# QuickSpecs

### **Overview**

### HP 255 G8 Notebook PC



#### Left

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

- 7. Power indicator LED
- 8. Hard drive indicator LED
- 9. SuperSpeed USB Type-C<sup>®</sup> 5Gbps signaling rate port (Data Transfer Only)
- 10. HDMI Port (Cable sold separately)
- 11. RJ-45 / Ethernet port
- 12. Power button



<sup>1.</sup> SuperSpeed USB 20Gbps is not available.

### **Overview**



#### Right

- 1. AC Smart Pin Adapter Plug
- 2. SuperSpeed USB Type-A 5Gbps signaling rate port (USB 3.2 Gen 1)
- 3. SuperSpeed USB Type-A 5Gbps signaling rate port (USB 3.2 Gen 1)
- 4. SD Card slot
- 5. Fingerprint Reader (Select models)
- 1. SuperSpeed USB 20Gbps is not available.



# QuickSpecs

### Overview

### At a Glance

- Windows 11 Pro, other Windows OS, or FreeDOS preinstalled
- A new compact narrow bezel design with thinner & lighter chassis
- Choice of AMD Ryzen<sup>™</sup>, Athlon<sup>™</sup> and AMD APU processors
- Choice of 39.62 cm (15.6") diagonal HD and FHD SVA Anti-Glare WLED or FHD IPS Anti-Glare WLED
- Choice of Integrated AMD Radeon<sup>™</sup> Vega Graphics or Radeon<sup>™</sup> Graphics
- Security features including Firmware TPM 2.0 and Fingerprint Reader (selected models)
- Weight starting at 3.84 lbs (1.74 kgs)
- MM18 Battery life up to 10 hours and 15 minutes <sup>1</sup>
- Wireless LAN (WLAN) up to 802.11ac or 802.11ax to keep you connected
- One SuperSpeed USB Type-C<sup>®</sup> 5Gbps signaling rate<sup>2</sup> (Data Transfer Only), Two SuperSpeed USB Type-A 5Gbps signaling rate<sup>2</sup> (USB 3.2 Gen 1)
- Choice of Solid State Drives up to 1 TB and Hard Drive up to 2 TB
- Dual channel DDR4 SODIMM memory up to 16 GB
- HP webcam with dual digital microphone and HD (supporting WDR- Wide Dynamic Range) or VGA camera

1. Windows 10 MM18 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 <a href="http://www.bapco.com">http://www.bapco.com</a> for additional details. 2. SuperSpeed USB Type-A 5Gbps signaling rate (USB 3.2 Gen 1)

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



### **PRODUCT NAME**

HP 255 G8 Notebook PC

#### **OPERATING SYSTEMS**

Preinstalled

Windows 11 Pro<sup>2</sup> Windows 11 Pro Education<sup>2</sup> Windows 11 Home – HP recommends Windows 11 Pro for business<sup>2</sup> Windows 11 Home Single Language – HP recommends Windows 11 Pro for business<sup>2</sup> Windows 10 Pro<sup>1,2</sup> Windows 10 Pro Education<sup>1,2</sup> Windows 10 Home – HP recommends Windows 11 Pro for business<sup>1,2</sup> Windows 10 Home Single Language – HP recommends Windows 11 Pro for business<sup>1,2</sup> FreeDOS

1. Device comes with Windows 10 and a free Windows 11 upgrade or may be preloaded with Windows 11. Upgrade timing may vary by device. Features and app availability may vary by region. Certain features require specific hardware (see Windows 11 Specifications).

2. 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 is automatically updated and enabled. High speed internet and Microsoft account required. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com.

#### PROCESSORS

AMD Ryzen<sup>™</sup> 5 3500U APU with Radeon<sup>™</sup> 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<sup>™</sup> 3 3300U APU with Radeon<sup>™</sup> Vega 6 Graphics (2.1 GHz base frequency, up to 3.5 GHz burst frequency,

4 MB cache, 4 cores) <sup>3,4,5</sup>

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

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

AMD 3020e APU with Radeon<sup>M</sup> Graphics (1.2 GHz base frequency, up to 2.6 GHz burst frequency, 4 MB cache, 2 cores) <sup>3,4,5</sup> AMD Ryzen<sup>M</sup> 3 5300U APU with AMD Radeon<sup>M</sup> Graphics (2.6 GHz base frequency, up to 3.8 GHz burst frequency, 4 MB cache, 4 cores) <sup>3,4,5</sup>

AMD Ryzen<sup>™</sup> 5 5500U APU with AMD Radeon<sup>™</sup> Graphics (2.1 GHz base frequency, up to 4.0 GHz burst frequency, 8 MB cache, 6 cores) <sup>3,4,5</sup>

AMD Ryzen<sup>™</sup> 7 5700U APU with AMD Radeon<sup>™</sup> Graphics (1.8 GHz base frequency, up to 4.3 GHz burst frequency, 8MB cache, 8cores) <sup>3,4,5</sup>

AMD Ryzen<sup>™</sup> 3 3200U APU with Radeon<sup>™</sup> Vega 3 Graphics (2.6 GHz base frequency, up to 3.5 GHz burst frequency, 4MB cache, 2 cores) <sup>3,4,5</sup>

#### **Processors Family**

AMD Ryzen<sup>™</sup> 7 Mobile Processors <sup>6</sup> AMD Ryzen<sup>™</sup> 5 Mobile Processors <sup>6</sup> AMD Ryzen<sup>™</sup> 3 Mobile Processors <sup>6</sup> AMD Athlon<sup>™</sup> Mobile Processors <sup>6</sup>



AMD APU processor <sup>6</sup>

Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
 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.
 AMD Max Boost frequency performance varies depending on hardware, software and overall system configuration.
 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<sup>™</sup> Vega 8 Mobile Graphics AMD Radeon<sup>™</sup> Vega 6 Mobile Graphics AMD Radeon<sup>™</sup> Vega 3 Mobile Graphics AMD Radeon<sup>™</sup> Graphics

Supports

Support HD decode, DX12, HDMI 1.4b<sup>7</sup>

7. HD content required to view HD images.

#### DISPLAYS

#### Non-Touch

39.6 cm (15.6") diagonal, HD (1366 x 768), SVA, Anti-Glare WLED, 250nits, eDP micro-edge, 45% NTSC <sup>7,8,9</sup> 39.6 cm (15.6") diagonal, FHD (1920 x 1080), IPS, Anti-Glare WLED, 250nits eDP micro-edge, 45% NTSC <sup>7,8,9</sup> 39.6 cm (15.6") diagonal, FHD (1920 x 1080), SVA, Anti-Glare WLED, 250nits eDP micro-edge, 45% NTSC <sup>7,8,9</sup>

#### HDMI

Port supports resolutions up to 1920 x 1080 external resolution @60 Hz

7. HD content required to view HD images.

8. Sold separately or as an optional feature.

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



### **STORAGE AND DRIVES**

#### **Primary Storage**

2 TB 5400 rpm SATA <sup>10</sup> 1 TB 5400 rpm SATA <sup>10</sup> 500 GB 7200 rpm SATA <sup>10</sup> 500 GB 5400 rpm SATA <sup>10</sup>

#### Primary M.2 Storage

128 GB M.2 SATA-3 TLC Solid State Drive <sup>10</sup> 128 GB PCle<sup>®</sup> NVMe<sup>™</sup> TLC Solid State Drive <sup>10</sup> 256 GB PCle<sup>®</sup> NVMe<sup>™</sup> M.2 QLC Solid State Drive <sup>10</sup> 512 GB PCle<sup>®</sup> NVMe<sup>™</sup> M.2 QLC Solid State Drive <sup>10</sup> 1TB PCle<sup>®</sup> NVMe<sup>™</sup> M.2 QLC Solid State Drive <sup>10</sup>

#### **Dual Storage**

128 GB M.2 SATA-3 TLC Solid State Drive + 1TB 5400rpm SATA <sup>10</sup> 128 GB PCle<sup>®</sup> NVMe<sup>™</sup> TLC Solid State Drive + 1 TB 5400rpm SATA <sup>10</sup> 256 GB PCle<sup>®</sup> NVMe<sup>™</sup> M.2 QLC Solid State Drive + 1TB 5400rpm SATA <sup>10</sup>

10. 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 DDR4-3200 SDRAM<sup>11</sup>

#### Memory

```
16 GB DDR4-3200 SDRAM (2 X 8 GB) <sup>11</sup>

16 GB DDR4-2400 SDRAM (2 X 8 GB) <sup>11</sup>

12 GB DDR4-3200 SDRAM (4 GB (1 x 4GB) and 8 GB (1 x 8 GB)) <sup>11</sup>

12 GB DDR4-2400 SDRAM (4 GB (1 x 4GB) and 8 GB (1 x 8 GB)) <sup>11</sup>

8 GB DDR4-3200 SDRAM (2 x 4 GB) <sup>11</sup>

8 GB DDR4-2400 SDRAM (2 x 4 GB) <sup>11</sup>

8 GB DDR4-3200 SDRAM (1 x 8 GB) <sup>11</sup>

8 GB DDR4-2400 SDRAM (1 x 8 GB) <sup>11</sup>

8 GB DDR4-2400 SDRAM (1 x 4 GB) <sup>11</sup>

4 GB DDR4-3200 SDRAM (1 x 4 GB) <sup>11</sup>

4 GB DDR4-2400 SDRAM (1 x 4 GB) <sup>11</sup>
```

#### **Memory Slots**

2 SODIMM (Ryzen3/5/7 speed runs up to 2400) Support Dual Channel Memory

1 SODIMM (Athlon Gold/Silver processors) Support Single Channel Memory

NOTE: All slots are customer non-accessible / non-upgradeable

11. 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**

#### WLAN

Realtek RTL8822CE 802.11ac 2x2 Wi-Fi<sup>®</sup> + Bluetooth<sup>®</sup> 5.0 Wireless Card <sup>12</sup> Realtek RTL8822CE 802.11a/b/g/n/ac (1x1) Wi-Fi<sup>®</sup> with Bluetooth<sup>®</sup> 5.0 Wireless Card <sup>12</sup> Realtek Wi-Fi CERTIFIED 6™ (2x2) and Bluetooth<sup>®</sup> 5.2 Wireless Card <sup>13</sup>

#### Miracast

Compatible with Miracast-certified devices (For Win10)<sup>14</sup>

#### Ethernet

Realtek 10/100/1000 GbE NIC 15

12. Wi-Fi supporting gigabit speeds (802.11ac) is achievable when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 160MHz channels.

13. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11ax) is backwards compatible with prior 802.11 specs.

14. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming. 15. 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.

#### AUDIO/MULTIMEDIA

#### Audio

2 Integrated stereo speakers Integrated dual digital microphone

**Camera** HP TrueVision HD Camera <sup>7,8</sup>

#### Webcam

VGA webcam <sup>8</sup>

7. HD content required to view HD images.

8. Sold separately or as an optional feature.



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

#### Keyboard

Full Size Textured island-style Keyboard

#### **Pointing Device**

Touchpad with multi-touch gesture support (PTP certified)

#### **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 Software

HP Support Assistant <sup>16</sup> Native Miracast Support <sup>17</sup> HP documentation HP Setup Integrated OOBE HP SSRM HP Audio Switch HP JumpStarts McAfee LiveSafe<sup>™ 15</sup> Xerox<sup>®</sup> DocuShare<sup>®</sup> 30 day free trial offer<sup>26</sup> HP QuickDrop HP Smart Support <sup>27</sup>

#### Security Management

Firmware TPM 2.0<sup>18</sup> Fingerprint reader (Select models)

#### 15. 30 days free trial

16. HP Support Assistant requires Windows and Internet access.

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

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

26. Simply sign up and start using Xerox<sup>®</sup> DocuShare<sup>®</sup> Go. No credit card. No obligation. Data will become unavailable unless a subscription is entered before the end of the 30-day free trial period. See visit http://www.xerox.com/docusharego for details.

27. HP Smart Support is available to commercial customers through your HP Service Representative and HP Factory Configuration Services; or it can be downloaded at: <a href="http://www.hp.com/smart-support">http://www.hp.com/smart-support</a>. HP Smart Support automatically collects the telemetry necessary upon initial boot of the product to deliver device-level configuration data and health insights.

#### POWER

#### **Power Supply**

HP Smart 65 W EM External AC power adapter <sup>19</sup> HP Smart 45 W External AC power adapter <sup>19</sup>

**Primary Battery** HP Long Life 3-cell, 41 Wh Li-ion (Polymer) <sup>20, 28</sup>

Power Cord 1m (3.28 feet) length power cord

MM18 Battery life Up to 10 hours and 15 minutes <sup>21</sup>

**Battery Weight** 

0.19 kg 0.42 lb



19. Availability may vary by country.

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

21. Windows 10 MM18 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.

28. Actual battery Watt-hours (Wh) will vary from design capacity. Battery capacity will naturally decrease with shelf life, time, usage, environment, temperature, system configuration, loaded apps, features, power management settings and other factors.

#### **WEIGHTS & DIMENSIONS**

#### Product Weight <sup>22</sup> Starting at 3.84 lb

Starting at 1.74 kg

#### Product Dimensions (w x d x h)

14.09 x 9.53 x 0.78 in 35.8 x 24.2 x 1.99 cm

22. Weight will vary by configuration. Does not include power adapter.

### **PORTS/SLOTS**

#### Ports

2 SuperSpeed USB Type-A 5Gbps signaling rate<sup>23</sup> (USB 3.2 Gen 1)
1 SuperSpeed USB Type-C<sup>®</sup> 5Gbps signaling rate<sup>23</sup> (Supports data transfer only and does not support charging or external monitors)
1 HDMI v1.4b<sup>24</sup>
1 RJ-45
1 AC Power
1 Headphone/microphone combo jack

#### **Expansion Slots**

Support SD/SDHC/SDXC 1 Multi-format digital media reader

23. SuperSpeed USB 20Gbps is not available

24. HDMI cable sold separately.



### SERVICE AND SUPPORT

1-year limited warranty and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty. 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>25</sup>

25. 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	4.1W
Integrated graphics	PCO - AMD Radeon Vega 8 Graphics Dali - AMD Radeon Graphics
Discrete Graphics	N/A (Switchable graphics design)
Max Operating Power	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	10% to 00% non condensing
Operating	10% to 90%, non-condensing
Non-operating	5% to 95%
Shock	40 C 2 ms duration half since
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
Altitude (unpressurized)	5.5 gillis
Operating	-15 m to 3048 m (-50 ft to 10000 ft)
Non-operating	-15 m to 12192 m (-50 ft to 40000 ft)
Planned Industry Standard Certifications	
UL	Yes
CSA	No
FCC Compliance	Yes
ENERGY STAR <sup>®</sup>	Yes
EPEAT®	Yes
ICES	Yes
Australia /	Yes
NZ A – Tick Compliance	Yes
CCC	Yes
Japan VCCI Compliance	Yes
КС	Yes
BSMI	Yes
CE Marketing Compliance	Yes
BNCI or BELUS	Yes
CIT	Yes
GOST	Yes
Saudi Arabian Compliance (ICCP)	Yes
SABS	Yes
UKRSERTCOMPUTER	Yes



### DISPLAYS

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

Panel LCD 15.6 inch FHD (1920x1080) Anti-Giare WLED UWVA 45percent cg ZSOnits eDP 1.2 w/o PSR slim NWBZOutline Dimensions (W x H x D) Active Area Weight Diagonal Size Surface Treatment Touch enabled Outline Dimensions (W x H x D)350.96 x 216.75 (max.) x 3.2 (max.) mmActive Area Weight Diagonal Size Surface TreatmentACG Touch enabled Outline Dimensions (W x H x D)350.96 x 216.75 (max.) x 3.2 (max.) mmActive Area Weight Diagonal Size Surface TreatmentACG Touch enabled Outline Dimensions (W x H x D)None Gontrast Ratio Gont Stream ConfigurationPanel LCD 15.6-in FHD (1920x1080) Anti-Giare WLED SVA 45percent cg ZSOnits eDP 1.2 w/o PSR LCD Mode ZSOnits eDP 1.2 w/o PSR NWBZ ultraslimOutline Dimensions (W x H x D) Sto.96 x 216.75 (max.) x 3.2 (max.) mmPanel LCD 15.6-in FHD (1920x1080) Anti-Giare WLED SVA 45percent cg ZSOnits eDP 1.2 w/o PSR NWBZ ultraslimOutline Dimensions (W x H x D) Active Area Weight Diagonal Size Surface Treatment AG Touch enabled None Contrast Ratio Configuration350.96 x 216.75 (max.) x 3.2 (max.) mmPanel LCD 15.6-in FHD (1920x1080) Anti-Giare WLED SVA 45percent cg ZSOnits eDP 1.2 w/o PSR NWBZ ultraslimOutline Dimensions (W x H x D) Active Area Weight Diagonal Size Surface Treatment AG Touch enabled None Contrast Ratio Configuration Configuration350.96 x 216.75 (max.) x 3.2 (max.) mmRefresh Rate Brightness Contrast Ratio Configuration300:1 (typ.) Refresh Rate CoHz Brightness Contrast Ratio Configuration300:1 (typ.) Refresh Rate CoHz Brightness ConfigurationPIN PIN P			
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PPI142Viewing AngleUWVA 85/85/85Panel LCD 15.6-in FHD (1920x1080) Anti-Glare WLED SVA 45percent cg 250nits eDP 1.2 w/o PSR NWBZ ultraslimOutline Dimensions (W x H x D) Active Area Weight350.96 x 216.75 (max.) x 3.2 (max.) mmActive Area Weight344.16 x 193.59 mmJagonal Size Surface Treatment15.6"Surface Treatment Contrast RatioAGTouch enabled BrightnessNoneContrast Ratio Brightness300:1 (typ.)Refresh Rate Brightness60HzBrightness Pixel Resolution250nits typ.Pixel Resolution Configuration1920 x 1080 (FHD)Interface LCD Mode PITNPPI142		Interface	eDP 1.2 w/o PSR
Viewing AngleUWVA 85/85/85Panel LCD 15.6-in FHD (1920x1080) Anti-Glare WLED SVA 45percent cg 250nits eDP 1.2 w/o PSR NWBZ ultraslimOutline Dimensions (W x H x D) $350.96 \times 216.75 (max.) \times 3.2 (max.) mm$ Active Area Weight $344.16 \times 193.59 mm$ Diagonal Size $360g max.$ Diagonal Size $15.6"$ Surface TreatmentAGTouch enabledNoneContrast Ratio $300:1 (typ.)$ Refresh Rate $60Hz$ Brightness $250nits typ.$ Pixel Resolution $250nits typ.$ Pixel Resolution $1920 \times 1080$ (FHD)Interface $eDP 1.2 w/o PSR$ LCD ModeTNPPI $142$		LCD Mode	IPS/PLS/AHVA
Panel LCD 15.6-in FHD (1920x1080) Anti-Glare WLED SVA 45percent cg 250nits eDP 1.2 w/o PSR NWBZ ultraslimOutline Dimensions (W x H x D)350.96 x 216.75 (max.) x 3.2 (max.) mmActive Area344.16 x 193.59 mmWeight360g max.Diagonal Size15.6"Surface TreatmentAGTouch enabledNoneContrast Ratio300:1 (typ.)Refresh Rate60HzBrightness250nits typ.Pixel Resolution1920 x 1080 (FHD)InterfaceeDP 1.2 w/o PSRLCD ModeTNPPI142		PPI	142
(1920x1080) Anti-Glare WLED SVA 45percent cg 250nits eDP 1.2 w/o PSR NWBZ ultraslimActive Area344.16 x 193.59 mmDiagonal Size360g max.Diagonal Size15.6"Surface TreatmentAGTouch enabledNoneContrast Ratio300:1 (typ.)Refresh Rate60HzBrightness250nits typ.Pixel Resolution1920 x 1080 (FHD)InterfaceeDP 1.2 w/o PSRLCD ModeTNPPI142		Viewing Angle	UWVA 85/85/85/85
(1920x1080) Anti-Glare WLED SVA 45percent cg 250nits eDP 1.2 w/o PSR NWBZ ultraslimActive Area344.16 x 193.59 mmDiagonal Size360g max.Diagonal Size15.6"Surface TreatmentAGTouch enabledNoneContrast Ratio300:1 (typ.)Refresh Rate60HzBrightness250nits typ.Pixel Resolution1920 x 1080 (FHD)InterfaceeDP 1.2 w/o PSRLCD ModeTNPPI142	Panel LCD 15.6-in FHD	Outline Dimensions (W x H x D)	350.96 x 216.75 (max.) x 3.2 (max.) mm
WLED SVA 45percent cg 250nits eDP 1.2 w/o PSRWeight360g max.NWBZ ultraslimDiagonal Size15.6"Surface TreatmentAGTouch enabledNoneContrast Ratio300:1 (typ.)Refresh Rate60HzBrightness250nits typ.Pixel Resolution1920 x 1080 (FHD)InterfaceeDP 1.2 w/o PSRLCD ModeTNPPI142			
ZSUNICS EDF 1.2 w/0 FSRDiagonal Size15.6"NWBZ ultraslimDiagonal Size15.6"Surface TreatmentAGTouch enabledNoneContrast Ratio300:1 (typ.)Refresh Rate60HzBrightness250nits typ.Pixel Resolution1920 x 1080 (FHD)InterfaceeDP 1.2 w/o PSRLCD ModeTNPPI142			
Surface Treatment AG Touch enabled None Contrast Ratio 300:1 (typ.) Refresh Rate 60Hz Brightness 250nits typ. Pixel Resolution Pixel Resolution 1920 x 1080 (FHD) Interface eDP 1.2 w/o PSR LCD Mode TN PPI 142		-	-
Touch enabledNoneContrast Ratio300:1 (typ.)Refresh Rate60HzBrightness250nits typ.Pixel Resolution1920 x 1080 (FHD)InterfaceeDP 1.2 w/o PSRLCD ModeTNPPI142		-	
Contrast Ratio300:1 (typ.)Refresh Rate60HzBrightness250nits typ.Pixel Resolution1920 x 1080 (FHD)InterfaceeDP 1.2 w/o PSRLCD ModeTNPPI142			
Refresh Rate60HzBrightness250nits typ.Pixel Resolution1920 x 1080 (FHD)InterfaceEDP 1.2 w/o PSRLCD ModeTNPPI142			
Brightness250nits typ.Pixel Resolution1920 x 1080 (FHD)Configuration1920 x 1080 (FHD)InterfaceeDP 1.2 w/o PSRLCD ModeTNPPI142			
Pixel ResolutionConfiguration1920 x 1080 (FHD)InterfaceeDP 1.2 w/o PSRLCD ModeTNPPI142			
Configuration1920 x 1080 (FHD)InterfaceeDP 1.2 w/o PSRLCD ModeTNPPI142			
InterfaceeDP 1.2 w/o PSRLCD ModeTNPPI142		•	z sonits typ.
LCD Mode TN PPI 142		Pixel Resolution	
<b>PPI</b> 142		Pixel Resolution Configuration	1920 x 1080 (FHD)
		Pixel Resolution Configuration Interface	1920 x 1080 (FHD) eDP 1.2 w/o PSR
Viewing Angle UWVA 45/45/15/35		Pixel Resolution Configuration Interface LCD Mode	1920 x 1080 (FHD) eDP 1.2 w/o PSR TN
		Pixel Resolution Configuration Interface LCD Mode PPI	1920 x 1080 (FHD) eDP 1.2 w/o PSR TN 142



Panel LCD 15.6-in HD (1366x768) Anti-Glare WLED SVA 45percent cg 250nits eDP 1.2 w/o PSR NWBZ ultraslim	Outline Dimensions (W x H x D) Active Area Weight Diagonal Size Surface Treatment Touch enabled Contrast Ratio Refresh Rate Brightness Pixel Resolution	351.03 x 216.75 (max.) x 3.2 (max.) mm 344.23 x 193.54 mm 360g max. 15.6" AG None 300:1 (typ.) 60Hz 250nits typ.
	Configuration Interface LCD Mode PPI Viewing Angle	1366 x 768 (HD) eDP 1.2 w/o PSR TN 101 UWVA 40/40/15/30



### **STORAGE AND DRIVES\***

\* 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.

reserved for system recovery	Software.	
HDD 1TB 5400RPM 7mm SATA (HDD 1TB 5400RPM 2.5in)	Drive Weight	0.21 lbs (95 g)
	Capacity	1TB
	Height	0.28 in (7 mm)
	Width	2.75 in (69.85 mm)
	Interface	ATA-8, SATA 3.0
	Performance	
	Maximum Sequential Read	Up to 100 MB/s
	Maximum Sequential Write	Up to 100 MB/s
	Logical Blocks	1,953,525,168
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
	Features	S.M.A.R.T., NCQ, Ultra DMA
HDD 2TB 5400RPM 7mm	Drive Weight	0.21 lbs (95 g)
SATA 2.5in (HDD 2TB	Capacity	2ТВ
5400RPM SATA 2.5in 2nd)	Height	Up to 128MB
	Width	0.28 in (7 mm)
	Interface	2.75 in (69.85 mm)
	Performance	
	Maximum Sequential Read	Up to 100 MB/s
	Maximum Sequential Write	Up to 100 MB/s
	Logical Blocks	3,907,029,168
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
	Features	S.M.A.R.T., NCQ, Ultra DMA
HDD 500GB 5400RPM 7mm	Drive Weight	0.21 lbs (95 g)
SATA	Capacity	500GB
	Height	0.28 in (7 mm)
	Width	2.75 in (69.85 mm)
	Interface	ATA-8, SATA 3.0
	Performance	
	Maximum Sequential Read	Up to 100 MB/s
	Maximum Sequential Write	Up to 100 MB/s
	Logical Blocks	976,773,168
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
	Features	S.M.A.R.T., NCQ, Ultra DMA
	i calui Co	שיות אין ארע, טעום שיות



HDD 500GB 7200RPM 7mm	Drive Weight	0.21 lbs (95 g)
SATA (HDD 500GB 7200RPM	-	500GB
2.5in)	Height	0.28 in (7 mm)
	Width	2.75 in (69.85 mm)
	Interface	ATA-8, SATA 3.0
	Performance	
	Maximum Sequential Read	Up to 120 MB/s
	Maximum Sequential Write	Up to 120 MB/s
	Logical Blocks	976,773,168
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]
	Features	S.M.A.R.T., NCQ, Ultra DMA
SSD 128GB 2280 M2 SATA-3	Drive Weight	0.01 lb (6 g) ~ 0.02 lb (10 g)
TLC ( SSD 128GB 2280 M2	Capacity	128 GB
SATA-3 TLC)	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	ATA-8, SATA 3.0
	Performance	
	Maximum Sequential Read	Up to 500 MB/s
	Maximum Sequential Write	Up to 400MB/s
	Logical Blocks	250,069,680
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	DIPM; TRIM; DEVSLP
SSD 1TB 2280 PCIe NVMe	Drive Weight	0.01 lb (6 g) ~ 0.02 lb (10 g)
QLC (SSD 1TB 2280 PCIe	Capacity	1TB
NVMe QLC)	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	PCIe NVMe Gen3X2
	Performance	
	Maximum Sequential Read	Up to 1500MB/s
	Maximum Sequential Write	Up to 750MB/s
	Logical Blocks	2,000,409,264
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]



SSD 256GB 2280 PCIe NVMe	Drive Weight	0.01 lb (6 g) ~ 0.02 lb (10 g)
QLC (SSD 256GB 2280 PCIe	Capacity	256GB
NVMe QLC)	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	PCIe NVMe Gen3X2
	Performance	
	Maximum Sequential Read	Up to 1500MB/s
	Maximum Sequential Write	Up to 750MB/s
	Logical Blocks	500,118,192
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	TRIM, L1.2

SSD 512GB 2280 PCIe NVMe	Drive Weight	0.01 lb (6 g) ~ 0.02 lb (10 g)
QLC (SSD 512GB 2280 PCIe	Capacity	512GB
NVMe QLC)	Height	0.09 in (2.3 mm)
	Width	0.87 in (22 mm)
	Interface	PCIe NVMe Gen3X2
	Performance	
	Maximum Sequential Read	Up to 1500MB/s
	Maximum Sequential Write	Up to 750MB/s
	Logical Blocks	1,000,215,216
	Operating Temperature	32° to 158°F (0° to 70°C) [ambient temp]
	Features	TRIM, L1.2



### **NETWORKING/COMMUNICATIONS**

Intel® Wi-Fi 6 AX201 + Bluetooth® 5.2 Wireless Card (802.11ax 2x2, non- vPro®, supporting gigabit file transfer speeds) non-vPro® <sup>1,2</sup>		IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11ac IEEE 802.11ac IEEE 802.11d IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
	Interoperability	Features Wi-Fi <sup>®</sup> 6 technology
	Frequency Band	<ul> <li>802.11b/g/n/ax</li> <li>2.402 – 2.482 GHz</li> <li>802.11a/n/ac/ax</li> <li>4.9 – 4.95 GHz (Japan)</li> <li>5.15 – 5.25 GHz</li> <li>5.25 – 5.35 GHz</li> <li>5.47 – 5.725 GHz</li> <li>5.825 – 5.850 GHz</li> </ul>
	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>802.11a: MCS 0 ~ MCS 15, (20MHz, and 40MHz)</li> <li>802.11ac: MCS0 ~ MCS9, (1SS, and 2SS) (20MHz, 40MHz, ,80MHz &amp; 160MHz)</li> <li>802.11ax: MCS0 ~ MCS11, (1SS and 2SS) (20MHz, 40MHz, ,80MHz &amp; 160MHz)</li> </ul>
	Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
	Security <sup>3</sup>	<ul> <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>
	Network Architecture	Ad-hoc (Peer to Peer)
	Models	Infrastructure (Access Point Required)
	Roaming Output Power <sup>4</sup>	IEEE 802.11 compliant roaming between access points
	Output Power <sup>4</sup>	<ul> <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> <li>802.11ax HT40(2.4GHz): +10dBm minimum</li> </ul>



	• 802.11ax VHT160(5GH	z): +10dBm minimum
Power Consumption	<ul> <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>	
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity⁵	<ul> <li>802.11b, 1Mbps: -93.5dBm maximum</li> <li>802.11b, 11Mbps: -84dBm maximum</li> <li>802.11a/g, 6Mbps: -86dBm maximum</li> <li>802.11a/g, 54Mbps: -72dBm maximum</li> <li>802.11n, MCS07: -67dBm maximum</li> <li>802.11n, MCS15: -64dBm maximum</li> <li>802.11ac, MCS0: -84dBm maximum</li> <li>802.11ac, MCS9: -59dBm maximum</li> <li>802.11ax, MCS11(HT40): -59dBm maximum</li> <li>802.11ax, MCS11(VHT160): -58.5dBm maximum</li> </ul>	
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	
	Two embedded dual ban	
Form Factor	Two embedded dual ban	nmunications and Bluetooth communications
Form Factor Dimensions	Two embedded dual ban support WLAN MIMO con	nmunications and Bluetooth communications d with CNVi Interface x 30.0 mm
	Two embedded dual ban support WLAN MIMO con PCI-Express M.2 MiniCar 1. Type 2230: 2.3 x 22.0	nmunications and Bluetooth communications d with CNVi Interface x 30.0 mm
Dimensions	Two embedded dual ban support WLAN MIMO con PCI-Express M.2 MiniCard 1. Type 2230: 2.3 x 22.0 2. Type 1216: 1.67 x 12.0 1. Type 2230: 2.8 g	nmunications and Bluetooth communications d with CNVi Interface x 30.0 mm
Dimensions Weight	Two embedded dual ban support WLAN MIMO con PCI-Express M.2 MiniCard 1. Type 2230: 2.3 x 22.0 2. Type 1216: 1.67 x 12.0 1. Type 2230: 2.8 g 2. Type 126: 1.3 g	nmunications and Bluetooth communications d with CNVi Interface x 30.0 mm
Dimensions Weight Operating Voltage	Two embedded dual ban support WLAN MIMO con PCI-Express M.2 MiniCard 1. Type 2230: 2.3 x 22.0 2. Type 1216: 1.67 x 12.0 1. Type 2230: 2.8 g 2. Type 126: 1.3 g 3.3v +/- 9% <b>Operating</b>	nmunications and Bluetooth communications d with CNVi Interface x 30.0 mm 0 x 16.0 mm 14° to 158° F (–10° to 70° C)
Dimensions Weight Operating Voltage Temperature	Two embedded dual ban support WLAN MIMO con PCI-Express M.2 MiniCard 1. Type 2230: 2.3 x 22.0 2. Type 1216: 1.67 x 12.0 1. Type 2230: 2.8 g 2. Type 126: 1.3 g 3.3v +/- 9% Operating Non-operating Operating Operating	nmunications and Bluetooth communications d with CNVi Interface x 30.0 mm D x 16.0 mm 14° to 158° F (–10° to 70° C) –40° to 176° F (–40° to 80° C) 10% to 90% (non-condensing)

- 1. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11ax) is backwards compatible with prior 802.11 specs.
- 2. Wi-Fi 6 is designed to support gigabit data rate when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 80MHz and higher channels.
- 3. Check latest software/driver release for updates on supported security features.
- 4. 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.
- 5. 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 4.0/4.1/4.2/5.0/5.1/5.2 Wireless Card Technology

Bluetooth Specification Frequency Band	4.0/4.1/4.2/5.0/5.1/5.2 Compliant 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 <sup>6</sup> 2.17 Mbps BLE: 1 Mbps signaling data rate <sup>6</sup> 0.2 Mbps 6. Actual throughput may vary.
	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 + 9.5 dBm for BR and EDR.



Realtek 802.11a/b/g/n/ac (1x1) Wi-Fi® and Bluetooth® 5.0 Wireless Card <sup>1</sup>	Wireless LAN Standards	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 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
	Interoperability Frequency Band	Wi-Fi certified modules 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
	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>2</sup>	<ul> <li>IEEE and WiFi 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>
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power <sup>3</sup>	<ul> <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>
	Power Consumption	<ul> <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>
	Power Management	ACPI and PCI Express compliant power management



	802.11 compliant power saving mode	
Receiver Sensitivity <sup>4</sup>	<ul> <li>802.11b, 1Mbps: -93.5dBm maximum</li> <li>802.11b, 11Mbps: -84dBm maximum</li> <li>802.11a/g, 6Mbps: -86dBm maximum</li> <li>802.11a/g, 54Mbps: -72dBm maximum</li> <li>802.11n, MCS07: -67dBm maximum</li> <li>802.11n, MCS15: -64dBm maximum</li> <li>802.11ac, MCS0: -84dBm maximum</li> <li>802.11ac, MCS9: -59dBm maximum</li> </ul>	
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 MiniCar	d
Dimensions	Туре 2230 : 2.3 x 22.0 x	30.0 mm
Weight	Type 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 – Radio OFF LED Off – Radio ON	

- 1. Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 5 (802.11 ac) is backwards compatible with prior 802.11 specs.
- 2. Check latest software/driver release for updates on supported security features.
- 3. 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.
- 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).

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

<b>Bluetooth Specification</b>	4.0/4.1/4.2/5.0 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.



Realtek RTL8822CE 802.11ac 2x2 Wi-Fi®+ Bluetooth® 5.0 Wireless Card <sup>1</sup>	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11d IEEE 802.11e IEEE 802.11e IEEE 802.11h IEEE 802.11h IEEE 802.11k IEEE 802.11r IEEE 802.11v
	Interoperability Frequency Band	Wi-Fi certified modules 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
	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>2</sup>	<ul> <li>IEEE and WiFi 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>
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power <sup>3</sup>	<ul> <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>802.11n HT40(5GHz) : +14.5dBm minimum</li> </ul>
	Power Consumption	<ul> <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>
	Power Management	ACPI and PCI Express compliant power management



	802.11 compliant powe	r saving mode	
Receiver Sensitivity <sup>4</sup>	<ul> <li>802.11b, 1Mbps: -93.5dBm maximum</li> <li>802.11b, 11Mbps: -84dBm maximum</li> <li>802.11a/g, 6Mbps: -86dBm maximum</li> <li>802.11a/g, 54Mbps: -72dBm maximum</li> <li>802.11n, MCS07: -67dBm maximum</li> <li>802.11n, MCS15: -64dBm maximum</li> <li>802.11ac, MCS0: -84dBm maximum</li> <li>802.11ac, MCS9: -59dBm maximum</li> </ul>		
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	1. Type 2230 : 2.3 x 22.0 x 30.0 mm 2. Type 1216: 1.67 x 12.0 x 16.0 mm		
Weight	1. Type 2230 : 2.8g 2. Type 126: 1.3g		
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 – Radio OFF LED Off – Radio ON		

- 1. Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 5 (802.11 ac) is backwards compatible with prior 802.11 specs.
- 2. Check latest software/driver release for updates on supported security features.
- 3. 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.
- 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).

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

Bluetooth Specification Frequency Band Number of Available Channels	4.0/4.1/4.2/5.0 Compliant 2402 to 2480 MHz 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.



#### **Technical Specifications** POWER AC Adapter 45 Watt Smart Dimensions (H x W x D) 95.0x40.0x26.5mm nPFC Standard Barrel Weight unit: 200g +/- 10g 4.5mm Right Angle 1.8m Input Input Efficiency 87.74 % at 115 Vac and 88.4 % at 230Vac Input frequency range 47~63 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 <8.0A Connector C6 (3pin/with grounded, with Smart ID DC connector) 32°F to 95°F (0° to 35°C) **Environmental Design** Operating temperature **Non-operating (storage)** -4°F to 185°F (-20° to 85°C) temperature Altitude 0 to 16,400 ft (0 to 5,000 m) Humidity 20% to 95% **Storage Humidity** 10% to 95% **EMI and Safety** CE Mark - full compliance with LVD and EMC directives Certifications 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. **AC Adapter 65 Watt Smart Dimensions** 102x55x30mm nPFC EM Barrel 4.5mm Weight unit: 250g +/- 10g New EM 88.0 % at 115 Vac and 89.0 % at 230Vac Input **Input Efficiency** 47~63 Hz Input frequency range **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** <11.0A Connector C6 (3pin/with grounded, with Smart ID DC connector) 32°F to 95°F (0°to 35°C) **Environmental Design** Operating temperature Non-operating (storage) -4°F to 185°F (-20°to 85°C) temperature Altitude 0 to 16,400 ft (0 to 5000m) Humidity 20% to 95%



	EMI and Safety Certifications	Worldwide safety standa SELV; Agency approvals - FCC Class B, CISPR22 Clas	10% to 95% with LVD and EMC directives rds - IEC60950, EN60950, UL60950, Class1, C-UL-US, NORDICS, DENAN, EN55022 Class B, S B, CCC, NOM-1 NYCE. Irs at 25°C ambient condition.	
Battery HW 3 Cell WHr 41	Dimensions	6.0mm x 186.85mm x 90	.2mm	
Long Life -PR+PL Fast	Weight	192g		
Charge (Not Linked)	Cells/Type	3cell Lithium-Ion Prismatic cell / 496080		
	Energy	Voltage	11.55V	
		Amp-hour capacity	3615mAh	
		Watt-hour capacity	41Wh	
	Temperature	Operating (Charging)	0°C ~ 45°C	
		Operating (Discharging)	-10°C ~ 60°C	
	Fuel Gauge LED	N/A		
	Warranty	1000 cycles > 65% (at 23	°C)	
	Optional Travel Battery Available	No		

#### **FINGERPRINT READER**

Model	Elan eFSA80ST touch sensor
Mobile Voltage Operation	2.65V to 3.6V
Operating Temperature:	32° to 95° F (0° to 35° C)
Current Consumption Image:	50mA peak
Low Latency Wait For Finger	<900 uA
Capture Rate: Image transmitter output frequency	20cm/sec
ESD Resistance	IEC 61000-4-2 (+15KV)
Detection Matrix	508 dpi / 4x4mm sensor area
FRR (False Reject Rate) / FAR (False Acceptance Rate)	FRR ~ 2% @ 1:50K FAR



### **Country of Origin**

China



# QuickSpecs

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

Туре	Description	Part Number
Cases	HP Prelude Pro Top Load	1X645AA
	HP Prelude Pro Backpack	1X644AA
	HP Prelude Top Load 15.6	1E7D7AA
	HP Prelude Backpack 15.6	1E7D6AA
Docking	HP 4.5 mm and USB-C <sup>®</sup> Dock Adapter G2	6LX61AA
Input/Output	HP USB Essential Keyboard/Mouse	H6L29AA
	HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA
	HP Slim Wireless Keyboard & Mouse	T6L04AA
	HP Wired Desktop 320K Keyboard	9SR37AA
	HP Slim Wireless Keyboard (Link-5)	T6U20AA
	HP 3-Button USB Laser Mouse	H4B81AA
	HP Essential USB Mouse	2TX37AA
	HP USB Travel Mouse	G1K28AA
	HP Bluetooth Travel Mouse	6SP30AA
	HP Comfort Grip Wireless Mouse	H2L63AA
	HP Wired Desktop 320M Mouse	9VA80AA
	HP HDMI to VGA Adapter	H4F02AA
	HP HDMI to DVI	F5A28AA
Power	HP 45W Smart AC Adapter	H6Y88AA
	HP 65W Smart AC Adapter	H6Y89AA
	HP 65W Slim Adapters (w/ detachable DC cable + TIPS)	H6Y82AA
Storage	HP External USB Optical Drive	F2B56AA



### Summary of Changes

Date of change:	Version History:		Description of change:
December14, 2020	From V1 to V2	Update	USB Information
February 25, 2021	From V2 to V3	Update	Xerox DocuShare offer value
March 2, 2021	From V3 to V4	Add	Fingerprint reader Spec and updates System Unit and At a Glance
April 20, 2021	From V4 to V5	Update	TechSpecs/Memory Modules
May 6, 2021	From V5 to V6	Add	HP Smart Support
June 14, 2021	From V6 to V7	Add	New WLAN in Networking/Communications section
July 6, 2021	From V7 to V8	Add	Battery disclaimer
October 12, 2021	From V8 to V9	Updated	Windows 10 with Free upgrade to Windows 11 when available in OS
			section and footnote.
			Removed Windows 10 Pro (Windows 10 Enterprise available with a
			Volume Licensing Agreement)
October 15, 2021	From V9 to V10	Removed	Memory from Options and Accessories section
December 13, 2021	From V10 to V11	Updated	OS footnotes and Wi-Fi 6 footnotes
April 20,2022	From V11 to V12	Added	Reference for USB Ports
July 21, 2022	From V12 to V13	Removed	HP USB-C <sup>®</sup> /A Universal Dock G2 from Docking Options
August 8, 2022	From V13 to V14	Updated	Memory Slots
March 6, 2023	From V14 to V15	Updated	Storage and Drives section
March 13, 2023	From V15 to V16	Updated	Bluetooth in Networking and Communication section
March 22, 2023	From V16 to V17	Updated	USB Type C <sup>®</sup> description
	From V17 to V18	-	

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