

### 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) | 4. SD Card slot             |
| 2. Optical drive (optional)                  | 5. Hard drive indicator LED |
| 3. USB 2.0 port                              | 6. Power indicator LED      |

### Overview

### AT A GLANCE

- Preinstalled with Windows 10 versions or FreeDOS
- Choice of AMD Ryzen™ processors
- 15.6" (39.6 cm) diagonal FHD/HD Anti-Glare Display
- Choice of Integrated AMD Radeon™ Vega 8 Mobile Graphics, AMD Radeon™ R4 Graphics, AMD Radeon™ R3 Graphics and AMD Radeon™ Graphics.
- 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
- Battery Life up to 10 hours and 30 minutes

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

---

### PRODUCT NAME

HP 255 G7 Notebook PC

### OPERATING SYSTEM

<b>Preinstalled OS</b>	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™ 5 2500U APU with Radeon™ Vega 8 Graphics (2 GHz base frequency, up to 3.6 GHz burst frequency, 6 MB cache, 4 cores)<sup>3,4,5,26</sup>

AMD Ryzen™ 3 2200U APU with Radeon™ Vega 3 Graphics (2.5 GHz base frequency, up to 3.4 GHz burst frequency, 5 MB cache, 2 cores)<sup>3,4,5,26</sup>

AMD A9-9425 APU with Radeon™ R5 Graphics (3.1 GHz base frequency, up to 3.7 GHz burst frequency, 1 MB cache, 2 cores)<sup>3,4,5,26</sup>

AMD A6-9225 APU with Radeon™ 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™ R3 Graphics (2.3 GHz base frequency, up to 2.6 GHz burst frequency, 1 MB cache, 2 cores)<sup>3,4,5</sup>

AMD Ryzen™ 5 3500U APU with Radeon™ Vega 8 Mobile Graphics (2.1 GHz base frequency, up to 3.7 GHz burst frequency, 4 MB cache, 4 cores)<sup>3,4,5</sup>

AMD Ryzen™ 3 3250U APU with Radeon™ Graphics (2.6 GHz base frequency, up to 3.5 GHz burst frequency, 1 MB cache, 2 cores)<sup>3,4,5</sup>

AMD Athlon™ Gold 3150U APU with Radeon™ Graphics (2.4 GHz base frequency, up to 3.3 GHz burst frequency, 1 MB cache, 2 cores)<sup>3,4,5</sup>

AMD Athlon™ Silver 3050U APU with Radeon™ Graphics (2.3 GHz base frequency, up to 3.2 GHz burst frequency, 1 MB cache, 2 cores)<sup>3,4,5</sup>

#### Processor Family

AMD Ryzen™ 5 Mobile Processors<sup>5</sup>

AMD Ryzen™ 3 Mobile Processors<sup>5,26</sup>

AMD Athlon™ Mobile Processors<sup>5</sup>

7th Generation AMD A9 APU processor (A9-9425)<sup>5,26</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.

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>.

26. Not available on Aug 1st 2020

---

## CHIPSET

Chipset is integrated with processor

---

## GRAPHICS

### Integrated

AMD Radeon Vega 8 Mobile Graphics

AMD Radeon Vega 3 Mobile Graphics<sup>26</sup>

AMD Radeon™ R5 Graphics<sup>26</sup>

AMD Radeon™ R4 Graphics

AMD Radeon™ R3 Graphics

### Supports

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

6. HDMI cable sold separately.

26. Not available on Aug 1st 2020

---

## DISPLAY

### Internal

#### Non-Touch

39.6 cm (15.6") diagonal HD SVA eDP anti-glare WLED-backlit slim, 220 cd/m<sup>2</sup>, 67% sRGB (1366 x 768)<sup>7,8,27</sup>

39.6 cm (15.6") diagonal FHD SVA eDP anti-glare WLED-backlit slim, 220 cd/m<sup>2</sup>, 67% sRGB (1920 x 1080)<sup>7,8,27</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.

27. Sold separately or as an optional feature.

---

## 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>  
512 GB PCIe Gen3x4 NVMe Value Solid State Drive<sup>9</sup>

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

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

### Memory Slots

2 SODIMM (AMD Ryzen™ Mobile Processors)  
DDR4 PC4 SODIMMS, system runs at 2400  
Supports Dual Channel Memory<sup>11</sup>  
Both slots are customer non-accessible / non-upgradeable

1 SODIMM (7<sup>th</sup> Generation AMD APU processor and Athlon™ Mobile Processors)  
DDR4 PC4 SODIMMS, system runs at 1866  
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™ APU processors.

## NETWORKING/COMMUNICATIONS

### WLAN

Realtek 802.11ac (1x1) and Bluetooth® 4.2 Combo<sup>12</sup>  
Realtek 802.11ac (2x2) Wi-Fi® and Bluetooth® 5.0 Combo (MU-MIMO supported)<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 DVD-RAM. 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 JumpStarts

HP Documentation

HP Setup Integrated OOBE

SSRM is provided via SSRU/SSRD format, also can be download from Cloud. But it's not default preinstalled in image.

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 Life

Up to 10 hours and 30 minutes hrs<sup>21</sup>

### Battery Weight

0.18 kg

0.39 lb

19. Availability may vary by country.

20. Battery is internal and not replaceable by customer. Serviceable by warranty.

21. Windows 10 MM14 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See <http://www.bapco.com> for additional details.



---

## WEIGHTS & DIMENSIONS

### Product Weight

Starting at 3.91 lbs<sup>22</sup>

Starting at 1.78 kgs<sup>22</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

22. 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. On-site 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>23</sup>

23. 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 <http://www.hp.com/go/cpc>. 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®	Yes <sup>24</sup>
EPEAT® 2019	Yes, Silver in U.S. <sup>25</sup>
ICES	Yes
Australia /	Yes
NZ A-Tick Compliance	Yes
CCC	Yes
Japan VCCI Compliance	Yes
KC	Yes
BSMI	Yes
CE Marking Compliance	Yes
BNCI or BELUS	Yes
CIT	Yes
GOST	Yes
Saudi Arabian Compliance (ICCP)	Yes
SABS	Yes
UKRSERTCOMPUTER	Yes

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

25. Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit <http://www.epeat.net> for more information.

## DISPLAYS

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

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

	<b>Configuration</b>	RGB
<b>Backlight</b>	LED	
<b>Color Gamut Coverage</b>	45%	
<b>Color Depth</b>	6 bits + FRC	
<b>Viewing Angle</b>	SVA 45/45/25/35	

### STORAGE AND DRIVES

#### 500 GB 5400 rpm SATA Hard Drive

<b>Drive Weight</b>	92g(0.20lb)
<b>Rotation speed</b>	5400 rpm
<b>Cache Buffer</b>	Up to 128MB
<b>Height</b>	7.0 +/- 0.2 mm (0.28 +/- .008 in)
<b>Width</b>	69.85 +/- 0.25 mm (2.750 +/- 0.010 in)
<b>Interface</b>	ATA-8, SATA 3.0
<b>Transfer Rate</b>	600 MB/s
<b>Seek Time</b>	Single Track: 1.5 ms Average: 13 ms Maximum: 32ms
<b>Logical Blocks</b>	976,773,168
<b>Operating Temperature</b>	0° to 60°C
<b>Security Features</b>	ATA Security
<b>Features</b>	S.M.A.R.T., NCQ, Ultra DMA

#### 500 GB 7200 rpm SATA Hard Drive

<b>Drive Weight</b>	<95g (0.209lb)
<b>Rotation speed</b>	7200 rpm
<b>Cache Buffer</b>	Up to 128 MB
<b>Height</b>	7.0 +/- 0.2 mm (0.28 +/- .008 in)
<b>Width</b>	69.85 +/- 0.25 mm (2.750 +/- 0.010 in)
<b>Interface</b>	ATA-8, SATA 3.0
<b>Transfer Rate</b>	600 MB/s
<b>Seek Time</b>	Single Track: 1.5 ms Average: 13 ms Maximum: 32 ms
<b>Logical Blocks</b>	976,773,168
<b>Operating Temperature</b>	0° to 60°C
<b>Security Features</b>	ATA Security
<b>Features</b>	S.M.A.R.T., NCQ, Ultra DMA

#### 1 TB 5400 rpm SATA Hard Drive

<b>Drive Weight</b>	90g(0.198lb)
<b>Rotation speed</b>	5400 rpm



<b>Cache Buffer</b>	Up to 128MB
<b>Height</b>	7.0 +/- 0.2 mm (0.28 +/- .008 in)
<b>Width</b>	69.85 +/- 0.25 mm (2.750 +/- 0.010 in)
<b>Interface</b>	ATA-8, SATA 3.0
<b>Transfer Rate</b>	600 MB/s
<b>Seek Time</b>	Single Track: 1.5 ms Average: 13 ms Maximum: 32 ms
<b>Logical Blocks</b>	976,773,168
<b>Operating Temperature</b>	0° to 60°C
<b>Security Features</b>	ATA Security
<b>Features</b>	S.M.A.R.T., NCQ, Ultra DMA

<b>128 GB 2280 M2 SATA-3 TLC Solid State Drive</b>	<b>Drive Weight</b>	0.02 lb (10 g)
	<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>Transfer Rate</b>	550MB/s
	<b>Logical Blocks</b>	250,069,680
	<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]
	<b>Security Features</b>	ATA Security
	<b>Features</b>	DIPM; TRIM; DEVSLP

<b>256 GB 2280 M2 SATA-3 TLC Solid State Drive</b>	<b>Drive Weight</b>	0.02 lb (10 g)
	<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>Transfer Rate</b>	550MB/s
	<b>Logical Blocks</b>	500,118,192
	<b>Operating Temperature</b>	32° to 158°F (0° to 70°C) [ambient temp]
	<b>Security Features</b>	ATA Security
	<b>Features</b>	DIPM; TRIM; DEVSLP

<b>256 GB 2280 M2 PCIe NVMe Value Solid State Drive</b>	<b>Form Factor</b>	M.2 2280
	<b>Capacity</b>	256 GB
	<b>NAND Type</b>	TLC
	<b>Height</b>	0.09 in (2.3 mm)

Width	0.87 in (22 mm)
Weight	0.01 lb (6 g) ~ 0.02 lb (10 g)
Interface	PCIe NVMe Gen3x2
Maximum Sequential Read	Up To 1500 MB/s
Maximum Sequential Write	Up To 900 MB/s
Logical Blocks	500,118,192
Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
Features	TRIM; L1.2

NETWORKING/COMMUNICATIONS

WLAN

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



<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
<b>Roaming</b>	IEEE 802.11 compliant roaming between access points
<b>Output Power<sup>2</sup></b>	<ul style="list-style-type: none"> <li>•802.11b: +14dBm minimum</li> <li>•802.11g: +12dBm minimum</li> <li>•802.11a: +12dBm minimum</li> <li>•802.11n HT20(2.4GHz): +12dBm minimum</li> <li>•802.11n HT40(2.4GHz): +12dBm minimum</li> <li>•802.11n HT20(5GHz): +10dBm minimum</li> <li>•802.11n HT40(5GHz): +10dBm minimum</li> <li>•802.11ac VHT80(5GHz): +10dBm minimum</li> </ul>
<b>Power Consumption</b>	<ul style="list-style-type: none"> <li>•Transmit: 2.0 W (max)</li> <li>•Receive: 1.6 W (max)</li> <li>•Idle mode (PSP): 180 mW (WLAN Associated)</li> <li>•Idle mode: 50 mW (WLAN unassociated)</li> <li>•Connect Standby: 10 mW (WLAN+BT)</li> <li>•Radio disabled: 8 mW</li> </ul>
<b>Power Management</b>	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
<b>Receiver Sensitivity<sup>4</sup></b>	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
<b>Antenna type</b>	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
<b>Form Factor</b>	PCI-Express M.2 MiniCard
<b>Dimensions</b>	Type 2230: 2.3 x 22.0 x 30.0 mm
<b>Weight</b>	Type 2230: 2.8g
<b>Operating Voltage</b>	3.3v +/- 9%
<b>Temperature</b>	Operating 14° to 158° F (-10° to 70° C) Non-operating -40° to 176° F (-40° to 80° C)
<b>Humidity</b>	Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing)
<b>Altitude</b>	Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	LED Amber – Radio OFF LED White – Radio ON



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

<b>Bluetooth Specification</b>	4.0/4.1/4.2 Compliant
<b>Frequency Band</b>	2402 to 2480 MHz
<b>Number of Available Channels</b>	Legacy: 0~79 (1 MHz/CH) BLE: 0~39 (2 MHz/CH)
<b>Signaling Data Rate</b>	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)
<b>Transmit Power</b>	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.

1. Wireless access point and internet service required and sold separately. Availability of public wireless access points limited.
2. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.
3. Check latest software/driver release for updates on supported security features.
4. 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).

### Realtek RTL8822CE 802.11ac 2x2 Wi-Fi® and Bluetooth® 5.0¹

<b>Wireless LAN Standards</b>	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
<b>Interoperability</b>	Wi-Fi CERTIFIED™
<b>Frequency Band</b>	•802.11b/g/n 2.402 – 2.482 GHz •802.11a/n/ac 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
<b>Data Rates</b>	•802.11b: 1, 2, 5.5, 11 Mbps

	<ul style="list-style-type: none"> <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, 80MHz &amp; 160MHz)</li> </ul>
<b>Modulation</b>	Direct Sequence Spread Spectrum BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM
<b>Security<sup>3</sup></b>	<ul style="list-style-type: none"> <li>•IEEE 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>•WAPI</li> </ul>
<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
<b>Roaming</b>	IEEE 802.11 compliant roaming between access points
<b>Output Power<sup>2</sup></b>	<ul style="list-style-type: none"> <li>• 802.11b: +18.5dBm minimum</li> <li>• 802.11g: +17.5dBm minimum</li> <li>• 802.11a: +18.5dBm minimum</li> <li>• 802.11n HT20(2.4GHz): +15.5dBm minimum</li> <li>• 802.11n HT40(2.4GHz): +14.5dBm minimum</li> <li>• 802.11n HT20(5GHz): +15.5dBm minimum</li> <li>• 802.11n HT40(5GHz): +14.5dBm minimum</li> <li>• 802.11ac VHT80(5GHz): +11.5dBm minimum</li> <li>• 802.11ac VHT160(5GHz): +11.5dBm minimum</li> </ul>
<b>Power Consumption</b>	<ul style="list-style-type: none"> <li>•Transmit mode 2.0 W</li> <li>•Receive mode 1.6 W</li> <li>•Idle mode (PSP) 180 mW (WLAN Associated)</li> <li>•Idle mode 50 mW (WLAN unassociated)</li> <li>•Connected Standby/Modern Standby: 10mW</li> <li>•Radio disabled 8 mW</li> </ul>
<b>Power Management</b>	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
<b>Receiver Sensitivity<sup>4</sup></b>	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
<b>Antenna type</b>	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
<b>Form Factor</b>	PCI-Express M.2 MiniCard with CNVi Interface
<b>Dimensions</b>	Type 2230: 2.3 x 22.0 x 30.0 mm Type 1216: 1.67 x 12.0 x 16.0 mm
<b>Weight</b>	Type 2230: 2.8 g Type 126: 1.3 g
<b>Operating Voltage</b>	3.3v +/- 9%
<b>Temperature</b>	Operating: 14° to 158° F (–10° to 70° C) Non-operating: –40° to 176° F (–40° to 80° C)
<b>Humidity</b>	Operating: 10% to 90% (non-condensing) Non-operating: 5% to 95% (non-condensing)
<b>Altitude</b>	Operating: 0 to 10,000 ft (3,048 m) Non-operating: 0 to 50,000 ft (15,240 m)
<b>LED Activity</b>	LED Amber – Radio OFF LED OFF – Radio ON

### HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0 Wireless Technology

<b>Bluetooth Specification</b>	4.0/4.1/4.2/5.0 Compliant
<b>Frequency Band</b>	2402 to 2480 MHz
<b>Number of Available Channels</b>	Legacy: 0~79 (1 MHz/CH) BLE: 0~39 (2 MHz/CH)
<b>Signaling Data Rate</b>	Legacy: 3 Mbps Signaling Data Rate 2.17 Mbps BLE: 1 Mbps Signaling Data Rate 0.2 Mbps <a href="#">1. Actual throughput may vary.</a>
	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)
<b>Transmit Power</b>	The Bluetooth component shall operate as a Class II Bluetooth device with a maximum transmit power of + 4 dBm for BR and EDR.
<b>Power Consumption</b>	Peak (Tx) 330 mW Peak (Rx) 230 mW Selective Suspend 17 mW
<b>Electrical Interface</b>	USB 2.0 compliant
<b>Bluetooth Software Supported</b>	Microsoft Windows Bluetooth Software
<b>Link Topology</b>	
<b>Power Management</b>	Microsoft Windows ACPI, and USB Bus Support
<b>Certifications</b>	FCC (47 CFR) Part 15C, Section 15.247 & 15.249
<b>Power Management Certifications</b>	ETS 300 328, ETS 300 826 Low Voltage Directive IEC950

Bluetooth Profiles  
Supported

- UL, CSA, and CE Mark
- BT4.1-ESR 5/6/7 Compliance
- LE Link Layer Ping
- LE Dual Mode
- LE Link Layer
- LE Low Duty Cycle Directed Advertising
- LE L2CAP Connection Oriented Channels
- Train Nudging & Interlaced Scan
- BT4.2 ESR08 Compliance
- LE Secure Connection- Basic/Full
- LE Privacy 1.2 –Link Layer Privacy
- LE Privacy 1.2 –Extended Scanner Filter Policies
- LE Data Packet Length Extension
- FAX Profile (FAX)
- Basic Imaging Profile (BIP)2
- Headset Profile (HSP)
- Hands Free Profile (HFP)
- Advanced Audio Distribution Profile (A2DP)

- 1. Wireless access point and internet service required and sold separately. Availability of public wireless access points limited.
- 2. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.
- 3. Check latest software/driver release for updates on supported security features.
- 4. 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).

POWER

HP 65 W Smart  
AC adapter

<b>Dimensions</b> (H x W x D)	108 x 47 x 37.4 mm	
<b>Weight</b>	250 g	
	Not including power cord. Power cord varies by country	
<b>Input</b>	100 to 240 VAC	
	<b>Input Efficiency</b>	88.0 % at 115 VAC and 89.0 % at 230VAC
	<b>Input frequency range</b>	50~ 60 Hz
	<b>Input AC current</b>	Max. 1.7 A at 90 VAC
<b>Output</b>	<b>Output power</b>	65 W
	<b>DC output</b>	19.5 V
	<b>Hold-up time</b>	5 ms at 115 VAC input
	<b>Output current limit</b>	The power supply shall limit the maximum steady state output current to an average current of 11 Amperes.
<b>Connector</b>	4.5 mm Barrel Type	



<b>45 W AC adapter</b>	<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>	The power supply can be operated at 5,000 m above sea level
		<b>Humidity</b>	The power supply shall withstand without degradation with 95% relative humidity, non-condensing, both operating and non-operating
	<b>EMI and Safety Certifications</b>	*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>Dimensions (H x W x D)</b>	95 x 40 x 26.5 mm	
	<b>Weight</b>	200 g	
		Not including power cord. Power cord varies by country	
	<b>Input</b>	100 to 240 VAC	
		<b>Input Efficiency</b>	87.8 % at 115 VAC and 88.5 % at 230VAC
		<b>Input frequency range</b>	50~ 60 Hz
		<b>Input AC current</b>	Max. 1.4 A at 90 VAC
	<b>Output</b>	<b>Output power</b>	45 W
		<b>DC output</b>	19.5 V
		<b>Hold-up time</b>	5ms at 115 VAC input
		<b>Output current limit</b>	The power supply shall limit the maximum steady state output current to an average current of 8 Amperes.
	<b>Connector</b>	4.5 mm Barrel Type	
	<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>	The power supply can be operated at 5,000 m above sea level
		<b>Humidity</b>	The power supply shall withstand without degradation with 95% relative humidity, non-condensing, both operating and non-operating
	<b>EMI and Safety Certifications</b>	*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 65 W Smart AC adapter (EM)

<b>Dimensions</b> (H x W x D)	102 x 55 x 30 mm	
<b>Weight</b>	270 g <i>Not including power cord. Power cord varies by country</i>	
<b>Input</b>	100 to 240 VAC	
<b>Output</b>	<b>Input Efficiency</b>	88.0 % at 115 VAC and 89.0 % at 230VAC
	<b>Input frequency range</b>	50~ 60 Hz
	<b>Input AC current</b>	Max. 1.7 A at 90 VAC
	<b>Output power</b>	65 W
	<b>DC output</b>	19.5 V
	<b>Hold-up time</b>	5ms at 115 VAC input
	<b>Output current limit</b>	The power supply shall limit the maximum steady state output current to an average current of 11 Amperes.
<b>Connector</b>	4.5 mm Barrel Type	
<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>	The power supply can be operated at 5,000 m above sea level
	<b>Humidity</b>	The power supply shall withstand without degradation with 95% relative humidity, non-condensing, both operating and non-operating
<b>EMI and Safety Certifications</b>	*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 3-cell Li-Ion (41 WHr)

<b>Dimensions (H x W x L)</b>	6.0 x 186.85 x 90.2 mm (0.236 x 7.35 x 3.55 inch)
<b>Weight</b>	0.18 kg (0.39 lb)
<b>Cells/Type</b>	3cell Lithium-Ion Polymer cell / 515974
<b>Voltage</b>	11.4V/11.34V
<b>Amp-hour capacity</b>	3.6Ah/3.62Ah
<b>Watt-hour capacity</b>	41 Wh
<b>Operating (Charging)</b>	32° to 113° F (0° to 45° C)
<b>Operating (Discharging)</b>	14° to 122° F (-10° to 60° C)
<b>Optional Travel Battery Available</b>	No
<b>Dimensions (H x W x L)</b>	6.0 x 186.85 x 90.2 mm (0.236 x 7.35 x 3.55 inch)

HP 3-cell Li-Ion  
(41 WHr)

Weight	0.19 kg (0.41 lb)
Cells/Type	3cell Lithium-Ion Prismatic 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
<b>Cases</b>	HP Essential Top Load Case	H2W17AA#xxx
	HP Essential Backpack (up to 15.6")	H1D24AA
	HP Essential Messenger Case (up to 17.3")	H1D25AA
<b>Docking</b>	HP 3005PR USB3 Port Replicator	Y4H06AA
	HP USB Travel Dock	T0K30AA
	HP Monitor Stand	M9X76AA
<b>Input/Output</b>	HP Slim USB Keyboard and Mouse	T6T83AA
	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
<b>Power</b>	HP 45W Smart AC Adapter 4.5mm	H6Y88AA#XXX
	HP 65W Smart AC Adapter	H6Y89AA#xxx
	HP 65W Slim AC Adapter	H6Y82AA#xxx
<b>Storage</b>	HP External USB Optical Drive	F2B56AA
<b>Memory</b>	HP 4GB 2666Mhz DDR4	4VN05AA
	HP 8GB 2666Mhz DDR4	4VN06AA
<b>Displays</b>	HP S140u 14-inch Portable Display	G8R65AA
	HP ProDisplay P223 21-5 inch Monitor	X7R61AA
	HP ProDisplay P232 23-inch Monitor	K7X31AA
	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:
	From v1 to v2		

©Copyright 2020 HP Development Company, L.P.

The only warranties for HP products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

AMD is a trademark of Advanced Micro Devices, Inc. USB Type-C™ and USB-C™ are trademarks of USB Implementers Forum. SD, SDHC and SDXC are registered trademarks of SD-3C in the United States, other countries or both. ENERGY STAR is a registered trademark of the U.S. Environmental Protection Agency. Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. Wi-Fi® and Wi-Fi CERTIFIED™ are trademarks or registered trademarks of Wi-Fi Alliance®. All other trademarks are the property of their respective owners.