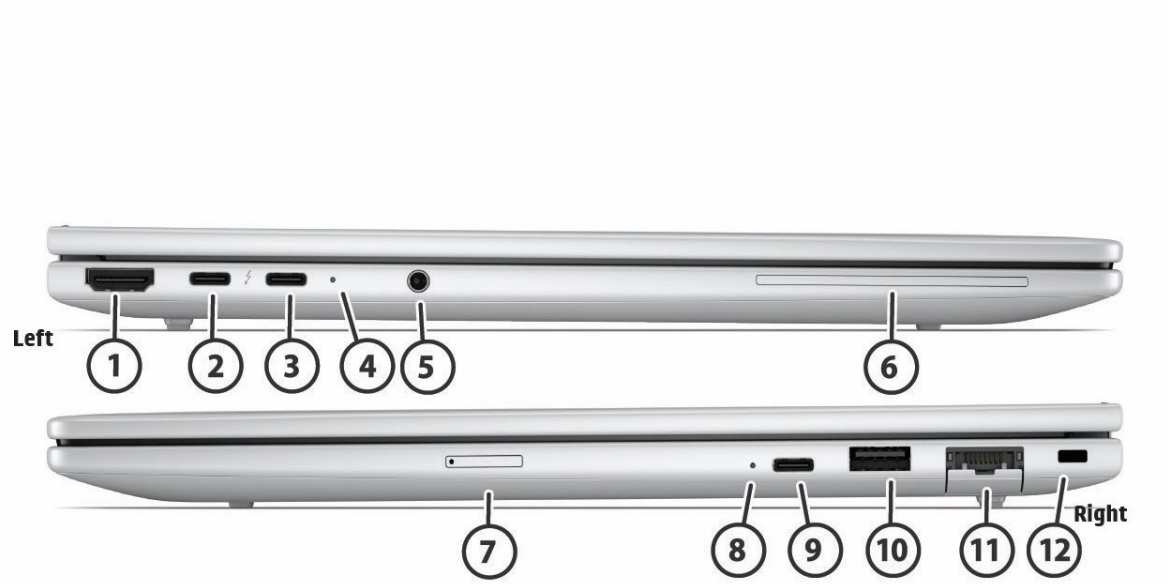
HP EliteBook 8 G2i 14 inch Notebook Next Gen AI PC



Front

1	ACS & ALS Sensor	5	Camera Shutter
2	Microphone (2)	6	IR LEDS (optional)
3	IR Camera (optional)	7	Web Cam LED
4	Web Cam	8	Touchpad



Sides

1	HDMI 2.1	7	Nano SIM card slot (optional)
2	Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 2.1) [1]	8	Power Indicator LED
3	Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 2.1) [1]	9	USB Type-C® 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)
4	Power Indicator LED	10	USB Type-A 5Gbps signaling rate (Powered)
5	Headphone/mic combo jack	11	RJ45 Ethernet port (optional)
6	Smart Card Reader (optional)	12	Nano Security slot

. USB 20Gbps signaling rate is not available with Thunderbolt™ 4. Actual throughput may vary.

PRODUCT NAME

HP EliteBook 8 G2i 14 inch Notebook Next Gen AI PC

OPERATING SYSTEM

Preinstalled

FreeDOS

Windows 11 Home - HP recommends Windows 11 Pro for business [1]

Windows 11 Home Single Language - HP recommends Windows 11 Pro for business [1]

Windows 11 Pro [1]

Windows 11 Pro Education[1]

Windows 11 Pro (Windows 11 Enterprise available with a Volume Licensing Agreement) [1]

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 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

Processor [2, 3, 4, 5, 6]	Cores	Number of P-cores	Number of E-cores	Number of LP E-cores	Threads	Smart Cache	Max Turbo Frequency [3]			Intel SIPP/vPro® Enterprise	Integrated Graphic	NPU
							P-cores	E-cores	LP E-cores			
Intel® Core™ Ultra X7 processor 368H	16 cores	4	8	4	16	18 MB	5.00 GHz	3.80 GHz	3.60 GHz	X	Intel® ARC™ B390 GPU Intel® ARC™ Pro B390 GPU	50 TOPS
Intel® Core™ Ultra X7 processor 358H	16 cores	4	8	4	16	18 MB	4.80 GHz	3.50 GHz	3.30 GHz		Intel® ARC™ B390 GPU	50 TOPS
Intel® Core™ Ultra7 processor 366H	16 cores	4	8	4	16	18 MB	4.80 GHz	3.60 GHz	3.40 GHz	X	Intel® Graphics	50 TOPS
Intel® Core™ Ultra7 processor 356H	16 cores	4	8	4	16	18 MB	4.70 GHz	3.50 GHz	3.30 GHz		Intel® Graphics	50 TOPS
Intel® Core™ Ultra5 processor 338H	12 cores	4	4	4	12	18 MB	4.70 GHz	3.40 GHz	3.30 GHz	X	Intel® ARC™ B370 GPU Intel® ARC™ Pro B370 GPU	47 TOPS
Intel® Core™ Ultra5 processor 336H	12 cores	4	4	4	12	18 MB	4.60 GHz	3.40 GHz	3.20 GHz	X	Intel® Graphics	47 TOPS
Intel® Core™ Ultra7 processor 365	8 cores	4	0	4	16	12 MB	4.80 GHz	NA	3.60 GHz	X	Intel® Graphics	49 TOPS
Intel® Core™ Ultra7 processor 355	8 cores	4	0	4	8	12 MB	4.70 GHz	NA	3.50 GHz		Intel® Graphics	49 TOPS
Intel® Core™ Ultra5 processor 335	8 cores	4	0	4	8	12 MB	4.60 GHz	NA	3.40 GHz	X	Intel® Graphics	47 TOPS

Intel® Core™ Ultra5 processor 325	8 cores	4	0	4	8	12 MB	4.50 GHz	NA	3.40 GHz		Intel® Graphics	47 TOPS
Intel® Core™ Ultra5 processor 332	6 cores	2	0	4	6	12 MB	4.40 GHz	NA	3.30 GHz	X	Intel® Graphics	46 TOPS
Intel® Core™ Ultra5 processor 322	6 cores	2	0	4	6	12 MB	4.40 GHz	NA	3.30 GHz		Intel® Graphics	46 TOPS

Processor Family

Intel® Core™ Ultra X7 processor

Intel® Core™ Ultra7 processor

Intel® Core™ Ultra5 processor

2. 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. Intel® numbering, branding, naming are not a measurement of clock speed.

3. Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration.

4. Features and software that require a NPU may require software purchase, subscription or enablement by a software or platform provider, and third party software may have specific configuration or compatibility requirements. Potential NPU inferencing performance varies by use, configuration, and other factors.

5. For full Intel® vPro® functionality, Windows 10 (or higher) Pro or Enterprise 64 bit edition, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or WLAN card and TPM 2.0 are required. Some functionality requires additional 3rd party software in order to run. See http://intel.com/vpro

6. 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

GRAPHICS

Integrated

Intel® Graphics [7]

Intel® ARC™ B370 [7]

Intel® ARC™ B390 [7]

Intel® ARC™ Pro B370 [7]

Intel® ARC™ Pro B390 [7]

Supported Protocols

Support DirectX®12, HDCP 2.3, HDMI 2.1 (up to 4K 60Hz)

Display supported (including internal display; dock may be required) up to 4

Codec

Hardware Acceleration HEVC (H.265) CODEC is supported

7. Intel® ARC™ graphics only available on select Intel® Core™ Ultra H-series processor-powered systems with at least 16GB of system memory in dual channel configuration.

DISPLAY

Availability may vary by country.

Actual brightness will be lower with touchscreen or HP Sure View.

Non-Touch

35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Anti-Glare, Low Blue Light, 800 nits, sRGB 100%, Sure View 6 [8]

35.6 cm (14") diagonal, 2.5K (2560 x 1600), LCD, 120Hz (VRR), UWVA, Anti-Glare, WLED+Low Blue Light, 400 nits, Adobe 100% + DCI-P3 100%

35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Anti-Glare, WLED+Low Blue Light, 400 nits, Low Power, sRGB 100%

35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Anti-Glare, WLED, 300 nits, Low Power, sRGB 62.5%

35.6 cm (14") diagonal, WUXGA (1920 x 1200), OLED, UWVA, Anti-Glare, OLED+Low Blue Light, 300 nits, DCI-P3 100%

Touch

35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Touch on Panel, Anti-Glare, Low Blue Light, 800 nits, sRGB 100%, Sure View 6 [8]

35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, Direct Bonding Touch Screen, UWVA, BrightView, Gorilla Glass 7, Low Blue Light, 800 nits, sRGB 100%, Sure View 6

35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, Touch on Panel, UWVA, Anti-Glare, WLED, 300 nits, Low Power, sRGB 62.5%

Display Size (Diagonal)

35.6 cm (14")

Aspect Ratio

16:10

Screen to Body Ratio

Up to 89.70%

Max Hinge Open Angle

169° ± 3°

8. HP Sure View integrated privacy screen is an optional feature that must be configured at purchase and is designed to function in landscape orientation.

DOCKING (SOLD SEPARATELY)

Docking station model name

HP Thunderbolt™ 100W G6 Dock

Total number of supported displays (incl.the notebook) display)

4

Max. resolutions supported

(4) 4K @60Hz*

(2) 4K @ 120Hz*

(3) QHD @ 120Hz*

(1) QHD @ 360Hz*

Dock Connectors

1 x HDMI 2.1, 2 x DisplayPort 1.4, 1 x Thunderbolt 4

Technical limitations

*Requires DisplayPort 1.4 support with Display Stream Compression (DSC).

Bluetooth required for HP Quick Connect. HP Quick Connect available on select HP notebooks.

Maximum resolution and display support is dependent on the maximum capability of the notebook.

Thunderbolt Hosts:

Maximum of (4) displays with maximum resolution of 5K@ 30Hz running Thunderbolt host.

Maximum resolution possible is dual 8K displays @ 60Hz running Thunderbolt host or running a non-Thunderbolt host in high resolution mode @30Hz

Non-Thunderbolt hosts:

The highest resolution for dual displays running a non-Thunderbolt host in multi-function mode is

(1) 5K dual cable (using both DP ports) +(1) 4K on USB-C DP port

Non-Thunderbolt hosts support (3) displays with a maximum resolution of (2) 5K single cable + (1) 4K UHD @ 60 Hz in high resolution mode. In multi-function mode the maximum resolution for (3) displays is (2) 5K single cable @ 30Hz + (1) 4K UHD @ 30Hz.

Docking station model name

HP USB-C™ 100W G6 Dock

Total number of supported displays (incl.the notebook) display)

3

Max. resolutions supported

(1) 4K @120hz*

(2) 4K @120hz*

(3) 4K @60hz*

Dock Connectors

1 x HDMI 2.1, 2 x DisplayPort 1.4

Technical limitations

*Requires DisplayPort 1.4 support with Display Stream Compression (DSC).

Bluetooth required for HP Quick Connect. HP Quick Connect available on select HP notebooks.

Maximum resolution and display support is dependent on the maximum capability of the notebook.

Highest resolution with dual displays is two 8K@ 60Hz host in High Resolution mode.

Three maximum displays supported are two 5K@ 30 Hz on DP ports plus one 4K UHD@ 30 Hz on HDMI in Multi-function mode

The highest resolution for a non-Thunderbolt host in Multi-function mode is a single 5K dual cable (using both DP ports) + (1) 4K on HDMI port.

Docking station model name

HP Thunderbolt™ 180W G6 Dock

Total number of supported displays (incl.the notebook) display)

4

Max. resolutions supported

(4) 4K @60Hz*

(2) 4K @ 120Hz*

(3) QHD @ 120Hz*

(1) QHD @ 360Hz*

Dock Connectors

1 x HDMI 2.1, 2 x DisplayPort 1.4, 1 x Thunderbolt 4, 1 x USB-C 3.2 Gen 2 DisplayPort

Technical limitations

*Requires DisplayPort 1.4 support with Display Stream Compression (DSC).

Up to 180W of power delivery via Thunderbolt 4 cable to notebooks that support PD 3.1.

Bluetooth required for HP Quick Connect. HP Quick Connect available on select HP notebooks.

Maximum resolution and display support is dependent on the maximum capability of the notebook.

Thunderbolt Hosts:

Maximum of (4) displays with maximum resolution of 5K@ 30Hz running Thunderbolt host.

Maximum resolution possible is (2) 8K @ 60Hz running TBT host or running a non-TBT host in high resolution mode @30Hz

STORAGE AND DRIVES

Storage

2 TB PCIe® Gen5 NVMe™ SSD Value [9]

1 TB PCIe®-5x4 NVMe™ Self Encrypted OPAL2 SSD [9]

1 TB PCIe® Gen5 NVMe™ SSD Value [9]

1 TB PCIe® NVMe™ SSD Value [9]

512 GB PCIe® Gen5 NVMe™ Self Encrypted OPAL2 SSD Value [9]

512 GB PCIe® Gen5 NVMe™ SSD Value [9]

512 GB PCIe® NVMe™ SSD Value [9]

256 GB PCIe® NVMe™ Self Encrypted OPAL2 SSD Value [9]

256 GB PCIe® NVMe™ SSD Value [9]

9. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 32 GB is reserved for system recovery software.

MEMORY

Maximum Memory

64GB LPDDR5X-8533 MT/s (onboard) [10]

64GB DDR5-5600 MT/s (2 x 32 GB)

Memory

64GB LPDDR5X-8533 MT/s (onboard)

64GB DDR5-5600 MT/s (2 x 32 GB)

32GB LPDDR5X-8533 MT/s (onboard)

48GB DDR5-5600 MT/s (2 x 24 GB)

32GB DDR5-6400 MT/s (2 x 16 GB)

32GB DDR5-5600 MT/s (1 x 32 GB)

32GB DDR5-5600 MT/s (2 x 16 GB)

24GB DDR5-5600 MT/s (1 x 24 GB)

16GB DDR5-6400 MT/s (1 x 16 GB)

16GB DDR5-5600 MT/s (1 x 16 GB)

16GB DDR5-5600 MT/s (2 x 8 GB)

Memory Type

Option 1: Onboard

No memory slots. Memory soldered down.

System runs at 7467 MT/s

Supports Dual Channel Memory

The memory is non-accessible / non-upgradeable.

Option 2: SODIMM

2 SODIMM

System runs at 6400 MT/s

Supports Dual Channel Memory

Memory is replaceable by customer or customer IT support.

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.

NETWORKING /COMMUNICATIONS

Items below may be optional.

Ethernet

Intel® I219-LM 1GbE vPro Ethernet Controller

WLAN

Intel® AX211 Wi-Fi 6E Bluetooth® 5.3 WW WLAN [11,12]

Intel® BE211 Wi-Fi 7 Bluetooth® 6.0 non-vPro® WW WLAN [13]

Intel® BE211 Wi-Fi 7 Bluetooth® 6.0 vPro® WW WLAN [13]

WWAN

HP 5G NR Sub-6 CAT19 [14]

HP 5G NR Sub-6 CAT19 HP Go Solution [14]

LPWAN

HP RW220-GL LTE (Low Power) (CAT-1bis) [15]

NFC

NFC Mirage WNC XRAV-1

Miracast

Native Miracast Support [16]

11. Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. Available in countries where Wi-Fi 6E is supported.
12. Wi-Fi 6E 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.
13. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 7 (802.11BE) functionality requires compatible Windows OS, select processor, and a Wi-Fi 7 router, sold separately. Wi-Fi 7 is backwards compatible with prior 802.11 specs. Available in countries where Wi-Fi 7 is supported. The specification for 802.11BE is a draft specification and is not final. If the final specification differs from the draft specification, it may affect the ability of the device to communicate with other 802.11BE devices.

14. 5G module is optional. WWAN-ready configuration must be selected at purchase to add WWAN at a later date. Module designed for 5G NR NSA (non-standalone) networks as carriers deploy Evolved-Universal Terrestrial Radio Access New Radio Dual Connectivity (ENDC) with both 100Mhz of 5G NR and LTE channel bandwidth, using 256QAM 4x4 as defined by 3GPP. Module requires activation and separately purchased service contract. Check with service provider for coverage and availability in your area. Data connection, upload and download speeds will vary due to network, location, environment, network conditions, and other factors. Backwards compatible to 4G LTE and 3G HSPA technologies. 5G module planned to be available in select platforms and select countries, where carrier supported.
15. LPWAN (also called Mobile Narrowband) supports HP Protect & Trace with Wolf Connect service through the subscription term, but does not support mobile broadband use.
16. Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.

AUDIO/MULTIMEDIA

Audio

Audio by Poly Studio

2 Integrated stereo speakers

Discrete Amplifiers

2 Integrated dual array microphone

Enhanced by AI noise reduction.

Speaker Power

1W / 8 ohm per speaker

Camera

5MP HDR camera

5MP HDR camera with Image Signal Processing (ISP) and AI Presence Detection, IR camera

Sensors

Ambient Light Sensor [17]

Color Sensor with Ambient Light Sensing [18]

Fingerprint Sensor (optional)

Hall Effect Sensor

HP Sure Platform

HP Tamper Lock

Thermal Sensor

17. Ambient light sensor included with Sure View display configurations.

18. Color sensor with Ambient Light Sensing included with OLED displays and LCD displays higher than 300 nits.

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

HP Premium Keyboard, spill-resistant, Privacy, Backlit, Durakey keyboard

HP Premium Keyboard, spill-resistant, Backlit, Durakey keyboard

HP Premium Keyboard, spill-resistant, Durakey keyboard

Pointing Device

Clickpad

Microsoft Precision Touchpad Default Gestures Support

Multi-touch gesture support

Function Keys

ESC - System information

F1 - Display Switching

F2 - Blank or Privacy

F3 - Brightness Down

F4 - Brightness Up

F5 - Blank or Keyboard Backlight

F6 - Audio Mute

F7 - Volume Down

F8 - Volume Up

F9 - Mic Mute

F10 - Media

F11 - Programmable Key (HP app)

F12 - HOME

Power Button (with LED)

Insert

Delete

End

Page up

Page down

Microsoft Copilot [19]

Hidden Function Keys

Fn+R - Break, Fn+S - Sys Rq, Fn+C - Scroll Lock, Fn+Copilot - Context Menu

19. Copilot+ in Windows requires Windows 11. Some features require an NPU. Timing of feature delivery and availability varies by market and device. Requires Microsoft account to log in. Where Microsoft in Windows is not available, the Copilot key will lead to the Bing search engine. See aka.ms/copilotpluspcs.

SOFTWARE AND SECURITY

Application Software

Buy Microsoft Office (Sold Separately) [20]

Edge Customization

HP Connection Optimizer

HP Hotkey Support

HP IQ [21]

HP Notifications

HP PC Hardware Diagnostics UEFI

HP PC Hardware Diagnostics Windows

HP Privacy Settings

HP Services Scan [22]

HP Support Assistant [23]

HSA Fusion for Commercial

HSA Telemetry for Commercial

HP app [24]

Poly Studio Desktop [25]

Manageability Features

HP Client Catalog (download) [26]

HP Client Management Script Library (download) [27]

HP Cloud Recovery [28]

HP Connect for Microsoft Endpoint Manager [29]

HP Driver Packs (download) [30]

HP Image Assistant (download) [31]

HP Manageability Integration Kit (download) [32]

HP Patch Assistant (download) [33]

HP Power Manager with Battery Health Manager (download) [34]

Security Features

Secured-Core PC Enable [35]

Windows Hello Enhanced Sign-In Security (ESS)

HP Wolf Security for Business which includes: [36]

HP Sure Admin [37]

HP Sure Click [38]

HP Sure Recover [39]

HP Sure Run [40]

HP Sure Sense [41]

HP Sure Start [42]

HP Tamper Lock [43]

Security- TPM

Model

Model: Nuvoton NPCT760HAEYX

Firmware Version

Firmware Version: 7.2.4.1

TCG

TCG TPM 2.0

FIPS 140-3 Compliant

FIPS 140-3Compliant: Yes

Model

Model: STMicro ST33KTPM2X32DKG9

Firmware Version

Firmware Version: 9.257

TCG

TCG TPM 2.0

FIPS 140-3 Compliant

FIPS 140-3 Compliant: Yes

BIOS

Absolute Persistence Module [44]

HP BIOS Recovery

BIOS Update via Network

HP BIOSphere [45]

HP DriveLock & Automatic DriveLock

HP Secure Erase [46]

TPM

Smartcard Reader

Model number

Alcorlink IC, CR, AK9563E66-GAF-GR, QFN28

FIPS 201-3 Compliant

FIPS 201-3 Compliant: Yes

IPv6 Support

Yes

FirstNet Certified

Yes

Does the BIOS implement the ISO/IEC 19678:2015 (formerly NIST 800-147) guidelines?

Yes

UEFI version

2.9

Class

3

20. Microsoft 365 sold separately and requires Internet access for activation.
21. HP IQ delivery app is preloaded on select HP PCs; it will be automatically updated to the future featured HP IQ application if you have auto updates enabled in Windows or will be available for download from the Microsoft Store. The future featured HP IQ app uses artificial intelligence. Features vary by configuration. For complete details see https://support.hp.com/us-en/document/ish_13696672-13696717-16
22. HP Services Scan automatically collects the telemetry necessary upon initial boot of the product to deliver device-level configuration data and health insights and is available preinstalled on select products, thru HP Factory Configuration Services; or it can be downloaded. For more information about how to enable HP Smart Support or for download, please visit http://www.hp.com/smart-support.
23. HP Support Assistant is available on Windows. For more information, please visit www.support.hp.com/help/hp-support-assistant.
24. HP app requires Windows 10 or higher OS.
25. Poly Lens Desktop requires a Windows OS.
26. HP Client Catalog not preinstalled, however available for download at (https://www.hp.com/us-en/solutions/client-management-solutions.html).
27. HP Client Management Script Library (https://www.hp.com/us-en/solutions/client-management-solutions.html#tab=manageability-tools).
28. HP Cloud Recovery is available for Z by HP, HP Elite and Pro desktops and laptops PCs with Intel® or AMD processors and requires an open, network connection. Note: You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Detail, please refer to: https://support.hp.com/us-en/document/c05115630.
29. HP Connect for Microsoft Endpoint Manager is available from the Azure Market Place for HP Pro, Elite, Z and Point-of-Sale PCs managed with Microsoft Endpoint Manager. Subscription to Microsoft Endpoint Manager required and sold separately. Network connection required.
30. HP Driver Packs not preinstalled, however available for download at http://www.hp.com/go/clientmanagement.
31. HP Image Assistant not preinstalled, however available for download at (https://ftp.ext.hp.com/pub/caps-softpaq/cmit/HPIA.html)
32. HP Manageability Integration Kit can be downloaded from http://www.hp.com/go/clientmanagement.
33. HP Patch Assistant available on select HP PCs with the HP Manageability Kit that are managed through Microsoft System Center Configuration Manager. HP Manageability Integration Kit can be downloaded from http://www8.hp.com/us/en/ads/clientmanagement/overview.html.
34. HP Power Manager with Battery Health can be downloaded by entering your system information here: https://support.hp.com/in-en/document/ish_4449597-3519507-16.

35. Secured-Core PC Enable requires an Intel® vPro®, AMD Ryzen™ Pro processor or Qualcomm® processor with SD850 or higher and requires 8 GB or more system memory. Secured-core PC is enabled from the factory.
36. HP Wolf Security for Business requires Windows 10 or 11 Pro or higher, includes various HP security features and is available on HP Pro, Elite, RPOS and Workstation products. See product details for included security features.
37. HP Sure Admin requires HP G8 or newer platforms, Windows 10 or higher, HP BIOS, HP Manageability Kit or KMS Service from http://www.hp.com/go/clientmanagement and HP Sure Admin Local Access Authenticator
38. HP Sure Click requires Windows 10 Pro or higher or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.
39. HP Sure Recover is available on select HP PCs and requires Windows 10 or 11 and an open network connection. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data. HP Sure Recover Gen6 with Embedded Reimaging is an optional feature on select HP PCs which requires Windows 10 or 11 must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data.
40. HP Sure Run is available on select HP PCs and requires Windows 10 and higher.
41. HP Sure Sense is available on select HP PCs with Windows 10 Pro, Windows 10 Enterprise, Windows 11 Pro, or Windows 11 Enterprise OS.
42. HP Sure Start is available on select HP PCs and requires Windows 10 and higher
43. HP Tamper Lock can be Enabled/disabled by customers or IT administrator with administrator authority.
44. Absolute Persistence firmware module is shipped turned off and can only be activated with the purchase a license subscription and full activation of the software agent. License subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. Certain conditions apply. For full details visit: https://www.absolute.com/about/legal/agreements/absolute/.
45. HP BIOSphere features may vary depending on the platform and configuration.
46. HP Secure Erase implements the methods outlined in the National Institute of Standards and Technology Special.

POWER

Power supply availability may vary by country.

Battery is internal and replaceable by customer. Serviceable by warranty.

Higher wattage adapter is recommended for best performance and fastest charging.

Power Supply

100W Wall Mount USB Type-C® GaN Halogen Free AC power adapter

65W Wall Mount USB Type-C® GaN Halogen Free AC power adapter

65W Standard USB Type-C® GaN AC power adapter

Battery

HP Long Life 3 cell, 68Wh Polymer

HP Long Life 3 cell, 62Wh Polymer

Compliant with UL 1642/2054 Standard

Battery Recharge Time

Supports battery HP Fast Charge: approximately 50% in 30 minutes [47]

Power Cord

3-wired plug- 1.0m for standard type adapter

Battery life

MM30: Up to 21 hours 15 minutes with 68Whr battery (Intel Core Ultra X7 358H, UMA graphic, brightness set to 250nits on a 14-inch WUXGA 400nits LP LCD display, 32GB LPDDR5X memory, 256GB SSD) [48]

Teams 3x3: Up to 14 hours with 68Whr battery (Intel Core Ultra X7 358H, UMA graphic, brightness set to 150nits on a 14-inch WUXGA 400nits LP LCD display, 32GB LPDDR5X memory, 256GB SSD) [49]

Web Browsing: Up to 23 hours 45 minutes with 68Whr battery (Intel Core Ultra X7 358H, UMA graphic, brightness set to 150nits on a 14-inch WUXGA 400nits LP LCD display, 32GB LPDDR5X memory, 256GB SSD) [50]

47. Recharges your battery up to 50% within 30 minutes when the system is off or in standby mode. Power adapter minimum of 65 watts required for battery capacities 56Whr or less. Power adapter minimum of 100 watts required for battery capacities greater than 56Whr and less than 83Whr. Power adapter minimum of 120 watts required for battery capacities greater than 83Whr and less than 100Whr. After charging has reached 50% capacity, charging will return to normal. Charging time may vary +/-10% due to System

tolerance.

48. Test configuration: MobileMark 30 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.

49. Test configuration: HP factory image, balanced power mode with Windows Studio Effects on. Teams 3x3 conferencing 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.

50. Test configuration: HP factory image. Microsoft web browsing 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 (CER Test Methodology).

WEIGHT & DIMENSIONS

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

Front height measurement is near the front edge where the mechanical chassis taper begins. Back height measurement is near the rear edge where the mechanical chassis taper ends.

Product Weight

Starting at 1.399 kg (3.08 lb) with 62.00 Wh battery (DIMM SKU)

Product Dimensions (w x d x h) [51]

Width: 315.6 mm (12.43 in)

Depth: 222.0 mm (8.74 in)

Height Front: 11.75 mm (0.46 in)

Height Rear: 15.50 mm (0.61 in)

Maximum Height: 18.95 mm (0.75 in)

Pallet Dimensions (w x d x h)

Product packaging size varies based on options chosen. Please contact your HP representative for your packaging size details. For detailed packaging information, access the HP Commercial Notebooks Packaging Guide.

51. Typical dimension. Actual dimension may vary +/- 0.5mm. Height may vary based on configuration. Maximum Height does not include Rubber feet.

PORTS/SLOTS

Left side

2 x Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 2.1)[52]

1 x HDMI 2.1 (support up to 4k60Hz)

1 x headphone/mic combo jack

1 x Smart Card Reader (optional)

Right side

1 x USB Type-C® 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)

1 x USB Type-A 5Gbps signaling rate (Powered)

1 x RJ45 Ethernet port (optional)

1 x Nano SIM card slot (optional)

1 x Nano Security Slot

52. USB 20Gbps signaling rate is not available with Thunderbolt™ 4. Actual throughput may vary.

SERVICE AND SUPPORT

1-year warranty and 90 day software limited warranty options depending on country. HP Worldwide Limited Warranty for the battery is aligned with the warranty period of the HP Hardware Product. 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. [53]

53. 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	20.0 V
Max Operating Power	UMA < 65 W
Temperature	
Operating	0° to 35° C (32° to 95° F) System performance may be reduced above 32°C (89.6°F)
Non - operating	-20° to 60° C (-4° to 140° F) System performance may be reduced above 32°C (89.6°F)
Relative Humidity	
Operating	10% to 90% (non-condensing)
Non - operating	5% to 95%, 38.7° C (101.6° F) maximum wet bulb temperature
Shock	
Operating	40 G, 2 ms, half-sine
Non - operating	240 G, 2 ms, half-sine
Random Vibration	
Operating	1.043 grms
Non - operating	3.500 grms
Altitude(unpressurized)	
Operating	3,048 m (10,000 ft)
Non - operating	12,192 m (40,000 ft)
Industry Standard Certifications	
Regulatory Model Number	HSN-I62C-4
CSA/UL 62368-1	Yes
ENERGY STAR® [1]	Yes
FCC/ICES/CISPR/VCCI	Yes
CE MARKING	Yes
GS Mark	Yes. Related commodity should comply with ISO 9241 Standards.
China CCC/SRRC/CEL	Yes
Taiwan BSMI/NCC	Yes
Korea KCC/KC/KES	Yes

Ukraine NSoC/TEC	Yes
EAEU Compliance	Yes
Saudi Arabian Compliance	Yes
TCO	Yes
EPEAT Gold [2]	Yes
Low Blue Light	Yes
WW RoHS	Yes
CECP	No
Medical EMC: IEC 60601-1-2:2014 EN60601-1-2: 2015	Yes
SEPA	No
MIL - STD Testing [3]	MIL-STD 810H

1. Configurations that are ENERGY STAR® qualified are identified as ENERGY STAR on HP websites and on http://www.energystar.gov
2. Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit http://www.epeat.net for more information.
3. MIL STD testing is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack.

DISPLAYS

Actual brightness will be lower with touchscreen or HP Sure View.

Availability may vary by country

35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Anti-Glare, Low Blue Light, 800 nits, sRGB 100%, Sure View 6	**Active Area**	301.590 x 188.500 mm (typ)
	Dimensions (W x H)	306.890 x 197.900 mm (max)
	Weight	230 g (max)
	Diagonal Size	14 inch
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1500:1 (typ)
	Refresh Rate	60Hz
	Brightness	800 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	1920x1200 (WUXGA)
	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	sRGB 100%
	Color Depth	8
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes
	Power Consumption	EBL@150nits:1.50 W (Max)
35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Touch on Panel, Anti-Glare, Low Blue Light, 800 nits, sRGB 100%, Sure View 6 [8]	**Active Area**	301.590 x 188.500 mm (typ)
	Dimensions (W x H)	306.890 x 197.900 mm (max)
	Weight	260 g (max)
	Diagonal Size	14 inch
	Surface Treatment	Anti-Glare
	Touch Enabled	Yes
	Contrast Ratio	1500:1 (typ)
	Refresh Rate	60Hz
	Brightness	800 nits (typ)
	Pixel Resolution	RGB

	Pixel Resolution - Format	1920x1200 (WUXGA)
	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	sRGB 100%
	Color Depth	8
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes
	Power Consumption	EBL@150nits:1.90 W (Max)
35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, Direct Bonding Touch Screen, UWVA, BrightView, Gorilla Glass 7, Low Blue Light, 800 nits, sRGB 100%, Sure View 6	**Active Area**	301.590 x 188.500 mm (typ)
	Dimensions (W x H)	309.600 x 210.500 mm (max)
	Weight	290 g (max)
	Diagonal Size	14 inch
	Surface Treatment	BrightView
	Touch Enabled	Yes
	Contrast Ratio	1500:1 (typ)
	Refresh Rate	60/40 Hz
	Brightness	800 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	1920x1200 (WUXGA)
	Aspect Ratio	16:10
	Backlight	Low Blue Light
	Color Gamut Coverage	sRGB 100%
	Color Depth	6+2 FRC
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes
	Power Consumption	150nits/OPR20% (MSFT CER Video) : Total 1.5W 150nits/OPR30% (MSFT CER Browsing) : Total 1.9W
35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Anti-Glare, WLED+Low Blue Light, 400	**Active Area**	301.590 x 188.500 mm (typ)
	Dimensions (W x H)	307.590 x 199.550 mm (max)
	Weight	300 g (max)
	Diagonal Size	14 inch

nits, Low Power, sRGB 100%	**Surface Treatment**	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1200:1 (typ)
	Refresh Rate	60 Hz
	Brightness	400 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	1920x1200 (WUXGA)
	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	sRGB 100%
	Color Depth	8
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes
	Power Consumption	EBL@200nits:1.40 W (Max) EBL@250nits:1.60 W (Max)
35.6 cm (14") diagonal, 2.5K (2560 x 1600), LCD, 120Hz (VRR), UWVA, Anti-Glare, WLED+Low Blue Light, 400 nits, Adobe 100% + DCI-P3 100%	**Active Area**	301.594 x 188.496 mm (typ)
	Dimensions (W x H)	306.890 x 197.900 mm (max)
	Weight	200 g (max)
	Diagonal Size	14 inch
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	2000:1 (typ)
	Refresh Rate	120 Hz
	Brightness	400 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	2560x1600 (2.5K)
	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	Adobe RGB 100% + DCI-P3 100%
	Color Depth	8
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes

	Power Consumption	2.3 (max)/ 2.7 (max)
35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Anti-Glare, WLED, 300 nits, Low Power, sRGB 62.5%	**Active Area**	301.590 x 188.500 mm (typ)
	Dimensions (W x H)	307.590 x 199.150 (max)
	Weight	300 g (max)
	Diagonal Size	14 inch
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1000 : 1 (typ)
	Refresh Rate	60 Hz
	Brightness	300 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	1920x1200 (WUXGA)
	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	sRGB 62.5%
	Color Depth	8
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	No
	Power Consumption	1.70 (max)/2.10(max)
35.6 cm (14") diagonal, WUXGA (1920 x 1200), OLED, UWVA, Anti-Glare, OLED+Low Blue Light, 300 nits, DCI-P3 100%	**Active Area**	301.824 x 188.640 mm (typ)
	Dimensions (W x H)	305.654 x 198.020 mm (max)
	Weight	174 g (max)
	Diagonal Size	14 inch
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1000000:1 (typ)
	Refresh Rate	60 Hz
	Brightness	300 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	1920x1200 (WUXGA)
	Aspect Ratio	16:10

	Backlight	OLED
	Color Gamut Coverage	DCI-P3 95%
	Color Depth	8
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes
	Power Consumption	EBL@200nits:2.70 W (Max)
35.6 cm (14") diagonal, WUXGA (1920 x 1200), LCD, Touch on Panel, UWVA, Anti-Glare, WLED, 300 nits, Low Power, sRGB 62.5%	**Active Area**	301.590 x 188.500 (typ)
	Dimensions (W x H)	30.7.59 x 199.15 (max)
	Weight	300 g (max)
	Diagonal Size	14 inch
	Surface Treatment	Anti-Glare
	Touch Enabled	Yes
	Contrast Ratio	1000:1(typ)
	Refresh Rate	60 Hz
	Brightness	300 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	1920x1200 (WUXGA)
	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	sRGB 62.5%
	Color Depth	8
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	No
	Power Consumption	1.75 (max) / 2.15 (max)

STORAGE

2 TB PCIe® Gen5 NVMe™ SSD Value	**Form Factor**	M.2 2280
	Capacity	2 TB
	NAND Type	Value
	Weight	10g
	Interface	PCIe Gen5 NVMe
	Sequential Read	10000 MB/s ±20%
	Sequential Write	8000 MB/s ±20%
	Logical Blocks	4000797360
	Features	Pyrite 2.0; TRIM; L1.2
		Not all features are available in all versions
1 TB PCIe®-5x4 NVMe™ Self Encrypted OPAL2 SSD	**Form Factor**	M.2 2280
	Capacity	1 TB
	NAND Type	Performance
	Weight	10 g
	Interface	PCIe Gen5x4 NVMe
	Sequential Read	13000 MB/s ±20%
	Sequential Write	9000 MB/s ±20%
	Logical Blocks	2000409264
	Features	TCG Opal 2.0; TRIM; L1.2
		Not all features are available in all versions
1 TB PCIe® Gen5 NVMe™ SSD Value	**Form Factor**	M.2 2280
	Capacity	1 TB
	NAND Type	Value
	Weight	10 g
	Interface	PCIe Gen5 NVMe
	Sequential Read	9500 MB/s ±20%
	Sequential Write	7000 MB/s ±20%
	Logical Blocks	2000409264
	Features	Pyrite 2.0; TRIM; L1.2
		Not all features are available in all versions

1 TB PCIe® NVMe™ SSD Value	**Form Factor**	M.2 2280
	Capacity	1TB
	NAND Type	Value
	Weight	10 g
	Interface	PCIe NVMe
	Sequential Read	3500 MB/s ±20%
	Sequential Write	2700 MB/s ±20%
	Logical Blocks	2000409264
	Features	Pyrite 2.0; TRIM; L1.2
		Not all features are available in all versions
512 GB PCIe® Gen5 NVMe™ Self Encrypted OPAL2 SSD Value	**Form Factor**	M.2 2280
	Capacity	512 GB
	NAND Type	Value
	Weight	10 g
	Interface	PCIe Gen5 NVMe
	Sequential Read	9000 MB/s ±20%
	Sequential Write	6000 MB/s ±20%
	Logical Blocks	1000215216
	Features	TCG Opal 2.0; TRIM; L1.2
		Not all features are available in all versions
512 GB PCIe® Gen5 NVMe™ SSD Value	**Form Factor**	M.2 2280
	Capacity	512 GB
	NAND Type	Value
	Weight	10g
	Interface	PCIe Gen5 NVMe
	Sequential Read	9000 MB/s ±20%
	Sequential Write	6000 MB/s ±20%
	Logical Blocks	1000215216
	Features	Pyrite 2.0; TRIM; L1.2
		Not all features are available in all versions

512 GB PCIe® NVMe™ SSD Value	**Form Factor**	M.2 2280
	Capacity	512GB
	NAND Type	Value
	Weight	10g
	Interface	PCIe NVMe
	Sequential Read	3500 MB/s ±20%
	Sequential Write	1600 MB/s ±20%
	Logical Blocks	1000215216
	Features	Pyrite 2.0; TRIM; L1.2
		Not all features are available in all versions
256 GB PCIe® NVMe™ Self Encrypted OPAL2 SSD Value	**Form Factor**	M.2 2280
	Capacity	256 GB
	NAND Type	Value
	Weight	10g
	Interface	PCIe NVMe
	Sequential Read	3100 MB/s ±20%
	Sequential Write	1200 MB/s ±20%
	Logical Blocks	500118192
	Features	TCG Opal 2.0; TRIM; L1.2
		Not all features are available in all versions
256 GB PCIe® NVMe™ SSD Value	**Form Factor**	M.2 2280
	Capacity	256GB
	NAND Type	Value
	Weight	10 g
	Interface	PCIe NVMe
	Sequential Read	3100 MB/s ±20%
	Sequential Write	1200 MB/s ±20%
	Logical Blocks	500118192
	Features	Pyrite 2.0; TRIM; L1.2
		Not all features are available in all versions

1. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 32 GB is reserved for system recovery software.

NETWORKING / COMMUNICATION

Intel® AX211 Wi-Fi 6E Bluetooth® 5.3 WW WLAN [1, 2]	**Wireless LAN Standards**	IEEE 802.11a
		IEEE 802.11ac
		IEEE 802.11ax
		IEEE 802.11b
		IEEE 802.11d
		IEEE 802.11e
		IEEE 802.11g
		IEEE 802.11h
		IEEE 802.11i
		IEEE 802.11k
		IEEE 802.11n
		IEEE 802.11r
		IEEE 802.11v
	Interoperability	Wi-Fi certified
	Frequency Band	802.11b/g/n/ax/be
		2.402 - 2.482 GHz
		802.11a/n/ac/ax/be
		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
		5.955 - 6.415 GHz
		6.435 - 6.515 GHz
		6.535 - 6.875 GHz
		6.895 - 7.115 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: max 300Mbps
		802.11ac : 1733Mbps802.11ax : max 2.4Gbps

Modulation	Direct Sequence Spread Spectrum
	OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM , 1024QAM
Security	WPA3 personal and enterprise including WPA2 transition mode.
	802.1X EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0 -MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA')
	128-bit AES-CCMP, 256-bit AES-GCMP
Network Architecture	Ad-hoc (Peer to Peer)
Models	Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power	802.11b : +17dBm minimum
	802.11g : +16dBm minimum
	802.11a : +17dBm minimum
	802.11n HT20(2.4GHz) : +14dBm minimum
	802.11n HT40(2.4GHz) : +13dBm minimum
	802.11n HT20(5GHz) : +14dBm minimum
	802.11n HT40(5GHz) : +13dBm minimum
	802.11ac VHT80(5GHz) : +10dBm minimum
	802.11ac VHT160(5GHz) : +10dBm minimum
	802.11ax HE40(2.4GHz) : +12dBm minimum
	802.11ax HE80(5GHz) : +10dBm minimum
	802.11ax HE160(5GHz) : +10dBm minimum
Power Consumption	Transmit mode : 2.0 W
	Receive mode : 1.6 W
	Idle mode (PSP) : 180 mW (WLAN Associated)
	Idle mode: 50 mW (WLAN unassociated)
	Connected Standby/Modern Standby : 10 mW
	Radio disabled : 8 mW
Power Management	ACPI and PCI Express® compliant power management
	802.11 compliant power saving mode
Receiver Sensitivity [4]	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(VHT80) : -84dBm maximum 802.11ac, MCS9(VHT80) : -59dBm maximum 802.11ac, MCS9(VHT160) : -58.5dBm maximum 802.11ax, MCS11(HE40): -57dBm maximum 802.11ax, MCS11(HE80): -54dBm maximum 802.11ax, MCS11(HE160): -53.5dBm maximum
Antenna Type	High efficiency antenna with spatial diversity Two embedded tri-band 2.4/5/6 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI Express® M.2
Dimensions	2.30 x 22.00 x 30.00 mm (0.09 x 0.87 x 1.18 inch)
Weight	Type 2230: 2.8 g(0.099 oz)
Operating Voltage	3.3 v +/- 9 %
	Integrated Bluetooth® specifications
Bluetooth® Specification	4.0/4.1/4.2/5.0/5.1/5.2/5.3 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 + 9.5 dBm for BR and EDR.

Power Consumption	Peak (Tx): 330 mW
	Peak (Rx): 230 mW
	Selective Suspend: 17 mW
Bluetooth® Software	Microsoft Windows Bluetooth® Software
Supported Link Topology	
Power Management	ACPI and PCI Express compliant power management
	802.11 compliant power saving mode
Certifications	FCC (47 CFR) Part 15C/E, Section 15.247, 15.249, 15.407
	ETSI 300 328, ETSI 301 893, ETSI 303 687
Bluetooth® Profiles	BT4.1-ESR 5/6/7 Compliance
Supported	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)
	BT5.2
	ESR9/10 Compliance
	LE Advertisement Extensions
	Channel Selection Algo
	Limited High Duty Cycle Non-Connectable Advertising
	2Mbps LE
	LE Long Range

		BT5.3 Host to Controller Encryption Key Control Enhancements Compliance to the latest Errata Section 12.3 of BT 5.3 specification Periodic Advertisement interval
Intel® BE211 Wi-Fi 7 Bluetooth® 6.0 non-vPro® WW WLAN [3]	**Wireless LAN Standards**	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax IEEE 802.11be IEEE 802.11d IEEE 802.11e IEEE 802.11h IEEE 802.11i IEEE 802.11k IEEE 802.11r IEEE 802.11v
	Interoperability	Wi-Fi certified
	Frequency Band	802.11b/g/n/ax/be 2.402 - 2.482 GHz 802.11a/n/ac/ax/be 5.15 - 5.25 GHz 5.25 - 5.35 GHz 5.47 - 5.725 GHz 5.825 - 5.850 GHz 5.955 - 6.415 GHz 6.435 - 6.515 GHz 6.535 - 6.875 GHz 6.895 - 7.115 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: max 300Mbps
	802.11ac : 1733Mbps
	802.11ax : max 2.4Gbps
	802.11be : max 5.76Gbps
Modulation	Direct Sequence Spread Spectrum
	OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM, 4096QAM
Security	WPA3 personal and enterprise including WPA2 transition mode.
	802.1X EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0 -MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA')
	128-bit AES-CCMP, 256-bit AES-GCMP"
Network Architecture	Ad-hoc (Peer to Peer)
Models	Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power	802.11b, 1Mbps : +17dBm minimum
	802.11g, 6Mpbs : +16dBm minimum
	802.11a, 6Mbps : +17dBm minimum
	802.11n, MCS7(HT20) : +14dBm minimum
	802.11n, MCS7(HT40) : +13.5dBm minimu
	802.11ac MCS9(VHT20) : 13.5dBm minimum
	802.11ac MCS9(VHT40) : +13.5dBm minimum
	802.11ac MCS9(VHT80) : +12.5dBm minimum
	802.11ac MCS9(VHT160) : +10.5dBm minimum
	802.11ax MCS11(HE20)(6GHz) : +11.5dBm minimum
	802.11ax MCS11(HE40)(6GHz) : +7.5dBm minimum
	802.11ax MCS11(HE80)(6GHz) : +7.5dBm minimum
	802.11ax MCS11(HE160)(6GHz) : +7.5dBm minimum
	802.11be MCS13(EHT20)(6GHz) : +4dBm minimum
	802.11be MCS13(EHT40)(6GHz) : +7dBm minimum
	802.11be MCS13(EHT80)(6GHz) : +10dBm minimum

	802.11be MCS13(EHT160)(6GHz) : +13dBm minimum
	802.11be MCS13(EHT320)(6GHz) : +16dBm minimum
Power Consumption	Transmit mode 3.1 W
	Receive mode 1.8 W
	Idle mode (PSP) 180 mW (WLAN Associated)
	Idle mode 50 mW (WLAN unassociated)
	Connected Standby 10mW
	Radio disabled 8 mW
Power Management	ACPI and PCI Express compliant power management
	802.11 compliant power saving mode
Receiver Sensitivity [4]	802.11b, 1Mbps : -93.5dBm maximum
	802.11b, 11Mbps : -85dBm maximum
	802.11a/g, 6Mbps : -90.5dBm maximum
	802.11a/g, 54Mbps : -72.5dBm maximum
	802.11n, MCS0(HT20) : -90dBm maximum
	802.11n, MCS7(HT20) : -71.5dBm maximum
	802.11n, MCS0(HT40) : -88.5dBm maximum
	802.11n, MCS7(HT40) : -68.5dBm maximum
	802.11ac, MCS9(VHT20) : -88.5dBm maximum
	802.11ac, MCS9(VHT40) : -65.5dBm maximum
	802.11ac, MCS9(VHT80) : -60.5dBm maximum
	802.11ac, MCS9(VHT160) : -58.5dBm maximum
	802.11ax, MCS11(HE20)(6GHz) : -59.5dBm maximum
	802.11ax, MCS11(HE40)(6GHz) : -56.5dBm maximum
	802.11ax, MCS11(HE80)(6GHz) : -53.5dBm maximum
	802.11ax, MCS11(HE160)(6GHz) : -51.5dBm maximum
	802.11be, MCS13(EHT20)(6GHz) : -55.5dBm maximum
	802.11be, MCS13(EHT40)(6GHz) : -53.5dBm maximum
	802.11be, MCS13(EHT80)(6GHz) : -51.5dBm maximum
	802.11be, MCS13(EHT160)(6GHz) : -48.5dBm maximum
	802.11be, MCS13(EHT320)(6GHz) : -45.5dBm maximum
Antenna Type	High efficiency antenna with spatial diversity
	Two embedded tri-band 2.4/5/6 GHz antennas are provided to

	the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express M.2
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 : 2.99g 2. Type 1216: 0.72g
Operating Voltage	3.3v +/- 9%
	Integrated Bluetooth® specifications
Bluetooth® Specification	4.0/4.1/4.2/5.0/5.1/5.2/5.3/5.4/6.0 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	Bluetooth 4.x : 1Mbps (LE); 3Mbps (EDR) Bluetooth 5.x : 2Mbps (LE); 3Mbps (EDR) Bluetooth 6.0 : 2Mbps (LE); 3Mbps (EDR)
Transmit Power	The Bluetooth component shall operate as a Class I Bluetooth device with a maximum transmit power of +15.5 dBm for BR and +13dBm for EDR.
Power Consumption	Peak (Tx): 330 mW Peak (Rx): 230 mW Selective Suspend: 17 mW
Bluetooth® Software	1. Microsoft Windows Bluetooth Software
Supported Link Topology	
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
Certifications	FCC (47 CFR) Part 15C/E, Section 15.247, 15.249, 15.407 ETSI 300 328, ETSI 301 893, ETSI 303 687
Bluetooth® Profiles Supported	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) BT5.2 ESR9/10 Compliance LE Advertisement Extensions Channel Selection Algo Limited High Duty Cycle Non-Connectable Advertising 2Mbps LE LE Long Range BT5.3 Host to Controller Encryption Key Control Enhancements Compliance to the latest Errata Section 12.3 of BT 5.3 specification Periodic Advertisement interval
Intel® BE211 Wi-Fi 7 Bluetooth® 6.0 vPro® WW WLAN [3]	**Wireless LAN Standards**	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax IEEE 802.11be IEEE 802.11d

	IEEE 802.11e
	IEEE 802.11h
	IEEE 802.11i
	IEEE 802.11k
	IEEE 802.11r
	IEEE 802.11v
Interoperability	Wi-Fi certified
Frequency Band	802.11b/g/n/ax/be
	2.402 - 2.482 GHz
	802.11a/n/ac/ax/be
	5.15 - 5.25 GHz
	5.25 - 5.35 GHz
	5.47 - 5.725 GHz
	5.825 - 5.850 GHz
	5.955 - 6.415 GHz
	6.435 - 6.515 GHz
	6.535 - 6.875 GHz
	6.895 - 7.115 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: max 300Mbps
	802.11ac : 1733Mbps
	802.11ax : max 2.4Gbps
	802.11be : max 5.76Gbps
Modulation	Direct Sequence Spread Spectrum
	OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM, 4096QAM
Security	WPA3 personal and enterprise including WPA2 transition mode.
	802.1X EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0 -MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA')
	128-bit AES-CCMP, 256-bit AES-GCMP

Network Architecture	Ad-hoc (Peer to Peer)
Models	Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power	802.11b, 1Mbps : +17dBm minimum
	802.11g, 6Mpbs : +16dBm minimum
	802.11a, 6Mbps : +17dBm minimum
	802.11n, MCS7(HT20) : +14dBm minimum
	802.11n, MCS7(HT40) : +13.5dBm minimu
	802.11ac MCS9(VHT20) : 13.5dBm minimum
	802.11ac MCS9(VHT40) : +13.5dBm minimum
	802.11ac MCS9(VHT80) : +12.5dBm minimum
	802.11ac MCS9(VHT160) : +10.5dBm minimum
	802.11ax MCS11(HE20)(6GHz) : +11.5dBm minimum
	802.11ax MCS11(HE40)(6GHz) : +7.5dBm minimum
	802.11ax MCS11(HE80)(6GHz) : +7.5dBm minimum
	802.11ax MCS11(HE160)(6GHz) : +7.5dBm minimum
	802.11be MCS13(EHT20)(6GHz) : +4dBm minimum
	802.11be MCS13(EHT40)(6GHz) : +7dBm minimum
	802.11be MCS13(EHT80)(6GHz) : +10dBm minimum
	802.11be MCS13(EHT160)(6GHz) : +13dBm minimum
	802.11be MCS13(EHT320)(6GHz) : +16dBm minimum
Power Consumption	Transmit mode 3.1 W
	Receive mode 1.8 W
	Idle mode (PSP) 180 mW (WLAN Associated)
	Idle mode 50 mW (WLAN unassociated)
	Connected Standby 10mW
	Radio disabled 8 mW
Power Management	ACPI and PCI Express compliant power management
	802.11 compliant power saving mode
Receiver Sensitivity [4]	802.11b, 1Mbps : -93.5dBm maximum
	802.11b, 11Mbps : -85dBm maximum
	802.11a/g, 6Mbps : -90.5dBm maximum
	802.11a/g, 54Mbps : -72.5dBm maximum

	802.11n, MCS0(HT20) : -90dBm maximum
	802.11n, MCS7(HT20) : -71.5dBm maximum
	802.11n, MCS0(HT40) : -88.5dBm maximum
	802.11n, MCS7(HT40) : -68.5dBm maximum
	802.11ac, MCS9(VHT20) : -88.5dBm maximum
	802.11ac, MCS9(VHT40) : -65.5dBm maximum
	802.11ac, MCS9(VHT80) : -60.5dBm maximum
	802.11ac, MCS9(VHT160) : -58.5dBm maximum
	802.11ax, MCS11(HE20)(6GHz) : -59.5dBm maximum
	802.11ax, MCS11(HE40)(6GHz) : -56.5dBm maximum
	802.11ax, MCS11(HE80)(6GHz) : -53.5dBm maximum
	802.11ax, MCS11(HE160)(6GHz) : -51.5dBm maximum
	802.11be, MCS13(EHT20)(6GHz) : -55.5dBm maximum
	802.11be, MCS13(EHT40)(6GHz) : -53.5dBm maximum
	802.11be, MCS13(EHT80)(6GHz) : -51.5dBm maximum
	802.11be, MCS13(EHT160)(6GHz) : -48.5dBm maximum
	802.11be, MCS13(EHT320)(6GHz) : -45.5dBm maximum
Antenna Type	High efficiency antenna with spatial diversity Two embedded tri-band 2.4/5/6 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 : 2.99g 2. Type 1216: 0.72g
Operating Voltage	3.3v +/- 9%
	Integrated Bluetooth® specifications
Bluetooth® Specification	4.0/4.1/4.2/5.0/5.1/5.2/5.3/5.4/6.0 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	Bluetooth 4.x : 1Mbps (LE); 3Mbps (EDR)
	Bluetooth 5.x : 2Mbps (LE); 3Mbps (EDR)
	Bluetooth 6.0 : 2Mbps (LE); 3Mbps (EDR)
Transmit Power	The Bluetooth component shall operate as a Class I Bluetooth device with a maximum transmit power of +15.5 dBm for BR and +13dBm for EDR.
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	Peak (Rx): 230 mW
	Selective Suspend: 17 mW
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	802.11 compliant power saving mode
Certifications	FCC (47 CFR) Part 15C/E, Section 15.247, 15.249, 15.407
	ETSI 300 328, ETSI 301 893, ETSI 303 687
Bluetooth® Profiles Supported	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)
	BT5.2

ESR9/10 Compliance
LE Advertisement Extensions
Channel Selection Algo
Limited High Duty Cycle Non-Connectable Advertising
2Mbps LE
LE Long Range
BT5.3
Host to Controller Encryption Key Control Enhancements
Compliance to the latest Errata Section 12.3 of BT 5.3 specification
Periodic Advertisement interval

1. Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. Available in countries where Wi-Fi 6E is supported.
2. Wi-Fi 6E 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. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 7 (802.11BE) functionality requires compatible Windows OS, select processor, and a Wi-Fi 7 router, sold separately. Wi-Fi 7 is backwards compatible with prior 802.11 specs. Available in countries where Wi-Fi 7 is supported. The specification for 802.11BE is a draft specification and is not final. If the final specification differs from the draft specification, it may affect the ability of the device to communicate with other 802.11BE devices.
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 5G NR Sub-6 CAT19 [5]	**Technology Operating Bands**	WCDMA/HSPA+ operating bands: Band 1: 1920 to 1980 MHz (UL), 2110 to 2170 MHz (DL) Band 2: 1850 to 1910 MHz (UL), 1930 to 1990 MHz (DL) Band 4: 1710 to 1755 MHz (UL), 2110 to 2155 MHz (DL) Band 5: 824 to 849 MHz (UL), 869 to 894 MHz (DL) Band 8: 880 to 915 MHz (UL), 925 to 960 MHz (DL) LTE FDD/TDD operating bands: Band 1: 1920 to 1980 MHz (UL), 2110 to 2170 MHz (DL) Band 2: 1850 to 1910 MHz (UL), 1930 to 1990 MHz (DL)

Band 3: 1710 to 1785 MHz (UL), 1805 to 1880 MHz (DL)
Band 4: 1710 to 1755 MHz (UL), 2110 to 2155 MHz (DL)
Band 5: 824 to 849 MHz (UL), 869 to 894 MHz (DL)
Band 7: 2500 to 2570 MHz (UL), 2620 to 2690 MHz (DL)
Band 8: 880 to 915 MHz (UL), 925 to 960 MHz (DL)
Band 12: 699 to 716 MHz (UL), 729 to 746 MHz (DL)
Band 13: 777 to 787 MHz (UL), 746 to 756 MHz (DL)
Band 14: 788 to 798 MHz (UL), 758 to 768 MHz (DL)
Band 17: 704 to 716 MHz (UL), 734 to 746 MHz (DL)
Band 18: 815 to 830 MHz (UL), 860 to 875 MHz (DL)
Band 19: 830 to 845 MHz (UL), 875 to 890 MHz (DL)
Band 20: 832 to 862 MHz (UL), 791 to 821 MHz (DL)
Band 25: 1850 to 1915 MHz (UL), 1930 to 1995 MHz (DL)
Band 26: 814 to 849 MHz (UL), 859 to 894 MHz (DL)
Band 28: 703 to 748 MHz (UL), 758 to 803 MHz (DL)
Band 29: 717 to 728 MHz (DL)
Band 30: 2305 to 2315 MHz (UL) 2350 to 2360 MHz (DL)
Band 32: 1452 to 1496 MHz (DL)
Band 34: 2010 to 2025 MHz (UL/DL)
Band 38: 2570 to 2620 MHz (UL/DL)
Band 39: 1880 to 1920 MHz (UL/DL)
Band 40: 2300 to 2400 MHz (UL/DL)
Band 41: 2496 to 2690 MHz (UL/DL)
Band 42: 3400 to 3600 MHZ (UL/DL)
Band 43: 3400 to 3800 MHZ (UL/DL)
Band 46: 5150 to 5925 MHZ (DL)
Band 48: 3550 to 3700 MHZ (UL/DL)
Band 66: 1710 to 1800 MHz (UL), 2110 to 2200 MHz (DL)
Band 71: 663 to 698 MHz (UL), 617 to 652 MHz (DL)
5GNR Sub 6GHZ
n1: 1920 to 1980 MHz (UL), 2110 to 2170 MHz (DL)
n2: 1850 to 1910 MHz (UL), 1930 to 1990 MHz (DL)
n3: 1710 to 1785 MHz (UL), 1805 to 1880 MHz (DL)

	n5: 824 to 849 MHz (UL), 869 to 894 MHz (DL)
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	n48: 3550 to 3700 MHZ (UL/DL)
	n66: 1710 to 1800 MHz (UL), 2110 to 2200 MHz (DL)
	n71: 663 to 698 MHz (UL), 617 to 652 MHz (DL)
	n77: 3300 to 4200 MHz (UL/DL)
	n78: 3300 to 3800 MHz (UL/DL)
	n79: 4400 to 5000 MHz (UL/DL)
Wireless Protocol Standards	NR Sub6G rel15
	200MHz 2 DLCA, 256 QAM
	200MHz 2 ULCA, 256 QAM
	15KHz/30KHz SCS for FDD/TDD
	LTE Rel15
	100MHz 5 DLCA, 256 QAM
	40MHz 2 ULCA, 256 QAM
	UMTS Rel8
GPS	GPS only support L1 C/A
GPS Bands	GPS: L1 (1575.42MHz)
	GLONASS: L1 (1602MHz)
	BeidouB1(1561.098MHz)
	Galileo E1 (1575.42)
	QZSS(1575.42 MHz)

	Maximum Data Rates	Sub-6 SA Peak DL 4.67Gbps/UL 1.25Gbps Sub-6 NSA Peak DL 3.74Gbps/UL 835Mbps LTE Peak DL 1.6Gbps (CAT19)/UL 211Mbps (CAT18) UMTS/HSPA+ DL DC-HSPA+: 42 Mbps (CAT24)/UL 11.5 Mbps (CAT7)
	Maximum Output Power	NR： 23 dBm in all band except (n30 = 22dBm & n48=21dBm & n77=25dBm & n41/n77/n78 = 26dBm) LTE: 23 dBm in all band except (B30 = 22dBm & B48=21dBm & B41=26dBm) UMTS: 23.5 dBm
	Maximum Power Consumption	3500 mA (peak); 1674mA (average)
	Form Factor	M.2, 3052-S3 Key B
	Weight	8.7g
	Dimensions (Length x Width x Thickness)	52 mm × 30 mm × 2.3 mm
	Embedded eSIM	Support
HP 5G NR Sub-6 CAT19 HP Go Solution [5]	**Technology Operating Bands**	WCDMA/HSPA+ operating bands: Band 1: 1920 to 1980 MHz (UL), 2110 to 2170 MHz (DL) Band 2: 1850 to 1910 MHz (UL), 1930 to 1990 MHz (DL) Band 4: 1710 to 1755 MHz (UL), 2110 to 2155 MHz (DL) Band 5: 824 to 849 MHz (UL), 869 to 894 MHz (DL) Band 8: 880 to 915 MHz (UL), 925 to 960 MHz (DL) LTE FDD/TDD operating bands: Band 1: 1920 to 1980 MHz (UL), 2110 to 2170 MHz (DL) Band 2: 1850 to 1910 MHz (UL), 1930 to 1990 MHz (DL)

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	200MHz 2 ULCA, 256 QAM
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	100MHz 5 DLCA, 256 QAM
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GPS Bands	GPS: L1 (1575.42MHz)
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	QZSS(1575.42 MHz)

Maximum Data Rates	Sub-6 SA Peak DL 4.67Gbps/UL 1.25Gbps Sub-6 NSA Peak DL 3.74Gbps/UL 835Mbps LTE Peak DL 1.6Gbps (CAT19)/UL 211Mbps (CAT18) UMTS/HSPA+ DL DC-HSPA+: 42 Mbps (CAT24)/UL 11.5 Mbps (CAT7)
Maximum Output Power	NR： 23 dBm in all band except (n30 = 22dBm & n48=21dBm & n77=25dBm & n41/n77/n78 = 26dBm) LTE: 23 dBm in all band except (B30 = 22dBm & B48=21dBm & B41=26dBm) UMTS: 23.5 dBm
Maximum Power Consumption	3500 mA (peak); 1674mA (average)
Form Factor	M.2, 3052-S3 Key B
Weight	8.7g
Dimensions (Length x Width x Thickness)	52 mm × 30 mm × 2.3 mm
Embedded eSIM	Support

5. 5G module is optional and must be configured at the factory. Module designed for 5G NR NSA (non-standalone) networks as carriers deploy Evolved-Universal Terrestrial Radio Access New Radio Dual Connectivity (ENDC) with both 100Mhz of 5G NR and LTE channel bandwidth, using 256QAM 4x4 as defined by 3GPP. Module requires activation and separately purchased service contract. Check with service provider for coverage and availability in your area. Data connection, upload and download speeds will vary due to network, location, environment, network conditions, and other factors. Backwards compatible to 4G LTE and 3G HSPA technologies. 5G module planned to be available in select platforms and select countries, where carrier supported.

NFC Mirage WNC XRAV-1	**Dimensions (L x W x H)**	17.00 x 10.00 x 2.00 mm (0.67 x 0.39 x 0.08 inch)
	Chipset	NPC300
	System Interface	I2C
	NFC RF Standards	ISO/IEC 14443 A
		ISO/IEC 14443 B
		ISO/IEC 15693
		ISO/IEC 18092
		ECMA-340 NFCIP-1 Target and Initiator
		ECMA-320 NFCIP-2
	NFC Forum Support	Type 1,
		Type 2,
		Type 3 / Type 4,
		NFCIP-1 / NFCIP-2
	Reader Mode (PCD-VCD)	ISO/IEC 14443 A
		ISO/IEC 14443 B
		ISO/IEC 15693
		MIFARE 1K
		MIFARE 4K
		MIFARE DESFire
		FeliCa
		Jewel and Topaz
	Card Emulation Mode (PICC-VICC)	ISO/IEC 14443 A
		ISO/IEC 14443 B and B'
		MIFARE
		FeliCa
	Frequency	13.56 MHz
	NFC Modes Supported	Reader/Writer,
		Peer-to-Peer
	Raw RF Data Rates	106 kbps,
		212 kbps,
		424 kbps,
		848 kbps

	Operating Temperature	0°C to 70°C (32°F to 158°F)
	Storage Temperature	125°C to 125°C (-4°F to 257°F)
	Humidity	Operating: 10 - 90%
		Non-Operating: 5 - 95%
	Supply Operating Voltage	4.35 to 5.25 Volts
	I/O Voltage	1.8V or 3.3V
	Power Consumption	Booster enable, VBAT= 3.3V, VCC_BOOST = 5V
	Mode	Power Consumption, Typical
	Polling	7.3 mA
	Detected Test Tag Type 1	Total 283.8 mA
		Net Module 236.8 mA
	Detected Test Tag Type 2	Total 288.8 mA
		Net Module 241.8 mA
	Detected Test Tag Type 3	Total 287.7 mA
		Net Module 240.7 mA
	Detected Test Tag Type 4	Total 282.3 mA
		Net Module 235.3 mA
	Antenna	Antenna connector, 0.5mm pitch, 7 connector FPC. Antenna matching is external to module.
Intel® I219-LM 1GbE Vpro Ethernet Controller	**Connector**	RJ-45
	System Interface	PCI™ (Intel proprietary) + SMBus
	Data Rates Supported	1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 802.3 clauses 40)
		100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30)
		10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14)
		Auto-Negotiation (Automatic Speed Selection)
		Full Duplex Operation at all Speeds
		Half Duplex operation at 10 & 100 Mbit/s
	IEEE Compliance	IEEE 802.1p QoS (Quality of Service) Support
		IEEE 802.1q VLAN support

		IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable)
		IEEE 802.3az EEE (Energy Efficient Ethernet)
	Performance	TCP/IP/UDP Checksum Offload (configurable)
		Protocol Offload (ARP & NS)
		Large send offload and Giant send offload
		Receiving Side Scaling(Hash Mode Only)
		Jumbo Frame 9K
	Power Consumption	Cable Disconnection: 25 mW
		100Mbps Full Run: 450 mW
		1000Mbps Full Run: 1000 mW
		WoL Enable(S3/S4/S5): 50 mW
		WoL Disable(S3/S4/S5): 25 mW
	Power Management	ACPI compliant – multiple power modes
		Situation-sensitive features reduce power consumption
		Advanced link down power saving for reducing link down power consumption
	Management Interface	Auto MDI/MDIX Crossover cable detection
	IT Manageability	Wake-on-LAN from modern standby or sleep state (Magic Packet and Microsoft Wake-Up Frame)
		Wake-on-LAN from off (Magic Packet only)
		PXE 2.1 Remote Boot
		Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30))
		Comprehensive diagnostic and configuration software suite
		Virtual Cable Doctor for Ethernet cable status
	Security & Manageability	Intel® vPro™ support with appropriate Intel® chipset components
HP RW220-GL LTE (Low Power) (CAT-1bis) [6]	**Technology/Operating bands**	FDD LTE: 2100 (Band 1), 1800 (Band 3), 850 (Band 5), 900 (Band 8), 700 (Band 12), 850 (Band 18), 850 (Band 19), 800 (Band 20), 850 (Band 26), 700 (Band 28)
		WIFI Scan : 802.11b
	Wireless Protocol Standards	-3GPP TS 51.010-1 V12.9.0: Mobile Station (MS) conformance

	specification; Part 1: Conformance specification -3GPP TS 36.521-1 V13.3.0: User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Conformance testing -3GPP TS 21.111 V10.0.0: USIM and IC card requirements -3GPP TS 51.011 V4.15.0: Specification of the Subscriber Identity Module -Mobile Equipment (SIM-ME) interface -3GPP TS 31.102 V10.11.0: Characteristics of the Universal Subscriber Identity Module (USIM) application -3GPP TS 31.111 V10.16.0: Universal Subscriber Identity Module (USIM) Application Toolkit (USAT) -3GPP TS 36.124 V13.2.0: Electro Magnetic Compatibility (EMC) requirements for mobile terminals and ancillary equipment -3GPP TS 27.007 V10.0.8: AT command set for User Equipment (UE) -3GPP TS 27.005 V10.0.1: Use of Data Terminal Equipment - Data Circuit terminating Equipment (DTE DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS)
GPS	GPS, Galileo, BeiDou, QZSS, AGPS-MS-B
GPS Bands	GPS L1:1575.42Mhz±1.023Mhz, BDS B1:1561.098Mhz±2.046Mhz , Galileo E1:1575.42Mhz±1.023Mhz , QZSS L1:1575.42Mhz±1.023Mhz
Maximum Data Rates	Downlink: 10Mbps Uplink: 5Mbps
Maximum Output Power	B1/3: 23 +/-2dBm, B5/8/12/18/19/20/26/28: 24 +1.7/-2dBm

Maximum Power Consumption	Peak Current: 290.945mA Average current: 8.035mA
Form Factor	M.2
Weight	3.9g
Dimensions (Length x Width x Thickness)	42.0 mm × 22.0 mm × 2.3 mm
Embedded eSIM	Support

6. LPWAN (also called Mobile Narrowband) supports HP Protect & Trace with Wolf Connect service through the subscription term, but does not support mobile broadband use.

POWER

Power supply availability may vary by country.

100W Wall Mount USB Type-C® GaN Halogen Free AC power adapter	Weight (DC Cable Included)	106 g ± 10 g
	Input	100 Vac ~ 240 Vac
	Input Efficiency	USB-C 90.00 % min at 115 Vac/ 230 Vac @ 20.00 V/ 5.00 A
	Input frequency range	47 Hz ~ 63 Hz
	Input AC current	Max 1.60 A at 90 Vac input
	Output	
	Output power	20.00 V / 100.00 W
	DC output	+ 20.00 V
	Hold - up time	5 ms at 115 Vac input
	Output Over Current Protection	5.40 A (max)
	AC Inlet Type	Fixed 2 Prong
	DC Cable Connector	USB Type-C
	DC Cable Material	Halogen Free
	Connector	
	Connector	Fixed 2 Prong
	Environmental Design	
	Operating temperature	0°C to 35°C (32°F to 95°F)
	Non - operating(storage) temperature	-20°C to 85°C (-4°F to 185°F)
	Altitude	0 m to 5000 m (0 ft to 16404.2 ft)
	Humidity	20 % to 95 %
	Storage Humidity	10 % to 95 %
	EMI and Safety Certifications	Worldwide safety standards - IEC60950-1 and IEC62368-1: 2018, EN62368-1:2014+A11, UL62368-1 Agency approvals - C-UL-US, TUV/GS, TUV/PSE, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC and CECP, CU(EAC), EAEU, KCC(Safety+EMC) and K-MEPS, NOM-001 and 029 NYCE, NRcan, NRCS, ISC, SEC, PSB, Argentina S-mark, Australia GEMS

		and RCM, BIS, BSMI, UAE, UKCA DoC
100W Wall Mount USB Type-C® GaN Halogen Free AC power adapter	Weight (DC Cable Included)	250 g ± 10 g
	Input	100 Vac ~ 240 Vac
	Input Efficiency	USB-C 90.00 % min at 115 Vac/ 230 Vac @ 20.00 V/ 5.00 A
	Input frequency range	47 Hz ~ 63 Hz
	Input AC current	Max 1.60 A at 90 Vac input
	Output	
	Output power	20.00 V / 100.00 W
	DC output	+ 20.00 V
	Hold - up time	5 ms at 115 Vac input
	Output Over Current Protection	5.40 A (max)
	AC Inlet Type	Foldable for 2 prong
	DC Cable Connector	USB Type-C
	DC Cable Material	Halogen Free
	Connector	
	Connector	Foldable for 2 prong
	Environmental Design	
	Operating temperature	0°C to 35°C (32°F to 95°F)
	Non - operating(storage) temperature	-20°C to 85°C (-4°F to 185°F)
	Altitude	0 m to 5000 m (0 ft to 16404.2 ft)
	Humidity	20 % to 95 %
	Storage Humidity	10 % to 95 %
	EMI and Safety Certifications	Worldwide safety standards - IEC60950-1 and IEC62368-1: 2018, EN62368-1:2014+A11, UL62368-1 Agency approvals - C-UL-US, TUV/GS, TUV/PSE, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC and CECP, CU(EAC), EAEU, KCC(Safety+EMC) and K-MEPS, NOM-001 and 029 NYCE, NRcan, NRCS, ISC, SEC, PSB, Argentina S-mark, Australia GEMS and RCM, BIS, BSMI, UAE, UKCA DoC

65W Standard USB Type-C® GaN AC power adapter	Weight (DC Cable Included)	185 g ± 10 g
	Input	100 Vac ~ 240 Vac
	Input Efficiency	USB-C 89.00 % min at 115 Vac/ 230 Vac @ 20.00 V/ 3.25 A
	Input frequency range	47 Hz ~ 63 Hz
	Input AC current	Max 1.60 A at 90 Vac input
	Output	
	Output power	20.00 V / 65.00 W
	DC output	+ 20.00 V
	Hold - up time	5 ms at 115 Vac input
	Output Over Current Protection	5.40 A (max)
	AC Inlet Type	C6
	DC Cable Connector	USB Type-C
	DC Cable Material	Low Halogen
	Connector	
	Connector	C6
	Environmental Design	
	Operating temperature	0°C to 35°C (32°F to 95°F)
	Non - operating(storage) temperature	-20°C to 85°C (-4°F to 185°F)
	Altitude	0 m to 5000 m (0 ft to 16404.2 ft)
	Humidity	20 % to 95 %
	Storage Humidity	10 % to 95 %
	EMI and Safety Certifications	Worldwide safety standards - IEC60950-1 and IEC62368-1: 2018, EN62368-1:2014+A11, UL62368-1 Agency approvals - C-UL-US, TUV/GS, TUV/PSE, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC and CECP, CU(EAC), EAEU, KCC(Safety+EMC) and K-MEPS, NOM-001 and 029 NYCE, NRcan, NRCS, ISC, SEC, PSB, Argentina S-mark, Australia GEMS and RCM, BIS, BSMI, UAE, UKCA DoC

65W Wall Mount USB Type-C® GaN Halogen Free AC power adapter	Weight (DC Cable Included)	185 g ± 10 g
	Input	100 Vac ~ 240 Vac
	Input Efficiency	USB-C 89.00 % min at 115 Vac/ 230 Vac @ 20.00 V/ 3.25 A
	Input frequency range	47 Hz ~ 63 Hz
	Input AC current	Max 1.60 A at 90 Vac input
	Output	
	Output power	20.00 V / 65.00 W
	DC output	+ 20.00 V
	Hold - up time	5 ms at 115 Vac input
	Output Over Current Protection	5.40 A (max)
	AC Inlet Type	Foldable for 2 prong
	DC Cable Connector	USB Type-C
	DC Cable Material	Halogen Free
	Connector	
	Connector	Foldable for 2 prong
	Environmental Design	
	Operating temperature	0°C to 35°C (32°F to 95°F)
	Non - operating(storage) temperature	-20°C to 85°C (-4°F to 185°F)
	Altitude	0 m to 5000 m (0 ft to 16404.2 ft)
	Humidity	20 % to 95 %
	Storage Humidity	10 % to 95 %
	EMI and Safety Certifications	Worldwide safety standards - IEC60950-1 and IEC62368-1: 2018, EN62368-1:2014+A11, UL62368-1 Agency approvals - C-UL-US, TUV/GS, TUV/PSE, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC and CECP, CU(EAC), EAEU, KCC(Safety+EMC) and K-MEPS, NOM-001 and 029 NYCE, NRcan, NRCS, ISC, SEC, PSB, Argentina S-mark, Australia GEMS and RCM, BIS, BSMI, UAE, UKCA DoC

65W Wall Mount USB Type-C® GaN Halogen Free AC power adapter	Weight (DC Cable Included)	185 g ± 10 g
	Input	100 Vac ~ 240 Vac
	Input Efficiency	USB-C 89.00 % min at 115 Vac/ 230 Vac @ 20.00 V/ 3.25 A
	Input frequency range	47 Hz ~ 63 Hz
	Input AC current	Max 1.60 A at 90 Vac input
	Output	
	Output power	20.00 V / 65.00 W
	DC output	+ 20.00 V
	Hold - up time	5 ms at 115 Vac input
	Output Over Current Protection	5.50 A (max)
	AC Inlet Type	Fixed 2 Prong
	DC Cable Connector	USB Type-C
	DC Cable Material	Halogen Free
	Connector	
	Connector	Fixed 2 Prong
	Environmental Design	
	Operating temperature	0°C to 35°C (32°F to 95°F)
	Non - operating(storage) temperature	-20°C to 85°C (-4°F to 185°F)
	Altitude	0 m to 5000 m (0 ft to 16404.2 ft)
	Humidity	20 % to 95 %
	Storage Humidity	10 % to 95 %
	EMI and Safety Certifications	Worldwide safety standards - IEC60950-1 and IEC62368-1: 2018, EN62368-1:2014+A11, UL62368-1 Agency approvals - C-UL-US, TUV/GS, TUV/PSE, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC and CECP, CU(EAC), EAEU, KCC(Safety+EMC) and K-MEPS, NOM-001 and 029 NYCE, NRcan, NRCS, ISC, SEC, PSB, Argentina S-mark, Australia GEMS and RCM, BIS, BSMI, UAE, UKCA DoC

Battery

Battery is internal and replaceable by customer. Serviceable by warranty.

HP Long Life 3 cell, 68Whr Polymer	Weight	251 g ± 10 g (0.55 lb)
	Cells / Type	3 cell Lithium-Ion Polymer /
	Energy	
	Voltage	11.67 V
	Amp - hour capacity	5.830 Ah
	Watt - hour capacity	68Wh.0.00 Wh
	Temperature	
	Operating (Charging)	0°C to 45°C (32°F to 113°F)
	Operating (Discharging)	-10°C to 65°C (14°F to 149°F)
	Optional Travel Battery Available	No
HP Long Life 3 cell, 62Whr Polymer	Weight	292 g ± 10 g (0.64 lb)
	Cells / Type	3 cell Lithium-Ion Polymer / 645974
	Energy	
	Voltage	11.58 V
	Amp - hour capacity	5.355 Ah
	Watt - hour capacity	62Wh.0.00 Wh
	Temperature	
	Operating (Charging)	0°C to 45°C (32°F to 113°F)
	Operating (Discharging)	-10°C to 65°C (14°F to 149°F)
	Optional Travel Battery Available	No

AUDIO

Codec	Realtek ALC3315
Audio I/O Ports	3.5mm Headset: CTIA only; Headphone-out
Internal Speaker Amplifier	TI TAS2783A 23-V Soundwire Mono Smart Amplifier
Multi-streaming Capable	Playback multi-streaming can be enabled in the audio control panel to allow independent audio streams to be sent to/from the front jacks or integrated speaker. Following Microsoft behavior.
Sampling	DAC: Supports resolutions from 16-bit to 24-bit;48.0 kHz to 48.0 kHz ADC: Supports resolutions from 16-bit to 24-bit;44.1 kHz to 48.0 kHz
Internal Speaker	Yes

FINGERPRINT READER

Sensor vendor	SYNAPTICS
Sensor type	Capacitive
DPI resolution	363 DPI
Scan area	104 x 86 pixels
False Rejection Rate	< 3%
False Acceptance Rate	< 0.001%
Mobile Voltage Operation	2.7 V ~ 3.6 V
Operating Temperature	5°C ~ 60°C (41°F ~ 140°F)
Current Consumption Image	100 mA max
Low Latency Wait For Finger	260 uA
Capture Rate	50 frames/sec
ESD Resistance	IEC 61000-4-2 4B (+15KV)
Detection Matrix	363 dpi / 7.4 x 6.0 mm sensor area

Sensor vendor	ELAN
Sensor type	Capacitive
DPI resolution	363 DPI
Scan area	56 x 56 pixels
False Rejection Rate	< 3%
False Acceptance Rate	< 0.001%
Mobile Voltage Operation	2.8 V ~ 3.6 V
Operating Temperature	-20°C ~ 80°C (-4°F ~ 176°F)
Current Consumption Image	100 mA max
Low Latency Wait For Finger	300 uA
Capture Rate	50 frames/sec
ESD Resistance	IEC 61000-4-2 4B (+15KV)
Detection Matrix	363 dpi / 4.0 x 4.0 mm sensor area

Sensor vendor	Goodix
Sensor type	Capacitive
DPI resolution	500 DPI

Scan area	176x 54 pixels
False Rejection Rate	<2%
False Acceptance Rate	< 0.001%
Mobile Voltage Operation	2.8 V ~ 3.6 V
Operating Temperature	-40°C~125°C (-40°F ~ 257°F)
Current Consumption Image	50 mA max
Low Latency Wait For Finger	360 uA
Capture Rate	50 frames/sec
ESD Resistance	IEC 61000-4-2 4B (+15KV)
Detection Matrix	500 dpi / 8.9 x 2.7 mm sensor area

OPTIONS

Container Name	Description	Part Number
Adapters	HP 240W Thunderbolt 4 Cable	BR1W8AA
	HP HDMI to VGA Adapter	H4F02AA
	HP USB 3.0 to Gigabit RJ45 Adapter G2	4Z7Z7AA
	HP USB-C to DisplayPort Adapter G2	8Y8Y1AA
	HP USB-C to HDMI 2.0 Adapter	1WC36AA
	HP USB-C to RJ45 Adapter G2	4Z527AA
	HP USB-C to USB 3.0 Adapter	N2Z63AA
	HP USB-C to VGA Adapter	N9K76AA
Audio - Earbuds	Poly Voyager Free 60+ Carbon Black Earbuds	7Y8G4AA
	Poly Voyager Free 60+ Carbon Black Earbuds	7Y8H0AA
Audio - Headset	Poly Blackwire 3210 Monaural USB-C Headset	8X214AA
	Poly Blackwire 3215 Monaural USB-C Headset	8X227AA
	Poly Blackwire 3220 Stereo USB-C Headset	8X228AA
	Poly Blackwire 3225 Stereo USB-C Headset	8X229AA
	Poly Blackwire 3310 Monaural USB-C Headset	8X215AA
	Poly Blackwire 3310 Monaural USB-C Headset	8X216AA
	Poly Blackwire 3315 Monaural USB-C Headset	8X217AA
	Poly Blackwire 3315 Monaural USB-C Headset	8X218AA
	Poly Blackwire 3320 Stereo USB-C Headset	8X219AA
	Poly Blackwire 3320 Stereo USB-C Headset	8X220AA
	Poly Blackwire 3325 Stereo USB-C Headset	8X221AA
	Poly Blackwire 3325 Stereo USB-C Headset	8X222AA
	Poly Blackwire 5210 Monaural USB-C Headset	8X230AA
	Poly Blackwire 5220 Stereo USB-C Headset	8X231AA
	Poly Blackwire 8225 Stereo USB-C Headset	8X223AA
	Poly Blackwire 8225 Stereo USB-C Headset	8X225AA
	Poly EncorePro 320 Binaural Headset	77T26AA
	Poly EncorePro 510 Monaural Headset	783Q2AA
	Poly EncorePro 510 Monoaural Headset	783Q1AA
	Poly EncorePro 520 Binaural Headset	783P6AA

Poly EncorePro 520 Binaural Headset	783P7AA
Poly EncorePro 530 Discreet Headset	783P2AA
Poly EncorePro 530 Headset	783P3AA
Poly EncorePro 540 Convertible Headset	783P0AA
Poly EncorePro 540 Convertible Headset	783P1AA
Poly EncorePro 720 Binaural Headset	8R707AA
Poly EncorePro HW710 Single Ear Headset	8R708AA
Poly EncorePro Monoaural 310 Headset	77T43AA
Poly EncorePro Monoaural 515 with USB-A Headset	783R0AA
Poly EncorePro Monoaural 515 with USB-A Headset	783R1AA
Poly EncorePro Stereo 525 with USB-A Headset	783R2AA
Poly EncorePro USB-A Monoaural 715 Headset	783N5AA
Poly EncorePro USB-A Stereo 525 Headset	783R3AA
Poly EncorePro USB-A Stereo 725 Headset	783M6AA
Poly EncorePro USB-C Monoaural 310 Headset	760Q8AA
Poly Savi 7310 DECT 1880-1900 MHz Single Ear Headset	8D3G3AA
Poly Savi 7310 Monaural DECT 1880-1900 MHz Headset	8L561AA
Poly Savi 7310 Monaural DECT 1880-1900 MHz Headset	8L575AA
Poly Savi 7310 Monaural DECT 1920-1930 MHz Headset	7S430AA
Poly Savi 7310 Monaural DECT 1920-1930 MHz Headset	8L570AA
Poly Savi 7310 Monaural DECT 1920-1930 MHz Headset	8L585AA
Poly Savi 7310-M DECT 1880-1900 MHz Single Ear Headset	8D3K7AA
Poly Savi 7310-M DECT 1920-1930 MHz Single Ear Headset	7S439AA
Poly Savi 7320 Stereo DECT 1880-1900 MHz Headset	8D3F7AA
Poly Savi 7320 Stereo DECT 1880-1900 MHz Headset	8L545AA
Poly Savi 7320 Stereo DECT 1880-1900 MHz Headset	8L553AA
Poly Savi 7320 Stereo DECT 1893-1906 MHz Headset	8D3F8AA
Poly Savi 7320 Stereo DECT 1893-1906 MHz Headset	8L546AA
Poly Savi 7320 Stereo DECT 1893-1906 MHz Headset	8L555AA
Poly Savi 7320 Stereo DECT 1910-1920 MHz Headset	8D3G0AA
Poly Savi 7320 Stereo DECT 1920-1930 MHz Headset	7S429AA
Poly Savi 7320 Stereo DECT 1920-1930 MHz Headset	8L549AA
Poly Savi 7320 Stereo DECT 1920-1930 MHz Headset	8L559AA

Poly Savi 7320-M Stereo DECT 1880-1900 MHz Headset	8D3J6AA
Poly Savi 7320-M Stereo DECT 1893-1906 MHz Headset	8D3K2AA
Poly Savi 7320-M Stereo DECT 1910-1920 MHz Headset	8D3K0AA
Poly Savi 7320-M Stereo DECT 1920-1930 MHz Headset	7S435AA
Poly Savi 8210 DECT 1880-1900 MHz USB-A Headset	8D3E9AA
Poly Savi 8210 DECT 1880-1900 MHz USB-A Headset	8D3F1AA
Poly Savi 8210 DECT 1920-1930 MHz USB-A Headset	77T29AA
Poly Savi 8210 DECT 1920-1930 MHz USB-A Headset	77T31AA
Poly Savi 8220 DECT 1880-1900 MHz USB-A Headset	8D3F2AA
Poly Savi 8220 DECT 1880-1900 MHz USB-A Headset	8D3F5AA
Poly Savi 8220 DECT 1920-1930 MHz USB-A Headset	77T33AA
Poly Savi 8220 DECT 1920-1930 MHz USB-A Headset	77Y82AA
Poly Savi 8220 Stereo DECT 1880-1900 MHz Top	8Y9C4AA
Poly Savi 8245 DECT 1880-1900 MHz Headset	8D3H2AA
Poly Savi 8245 DECT 1880-1900 MHz USB-A Headset	8D3F4AA
Poly Savi 8410 Monaural DECT 1880-1900 MHz Headset	8L5A7AA
Poly Savi 8410 Monaural DECT 1880-1900 MHz Headset	8L5A9AA
Poly Savi 8410 Monaural DECT 1920-1930 MHz Headset	8L7E6AA
Poly Savi 8410 Monaural DECT 1920-1930 MHz Headset	8L7E9AA
Poly Savi 8420 Stereo DECT 1880-1900 MHz Headset	8L5B2AA
Poly Savi 8420 Stereo DECT 1880-1900 MHz Headset	8L5B3AA
Poly Savi 8420 Stereo DECT 1920-1930 MHz Headset	8L7F2AA
Poly Savi 8420 Stereo DECT 1920-1930 MHz Headset	8L7F5AA
Poly Savi 8445 DECT 1880-1900 MHz Convertible Headset	8L5B4AA
Poly Savi 8445 DECT 1880-1900 MHz Convertible Headset	8L5B6AA
Poly Savi 8445 DECT 1920-1930 MHz Convertible Headset	8L7F1AA
Poly Savi 8445 DECT 1920-1930 MHz Convertible Headset	8L7F8AA
Poly Voyager 4310 Headset	77Y93AA
Poly Voyager 4310 Monaural Headset	77Y92AA
Poly Voyager 4310 USB-A Headset	76U48AA
Poly Voyager 4310 USB-A Headset	77Y91AA
Poly Voyager 4310 USB-C Headset	77Y94AA
Poly Voyager 4310 USB-C Headset	77Y95AA

	Poly Voyager 4310 USB-C Headset	77Y96AA
	Poly Voyager 4310-M USB-C Headset	77Y97AA
	Poly Voyager 4320 Headset	77Z00AA
	Poly Voyager 4320 Stereo USB-A Headset	77Y99AA
	Poly Voyager 4320 USB-A Headset	76U49AA
	Poly Voyager 4320 USB-A Headset	77Y98AA
	Poly Voyager 4320 USB-C Headset	76U50AA
	Poly Voyager 4320 USB-C Headset	77Z30AA
	Poly Voyager 4320 USB-C Headset	77Z31AA
	Poly Voyager 4320-M Headset	77Z32AA
	Poly Voyager Focus 2 USB-C-C Headset	9T9J3AA
	Poly Voyager Focus 2 USB-C-C Headset	9T9J5AA
	Poly Voyager Focus 2 USB-C-C Headset	9T9J6AA
	Poly Voyager Legend 50 Headset UC	AT9M9AA,AT9M9UT
	Poly Voyager Legend 50-M Headset UC	AJ8V4AA,AJ8V4UT
	Poly Voyager Surround 80 USB-C Headset	8G7T9AA
	Poly Voyager Surround 80 USB-C Headset	8G7U0AA
	Poly Voyager Surround 85 USB-C Headset	8G7T7AA
	Poly Voyager Surround 85 USB-C Headset	8G7T8AA
Audio - Speaker phone	Poly Sync 10 Speakerphone	77P34AA
	Poly Sync 20 Speakerphone USB-C/A Adapter	B95VJUT
	Poly Sync 20+ Speakerphone	B95VKAA
	Poly Sync 20+M Speakerphone USB-C/A Adapter	B95VLAA
	Poly Sync 20-M Speakerphone USB-C/A Adapter	B95VMUT
	Poly Sync 40 Speakerphone	77P35AA
	Poly Sync 40+ USB-A USB-C Speakerphone	77P36AA
	Poly Sync 40+ USB-A USB-C Speakerphone	772C5AA
	Poly Sync 60 Speakerphone	772C2AA
	Poly Sync 60 Speakerphone	77P41AA
	Poly Sync USB-A USB-C 10 Speakerphone	772C3AA
	Poly Sync USB-A USB-C 40 Speakerphone	772C4AA
Camera	HP 625 Webcam	6Y7L1AA
	HP USB-A 325 Webcam	53X27AA

Cases	HP 14 Convertible Laptop Backpack Tote	9C2H1AA
	HP 14 Modular Laptop Sleeve	9J499AA
	HP 15.6 Modular Laptop Backpack	9J496AA
	HP 15.6 Modular Laptop Bag	9J497AA
	HP 15.6 Modular Laptop Sleeve	9J498AA
	HP Campus blue Backpack	7K0E5AA
	HP Campus Core 16 blue Laptop Backpack	B9RB4AA
	HP Campus Core 16 green Laptop Backpack	B9RB5AA
	HP Campus green Backpack	7K0E4AA
	HP Campus XL Marble Stone Backpack	7K0E2AA
	HP Campus XL Tie Dye Backpack	7K0E3AA
	HP Convertible Laptop Stand	9C2H2AA
	HP Everyday 14 odyssey gray Laptop Bag	A08KJAA
	HP Everyday 14 odyssey gray Laptop Briefcase	A08KGAA
	HP Modern 14-inch moonless Night Laptop Briefcase	CJ8D0AA
	HP Modern 14-inch navy blazer Laptop Briefcase	CJ8F8AA
	HP Prelude 15.6 Backpack	1E7D6AA,1E7D6UT,50P32AA
	HP Prelude 15.6 Top Load	1E7D7AA,50P31AA
	HP Prelude Pro Recycled 15.6 Backpack	1X644AA
	HP Prelude Pro Recycled 15.6 Top Load	1X645AA
	HP Protective 13-14 atmospheric blue Laptop Sleeve	C3TR3UT
	HP Protective 13-14 meteor silver Laptop Sleeve	C3TR2UT
	HP Renew Business 14.1 Laptop Bag	3E5F9AA
	HP Renew Business 14.1 Laptop Sleeve	3E2U7AA
	HP Renew Business 15.6 Laptop Bag	3E5F8AA
	HP Renew Business 17.3 Laptop Backpack	3E2U5UT
	HP Renew Business 17.3 Laptop Bag	3E2U6AA
	HP Renew Executive 14.1 Laptop Sleeve	6B8Y3AA
	HP Renew Executive 16 Laptop Backpack	6B8Y1UT
	HP Renew Executive 16 Laptop Bag	6B8Y2AA
	HP Travel 18 Liter 15.6 iron gray Laptop Backpack	6H2D9AA
	HP Travel 25 Liter 15.6 iron gray Laptop Backpack	6H2D8AA
	HP Travel Plus 15 Liter 14 Laptop Bag	A2CE2AA

Commodity	HP USB DVD-Writer External ODD	F2B56AA
	HP 14-inch Widescreen Laptop Privacy Filter	63B28AA
	HP Combination Nano Cable Lock	63B31AA
	HP Essential Combination Nano Cable Lock	1AJ39AA
	HP Nano Keyed Cable Lock	1AJ40AA
	HP Nano Master Keyed Cable Lock	6UW42AA
	HP SureKey Standard/Nano/Wedge Cable Lock	6UW42AA,6UW42UT
Docking	HP Thunderbolt™ 100W G6 Dock	9X472AA,9X472UT
	HP Thunderbolt™ 180W G6 Dock	9X481AA,9X481UT
	HP Thunderbolt™ 280W G6 Dock	AW5L5AA,AW5M5UT
	HP USB-C™ 100W G6 Dock	9X3V1AA,9X3V1UT
Hub	HP 4K USB-C Multiport Hub	6G843AA
	HP Portable USB-C 4K HDMI Hub	BR1U0UT
	HP Portable USB-C Hub	B8SU8UT
	HP Universal USB-C Hub and Laptop Charger Combo	9H0H9AA
	HP Universal USB-C Multiport Hub	50H55UT
	HP USB-C to USB-A Hub	Z6A00AA
	HP USB-C Travel Hub G3	86S97UT
Keyboard	HP 125 G2 Wired Keyboard	AY2Y7AA
	HP 125 Wired Keyboard	266C9AA
	HP 225 Wireless Keyboard	805T1AA
	HP 320K G2 Wired Keyboard	9SR37UT
	HP 405 Backlit Wired Keyboard	7N7C1AA,7N7C1UT
	HP 435 Programmable Wireless Keypad	7N7C3AA
	HP 475 Dual-Mode Wireless Keyboard	7N7B9AA,7N7B9UT
	HP 485 Comfort Wired Keyboard	8T6M2AA
	HP 495K Multi-Device Keyboard	BD5F5UT
	HP 585K Multi-Device Keyboard with Palm Rest	BD5F7AA
	HP 685 Comfort Dual-Mode Keyboard	8T6L9UT
	HP 725 Multi-Device Rechargeable Wireless Keyboard	9T5B2AA
	HP 965 black Ergonomic Wireless Keyboard	7E756AA
	HP 975 Dual-Mode USB+Bluetooth Wireless Keyboard	3Z726AA
Keyboard & Mouse Combo	HP 225 Wired Mouse and Keyboard Combo G2	AX2Y7AA

	HP 225 Wired Mouse and Keyboard Combo Cashmere White G2	AW5S6AA
	HP 235 Wireless Mouse and Keyboard Combo	1Y4D0UT
	HP 685 Comfort Dual-Mode Keyboard and Mouse Combo	8T6L7UT
	HP 725 Multi-Device Rechargeable Wireless Keyboard and Mouse Combo	9T5B0UT
	HP Multi-Device Dual-Mode Mouse and Keyboard Combo 495C	BE1Q0UT
	HP Multi-Device Dual-Mode Mouse and Keyboard Combo 495C White	BE1M6AA
	HP Multi-Device Dual-Mode Mouse and Keyboard Combo with Palm Rest 585C	BD5F3AA
	HP Wired Desktop 320MK Mouse and Keyboard	9SR36UT
Mouse	HP 105 Black Wired Mouse	822M9UT
	HP 105 Mouse Pad	8X595AA
	HP 125 Wired Mouse	265A9UT
	HP 128 Laser Wired Mouse	265D9AA
	HP 205 Desk Mat	8X597AA
	HP 245 Black Bluetooth Mouse	81S67AA,81S67UT
	HP 255 Dual Wireless Mouse	8R3U1AA,8R3U1UT
	HP 285 Silent Wireless Mouse	6G4E6AA
	HP 320M Wired Mouse	9VA80AA
	HP 405 Quiet Black Wireless Mouse	AZ7B3AA
	HP 425 Programmable Wireless Mouse	7M1D5AA
	HP 435 Multi-Device Wireless Mouse	3B4Q5UT
	HP 515 Ultra-Fast Rechargeable Wireless Mouse	9C2F7AA
	HP 685 Comfort Dual-Mode Mouse	8T6M0UT
	HP 695 Qi-Charging Wireless Mouse	8F1Y4AA
	HP 705 Rechargeable Wireless Mouse	AZ7B1AA
	HP 715 Rechargeable Multi-Device Bluetooth Mouse	6E6F0AA
	HP 925 Ergonomic Vertical Wireless Mouse	6H1A5AA
	HP Tilt Ergonomic Mouse 725M	BH0Z5AA
	HP Ultra-Fast Scroll Wireless Mouse 785M	B8YX4AA
Power	HP 110W USB-C Laptop Charger	8B3Y2UT
	HP 140W USB-C Laptop Charger	B7NK0AA

HP 65W Gallium Nitride USB-C LC Laptop Charger	9Y3X5AA,9Y3X5UT
HP 65W LC USB-C AC power adapter	1P3K6AA
HP 65W LC USB-C AC power adapter	AJ7X5AA
HP 65W Gallium Nitride USB-C Laptop Charger	600Q8UT
HP 65W USB-C Laptop Charger	671R3UT
HP 62Wh Replaceable Laptop Battery	BW7P2AA

CHANGELOG

Date of change	Version History		Description of change
March 26, 2026	V1 to V2	Added Updated	Battery Life Section Memory Section
March 31, 2026	V2 to V3	Updated	Memory Section
April 8, 2026	V3 to V4	Updated	Power Section
April 21, 2026	V4 to V5	Updated	Display Section Memory Section
May 12, 2026	V5 to V6	Updated	Processor Section

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