7 ENERGY STAR on HP websites and on http://www.energystar.gov.



24. EPEAT® registered where applicable. EPEAT registration varies by country. See http://www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at http://www.hp.com/go/options.

## DISPLAYS

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

15.6" diagonal HD WLED AntiGlare (1366x768)	<b>Outline Dimensions</b> (W × H × D)	360 x 224.3 x 3.2 (max)	
slim-flat (3.2mm) SVA,	Active Area	344.2 x 193.5	
eDP	Weight	420 max.	
	Diagonal Size	15.6 (inch)	
	Thickness	3.2mm max	
	Interface	eDP 1.2 (1 lane)	
	Surface Treatment	Anti-glare (AG)	
	Touch Enabled	NO	
	Contrast Ratio	300:1 (typ)	
	Refresh Rate	60Hz	
	Brightness	220 nit typ	
	Digitiess	Format	1366 x 768 (HD)
	Pixel Resolution	Configuration	RGB
	Backlight	LED	NGD
	Color Gamut Coverage	45%	
	Color Depth	6 bits (Hi FRC)	
	Viewing Angle	SVA 40/40/15/30	
	viewing Aligle	SVA 40/40/15/50	
15.6" diagonal FHD WLED AntiGlare (1920x1080)	<b>Outline Dimensions</b> (W × H × D)	360.0 x 224.3mm max	
slim-flat (3.2mm) SVA,	Active Area	344.16 x 193.59	
eDP		511110/1155.55	
	Weight	370g max.	
	Weight Diagonal Size		
	-	370g max.	
	Diagonal Size	370g max. 15.6 (inch)	
	Diagonal Size Thickness	370g max. 15.6 (inch) 3.2mm max	
	Diagonal Size Thickness Interface	370g max. 15.6 (inch) 3.2mm max eDP 1.2	
	Diagonal Size Thickness Interface Surface Treatment	370g max. 15.6 (inch) 3.2mm max eDP 1.2 Anti-glare (AG)	
	Diagonal Size Thickness Interface Surface Treatment Touch Enabled	370g max. 15.6 (inch) 3.2mm max eDP 1.2 Anti-glare (AG) NO	
	Diagonal Size Thickness Interface Surface Treatment Touch Enabled Contrast Ratio	370g max. 15.6 (inch) 3.2mm max eDP 1.2 Anti-glare (AG) NO 300:1 (typ)	
	Diagonal Size Thickness Interface Surface Treatment Touch Enabled Contrast Ratio Refresh Rate	370g max. 15.6 (inch) 3.2mm max eDP 1.2 Anti-glare (AG) NO 300:1 (typ) 60Hz	1920 x 1080 (FHD)



Backlight	LED
Color Gamut Coverage	45%
Color Depth	6 bits + FRC
Viewing Angle	SVA 45/45/25/35

## **STORAGE AND DRIVES**

500 GB 5400 rpm SATA	Drive Weight	92g(0.20lb)
Dard Drive	Rotation speed	5400 rpm
	Cache Buffer	
		Up to 128MB
	Height	7.0 +/- 0.2 mm (0.28 +/008 in)
	Width	69.85 +/- 0.25 mm (2.750 +/- 0.010 in)
	Interface	ATA-8, SATA 3.0
	Transfer Rate	600 MB/s
	Seek Time	Single Track: 2 ~ 1.5 ms Average: 11 ~ 16 ms Maximum: 18 ~ 22 ms
	Logical Blocks	976,773,168
	Operating Temperature	0° to 60°C
	Security Features	ATA Security
	Features	S.M.A.R.T., NCQ, Ultra DMA
500 GB 7200 rpm SATA	Drive Weight	<95g (0.209lb)
Hard Drive	Rotation speed	500 GB
	Cache Buffer	6.8 +/- 0.2 mm (0.268 +/008 in)
	Height	7.0 +/- 0.2 mm (0.28 +/008 in)
	Width	69.85 +/- 0.25 mm (2.750 +/- 0.010 in)
	Interface	ATA-8, SATA 3.0
	Transfer Rate	600 MB/s
	Seek Time	Single Track: 2 ~ 1.5 ms Average: 11 ~ 13 ms Maximum: 18 ~ 22 ms
	Logical Blocks	976,773,168
	Operating Temperature	0° to 60°C
	Security Features	ATA Security
	Features	S.M.A.R.T., NCQ, Ultra DMA
1 TB 5400 rpm SATA	Drive Weight	90g(0.198lb)
Hard Drive	Rotation speed	5400 rpm
	Cache Buffer	Up to 128MB
		-r



## HP 255 G7 Notebook PC

# QuickSpecs

	Height	<7.2mm
	Width	69.85 +/- 0.25 mm (2.750 +/- 0.010 in)
	Interface	ATA-8, SATA 3.0
	Transfer Rate	600 MB/s
	Seek Time	Single Track: 2 ~ 1.5 ms Average: 11 ~ 16 ms Maximum: 18 ~ 22 ms
	Logical Blocks	976,773,168
	Operating Temperature	0° to 60°C
	Security Features	ATA Security
	Features	S.M.A.R.T., NCQ, Ultra DMA
128 GB 2280 M2 SATA-3	Drive Weight	0.02 lb (10 g)
TLC Solid State Drive	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	ATA-8, SATA 3.0
	Transfer Rate	550MB/s
	Logical Blocks	250,069,680
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Security Features	ATA Security
	Features	DIPM; TRIM; DEVSLP
256 GB 2280 M2 SATA-3	Drive Weight	0.02 lb (10 g)
TLC Solid State Drive	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	ATA-8, SATA 3.0
	Transfer Rate	550MB/s
	Logical Blocks	500,118,192
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Security Features	ATA Security
	Features	DIPM; TRIM; DEVSLP
256 GB 2280 M2 PCIe	Form Factor	M.2 2280
256 GB 2280 M2 PCIe NVMe Value Solid State	Form Factor Capacity	M.2 2280 256 GB
NVMe Value Solid State	Capacity	256 GB
NVMe Value Solid State	Capacity NAND Type	256 GB TLC
NVMe Value Solid State	Capacity NAND Type Height	256 GB TLC 0.09 in (2.3 mm)



Interface	PCIe NVMe Gen3x2
Maximum Sequential	Up To 1500 MB/s
Read	
Maximum Sequential	Up To 1000 MB/s
Write	
Logical Blocks	500,118,192
Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
Features	DIPM; TRIM; DEVSLP

## **NETWORKING/COMMUNICATIONS**

WLAN

Realtek RTL8821CE	Wireless LAN Standards	IEEE 802.11a
802.11ac 1x1 WiFi +		IEEE 802.11b
Bluetooth <sup>®</sup> 4.2 Combo		IEEE 802.11g
Adapter (MU-MIMO		IEEE 802.11n
supported)		IEEE 802.11ac
	Interoperability	Wi-Fi <sup>®</sup> certified
	Frequency Band	802.11b/g/n
		•2.402 – 2.482 GHz
		802.11a/n
		•4.9 – 4.95 GHz (Japan)
		•5.15 – 5.25 GHz
		•5.25 – 5.35 GHz
		•5.47 – 5.725 GHz
		•5.825 – 5.850 GHz
	Data Rates	<ul> <li>802.11b: 1, 2, 5.5, 11 Mbps</li> <li>802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps</li> <li>802.11n: MCS 0 ~ MCS 15, (20MHz, and 40MHz)</li> <li>802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, and 80MHz)</li> </ul>
	Modulation	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
	Security <sup>3</sup>	<ul> <li>IEEE and WiFi<sup>®</sup> compliant 64 / 128 bit WEP encryption for a/b/g mode only</li> <li>AES-CCMP: 128 bit in hardware</li> <li>802.1x authentication</li> <li>WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.</li> <li>WPA2 certification</li> <li>IEEE 802.11i</li> <li>Cisco Certified Extensions, all versions through CCX4 and CCX Lite</li> <li>WAPI</li> </ul>



## HP 255 G7 Notebook PC

# QuickSpecs

Network Architecture Models	Ad-hoc (Peer to F Infrastructure (A	Peer) ccess Point Required)	
Roaming	IEEE 802.11 compliant roaming between access points		
Output Power <sup>2</sup>	<ul> <li>802.11b</li> <li>802.11c</li> <li>802.11c</li> <li>802.11r</li> <li>802.11r</li> <li>802.11r</li> <li>802.11r</li> <li>802.11r</li> <li>802.11r</li> </ul>	2 +14dBm minimum g: +12dBm minimum a: +12dBm minimum n HT20(2.4GHz): +12dBm minimum n HT40(2.4GHz): +12dBm minimum n HT20(5GHz): +10dBm minimum n HT40(5GHz): +10dBm minimum ac VHT80(5GHz): +10dBm minimum	
Power Consumption	Transmit: 2.0 W (max) Receive: 1.6 W (max) Idle mode (PSP): 180 mW (WLAN Associated) Idle mode: 50 mW (WLAN unassociated) Connect Standby: 10 mW (WLAN+BT) Radio disabled: 8 mW		
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode		
Receiver Sensitivity <sup>3</sup>	802.11b, 1Mbps: -93.5dBm maximum 802.11b, 11Mbps: -84dBm maximum 802.11a/g, 6Mbps: -86dBm maximum 802.11a/g, 54Mbps: -72dBm maximum 802.11n, MCS07: -67dBm maximum 802.11n, MCS15: -64dBm maximum 802.11ac, MCS0: -84dBm maximum 802.11ac, MCS9: -59dBm maximum		
Antenna type	High efficiency antenna with spatial diversity, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications		
Form Factor	PCI-Express M.2 MiniCard		
Dimensions	Type 2230: 2.3 x 22.0 x 30.0 mm		
Weight	Туре 2230: 2.8g		
Operating Voltage	3.3v +/- 9%		
Temperature	Operating Non-operating	14° to 158° F (–10° to 70° C) –40° to 176° F (–40° to 80° C)	
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)	
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)	
LED Activity	LED Amber – Rac	lio OFF; LED White – Radio ON	
1. Check latest sof	tware/driver release	e for updates on supported security features.	

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 (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

HP Integrated Module with Bluetooth 4.0/4.1/4.2 Wireless Technology		
<b>Bluetooth Specification</b>	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)	
Signaling Data Rate	Legacy: 3 Mbps signaling data rate up to 2.17 Mbps BLE: 1 Mbps signaling data rate 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.	

### Power

HP 65 W Smart	<b>Dimensions</b> (H x W x D)	108 x 47 x 37.4mm	
AC adapter	Weight	250g	
	Input	100 to 240 VAC	
		Input Efficiency	88.0 % at 115 VAC and 89.0 % at 230VAC
		Input frequency range	50~ 60 Hz
		Input AC current	Max. 1.7 A at 90 VAC
	Output	Output power	65W
		DC output	19.5V
		Hold-up time	5ms at 115 VAC input
		Output current limit	The power supply shall limit the maximum steady state output current to an average current of 11 Amperes.
	Connector	4.5mm Barrel Type	
	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	The power supply can be operated at 5,000 m above sea level
		Humidity	The power supply shall withstand without degradation with 95% relative humidity, non-condensing, both operating and non-operating
	EMI and Safety Certifications	SELV;	th LVD and EMC directives s - IEC60950, EN60950, UL60950, Class1, 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.

45 W AC adapter	<b>Dimensions</b> (H × W × D)	95x40x26.5mm	
	Weight	200g	
	Input	100 to 240 VAC	
		Input Efficiency	87.8 % at 115 VAC and 88.5 % at 230VAC
		Input frequency range	50~ 60 Hz
		Input AC current	Max. 1.4 A at 90 VAC
	Output	Output power	45W
		DC output	19.5V
		Hold-up time	5ms at 115 VAC input
		Output current limit	The power supply shall limit the maximum steady state output current to an average current of 8 Amperes.
	Connector	4.5mm Barrel Type	
	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	The power supply can be operated at 5,000 m above sea level
		Humidity	The power supply shall withstand without degradation with 95% relative humidity, non-condensing, both operating and non- operating
	EMI and Safety Certifications		with LVD and EMC directives ds - IEC60950, EN60950, UL60950, Class1,
		Class B, CISPR22 Class B, CCC, NOM-	5, NORDICS, DENAN, EN55022 Class B, FCC 1 NYCE. 's at 25°C ambient condition.
HP 65 W Smart	<b>Dimensions</b> (H × W × D)	102x55x30mm	
AC adapter (EM)	Weight	270g	
-	Input	100 to 240 VAC	
	mpac	Input Efficiency	88.0 % at 115 VAC and 89.0 % at 230VAC
		Input frequency range	50~ 60 Hz
		Input AC current	Max. 1.7 A at 90 VAC
	Output	Output power	65W
		DC output	19.5V
		Hold-up time	5ms at 115 VAC input
		Output current limit	The power supply shall limit the maximum steady state output current to an average current of 11 Amperes.
	Connector	4.5mm Barrel Type	•



	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	The power supply can be operated at 5,000 m above sea level
		Humidity	The power supply shall withstand without degradation with 95% relative humidity, non-condensing, both operating and non- operating
	EMI and Safety Certifications		with LVD and EMC directives ds - IEC60950, EN60950, UL60950, Class1,
		-	5, NORDICS, DENAN, EN55022 Class B, FCC
		CISPR22 Class B, CCC, NOM- * MTBF - over 200,000 hour	1 NYCE. 's at 25°C ambient condition.
HP 3-cell Li-Ion	Dimensions (H x W x L)	6.0 x 186.85 x 90.2 mm (0	.236 x 7.35 x 3.55 inch)
(41 WHr)	Weight	0.18 kg (0.39 lb)	
	Cells/Type	3cell Lithium-Ion Polymer	cell / 515974
	Voltage	11.4V	
	Amp-hour capacity	3.6Ah	
	Watt-hour capacity	41Wh	
	Operating (Charging)	32° to 113° F (0° to 45° C)	
	Operating (Discharging)	14° to 122° F (-10° to 60°	C)
	Optional Travel Battery Available	No	
HP 3-cell Li-Ion	Dimensions (H x W x L)	6.0 x 186.85 x 90.2 mm (0	.236 x 7.35 x 3.55 inch)
(41 WHr)	Weight	0.19 kg (0.41 lb)	
	Cells/Type	3cell Lithium-Ion Prismation	c cell / 496080
	Voltage	11.55V	
	Amp-hour capacity	3.615Ah/3.63Ah	
	Watt-hour capacity	41Wh	
	Operating (Charging)	32° to 113° F (0° to 45° C)	
	Operating (Discharging)	14° to 122° F (-10° to 60°	C)
	Optional Travel Battery Available	No	



### **Country of Origin**

China



Category	Description	Part Number
Cases	HP Essential Top Load Case	H2W17AA#xxx
	HP Essential Backpack (up to 15.6")	H1D24AA
	HP Essential Messenger Case (up to 17.3")	H1D25AA
Docking	HP 3005PR USB3 Port Replicator	Y4H06AA
	HP USB Travel Dock	ТОКЗОАА
	HP USB-C Travel Dock	TOK29AA
	HP Monitor Stand	M9X76AA
Input/Output	HP Slim USB Keyboard and Mouse	ТбТ8ЗАА
	HP Slim Wireless Keyboard and Mouse	T6L04AA
	HP 3-Button USB Laser Mouse	H4B81AA
	HP USB Travel Mouse	G1K28AA
	HP Comfort Grip Wireless Mouse	H2L63AA
	HP Ultra Mobile Wireless Mouse	H6F25AA#xxx
	HP HDMI to DVI Adapter	F5A28AA
	HP Stereo USB Headset	T1A67AA
	HP Stereo 3.5mm Headset	T1A66AA
Power	HP 45W Smart AC Adapter 4.5mm	H6Y88AA#XXX
	HP 65W Smart AC Adapter	H6Y89AA#xxx
	HP 65W Slim AC Adapter	H6Y82AA#xxx
Storage	HP External USB Optical Drive	F2B56AA
Memory	HP 4GB 2666Mhz DDR4	4VN05AA
	HP 8GB 2666Mhz DDR4	4VN06AA
Displays	HP S140u 14-inch Portable Display	G8R65AA
	HP ProDisplay P223 21-5 inch Monitor	X7R61AA
	HP ProDisplay P232 23-inch Monitor	К7Х31АА
	HP ProDisplay P240va 23.8-inch Monitor	N3H14AA
	HP EliteDisplay S14 14-inch USB-C Portable Monitor	3HX46AA



## Summary of Changes

Date of change:	Version History:		Description of change:
January 2, 2019	From v1 to v2	Removed	Memory 16 GB

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