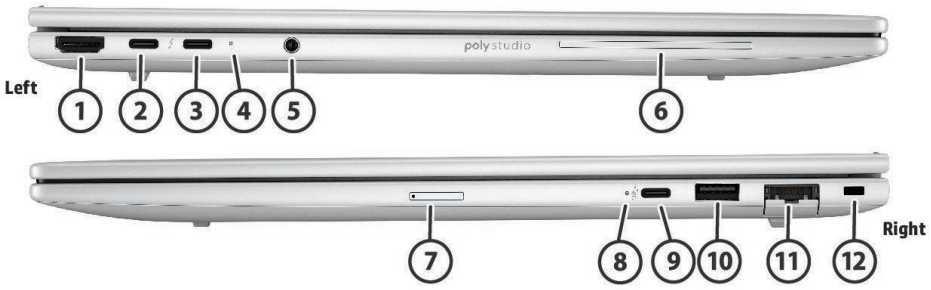
HP EliteBook 8 G1a 16 inch Notebook AI PC



Front

1	Internal Microphone (2)	4	Webcam LED
2	Webcam	5	Touchpad
3	Camera Shutter		



Sides

1	HDMI 2.1	7	Nano SIM card slot (Optional)
2	Thunderbolt™ 4 with Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 2.1) [1]	8	LED Indicator
3	Thunderbolt™ 4 with 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	Drop Jaw RJ-45 (Optional) [2]
		12	Nano Security Slot (Integrated)
6	Smart Card Reader (Optional)		

1. USB 20Gbps signaling rate is not available with Thunderbolt™ 4. Actual throughput may vary.
2. RJ-45 port must be configured at time of purchase and is not available in all regions.

PRODUCT NAME

HP EliteBook 8 G1a 16 inch Notebook AI PC

OPERATING SYSTEM

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

Windows 11 Pro [1]

Windows 11 Pro Education [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]	Cores	Threads	L3 Cache	Max Boost Frequency	Base Frequency	Pro	Integrated Graphics	NPU
AMD Ryzen™ 7 PRO - 250	8 cores	16	16 MB	5.10 GHz	3.30 GHz	X	AMD Radeon™ 780M	16 TOPS
AMD Ryzen™ 7- 250	8 cores	16	16 MB	5.10 GHz	3.30 GHz		AMD Radeon™ 780M	16 TOPS
AMD Ryzen™ 7 PRO -249	8 cores	16	16 MB	4.90 GHz	3.10 GHz	X	AMD Radeon™ 780M	16 TOPS
AMD Ryzen™ 7- 249	8 cores	16	16 MB	4.90 GHz	3.10 GHz		AMD Radeon™ 780M	16 TOPS
AMD Ryzen™ 5 PRO - 224	6 cores	12	16 MB	4.80 GHz	3.30 GHz	X	AMD Radeon™ 760M	16 TOPS
AMD Ryzen™ 5 - 224	6 cores	12	16 MB	4.80 GHz	3.30 GHz		AMD Radeon™ 760M	16 TOPS
AMD Ryzen™ 5 PRO - 230	6 cores	12	16 MB	4.90 GHz	3.50 GHz	X	AMD Radeon™ 760M	16 TOPS
AMD Ryzen™ 5- 230	6 cores	12	16 MB	4.90 GHz	3.50 GHz		AMD Radeon™ 760M	16 TOPS

Processor Family

AMD Ryzen™ 7 PRO - processor

AMD Ryzen™ 7- processor

AMD Ryzen™ 5 PRO - processor

AMD Ryzen™ 5- 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. AMD's numbering is not a measurement of clock speed.
3. AMD Max Boost frequency 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.

GRAPHICS

Integrated

AMD Radeon™ Graphics

Supported Protocols

HDMI 2.1

Displays supported (including Internal display; dock may be required)

Up to 4

Codec

Hardware Acceleration HEVC (H.265) CODEC is supported.

DISPLAY

Actual brightness will be lower with touchscreen or HP Sure View.
Availability may vary by country

Non-Touch

40.6 cm (16") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Anti-Glare, Low Blue Light, 800 nits, sRGB 100%, HP Sure View 5 [5]
40.6 cm (16") diagonal, 2.5K (2560 x 1600), LCD, 120Hz (VRR), UWVA, Anti-Glare, WLED+Low Blue Light, 400 nits, Adobe 100% + DCI-P3 100%
40.6 cm (16") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Anti-Glare, WLED+Low Blue Light, 400 nits, Low Power, sRGB 100%
40.6 cm (16") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Anti-Glare, WLED, 300 nits, sRGB 62.5%

Touch

40.6 cm (16") diagonal, WUXGA (1920 x 1200), LCD, Touch, UWVA, Anti-Glare, WLED, 300 nits, sRGB 62.5%

Display Size (Diagonal)

40.6 cm (16")

Screen to Body Ratio

Up to 90.41%

Aspect Ratio

16:10

Max Hinge Open Angle

169 ± 3° (from 172°)

5. 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 #1	HP Thunderbolt 4 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	1x HDMI 2.1, 2x DisplayPort 1.4, 1x Thunderbolt 4
HP Quick Connect Support	Yes
Technical limitations	HP Quick Connect is supported on this platform. *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. Maximum of (4) displays with maximum resolution of 5K@ 30Hz running Thunderbolt Hosts: 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 #2	HP USB-C Dock G5
Total number of supported displays (incl. the notebook display)	3
Max. resolutions supported	Multi-Function Mode: (2) 5k @ 30Hz and (1) 4k UHD @ 30Hz on any port

	High-Resolution Mode: (2) 5k @ 60Hz on DisplayPort ports and (1) 4k UHD @ 60Hz on HDMI port
Dock Connectors	1x HDMI 2.0, 2x DisplayPort 1.4
Technical limitations	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 #3	HP Thunderbolt™ 120W G4 Dock
Total number of supported displays (incl. the notebook display)	4
Max. resolutions supported	Quad 4K @60Hz Dual 8K single cable@30 for Thunderbolt hosts or USB-C hosts DisplayPort 1.4 with Display Stream Compression in High-Resolution Mode
Dock Connectors	2x HDMI 2.0, 2x DisplayPort 1.4, 1x Thunderbolt 4, 1x USB-C 3.2 Gen 2 DisplayPort
Technical limitations	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.

STORAGE AND DRIVES

All Gen5 SSDs on this system run at Gen4 speed.

For all SSDs, read and write speeds are an average of the maximum values measured under full load conditions. Actual performance may vary +/- 20%.

Storage

2 TB PCIe® Gen5 NVMe™ SSD Value [6]

2 TB PCIe® Gen4x4 NVMe™ SSD Three Layer Cell [6]

1 TB PCIe® Gen5 NVMe™ SSD Value [6]

1 TB PCIe® Gen5x4 NVMe™ Performance Self Encrypted OPAL2 SSD [6]

1 TB PCIe® Gen4x4 NVMe™ SSD Three Layer Cell [6]

1 TB PCIe® NVMe™ SSD Value [6]

512 GB PCIe® Gen5 NVMe™ Self Encrypted OPAL2 SSD Value [6]

512 GB PCIe® Gen5 NVMe™ SSD Value [6]

512 GB PCIe® Gen4x4 NVMe™ SSD Three Layer Cell [6]

512 GB PCIe® Gen4x4 NVMe™ Self Encrypted OPAL2 SSD Three Layer Cell [6]

512 GB PCIe® NVMe™ SSD Value [6]

256 GB PCIe® NVMe™ Self Encrypted OPAL2 SSD Value [6]

256 GB PCIe® NVMe™ SSD Value [6]

6. 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 DDR5-5600 MT/s (2 x 32 GB) [7]

Memory

64GB DDR5-5600 MT/s (2 x 32 GB) [7]

32GB DDR5-5600 MT/s (1 x 32 GB) [7]

32GB DDR5-5600 MT/s (2 x 16 GB) [7]

24GB DDR5-5600 MT/s (2 x 12 GB) [7]

16GB DDR5-5600 MT/s (1 x 16 GB) [7]

16GB DDR5-5600 MT/s (2 x 8 GB) [7]

8GB DDR5-5600 MT/s (1 x 8 GB) Memory [7]

Memory Slots

2 SODIMM

System runs at 5600 MT/s

Supports Dual Channel Memory(optional).

The memory is accessible/upgradeable by IT or self-maintainers only

7. 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

Realtek RTL8111EPP 1GbE Ethernet Controller

WLAN

Qualcomm® Fast Connect 7800 Wi-Fi 7 Bluetooth® 5.4 AIM-T WW WLAN [8]

Mediatek MT7925 Wi-Fi 7 Bluetooth® 5.4 AIM-T WW WLAN [8]

Mediatek RZ616 Wi-Fi 6E Bluetooth® 5.3 AIM-T WLAN [8]

WWAN

MediaTek T700 5G NR WWAN [9]

MediaTek T700 4G LTE-Advanced Pro WWAN [10]

LPWAN

Qualcomm 9205 LTE-M (CAT-M1 fSVC) [11]

NFC

NFC Mirage WNC XRAV-1

Miracast

Native Miracast Support [12]

8. 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. And available in countries where Wi-Fi 6E is supported.
9. 5G module is optional. WWAN-ready configuration must be selected at purchase to add WWAN module at a later date (WWAN After Market Option Kit). Module designed for 5G NR SA(standalone) and 5G NR NSA (non-standalone) Public and Private networks including 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 includes embedded eSIM. 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 and frequency bands supported.

10. 4G module is optional. WWAN-ready configuration must be selected at purchase to add WWAN at a later date. Check with service provider for coverage and availability in your area. Connection, upload and download speeds will vary due to network, location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions.

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

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

AUDIO/MULTIMEDIA

Privacy panel is only available on select models.

Audio

Audio by Poly Studio

2 Integrated stereo speakers

Discrete Amplifiers

2 Integrated dual array microphone

Speaker Power

1W / 8 ohm per speaker

Camera

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

Sensor

Ambient Light Sensor

Color Sensor with Ambient Light Sensing (optional)

Fingerprint Sensor (optional)

Hall Effect Sensor

HP Sure Platform

HP Tamper Lock [13]

Thermal Sensor

13. HP Tamper Lock must be enabled by the customer or your administrator.

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

HP Premium Keyboard, with numeric keypad, spill-resistant, backlit, Durakey, keyboard.

HP Premium Keyboard, with numeric keypad, spill-resistant, Privacy, backlit, Durakey, keyboard.

HP Premium Keyboard, with numeric keypad, 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 - Play and Pause

F11 – Programmable Key

F12 - Print Screen

Power Button (with LED)

Insert

Delete

Home

End

Page up

Page down

Microsoft Copilot [14]

Hidden Function Keys

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

14. May require Windows Update or app download from the Microsoft Store. Microsoft Copilot is NOT available in China, Russia, Belarus, and embargoed regions Cuba, Iran, North Korea, Crimea.

SOFTWARE AND SECURITY

Application Software

Buy Microsoft Office (Sold Separately)

HP Connection Optimizer

Edge Customization

HP Hotkey Support

HP Mac Address Manager

HP Notifications

HP PC Hardware Diagnostics UEFI

HP PC Hardware Diagnostics Windows

HP Privacy Settings

HP Services Scan [15]

HP Smart Support [16]

HP Support Assistant [17]

myHP

HSA Fusion for Commercial

HSA Telemetry for Commercial

Poly Lens [18]

Poly Camera Pro

Manageability Features

HP Client Catalog (download) [19]

HP Client Management Script Library (download) [20]

HP Cloud Recovery [21]

HP Connect for Microsoft Endpoint Manager

HP Driver Packs (download) [22]

HP Image Assistant (download) [23]

HP Manageability Integration Kit (download) [24]

HP Power Manager with Battery Health Manager (download) [25]

Security Features

Secured-Core PC Enable

Windows Hello Enhanced Sign-In Security (ESS)

HP Wolf Security for Business which includes: [26]

HP Tamper Lock

HP Sure Admin [27]

HP Sure Click [28]

HP Sure Recover [29]

HP Sure Run [30]

HP Sure Sense [31]

HP Sure Start [32]

Security- TPM

Model: Nuvoton NPCT760HACYX

Firmware Version: 7.2.4.0

TCG TPM 2.0

FIPS 140-2 Compliant: Yes

BIOS

Absolute Persistence Module [33]

Audio Permanent Disable

HP BIOS Recovery

HP Fingerprint Sensor [34]

BIOS Update via Network

HP BIOSphere Gen6 [35]

HP DriveLock & Automatic DriveLock

HP Secure Erase [36]

HP Wake on WLAN

Smartcard Reader

Model number: Alcorlink AK9563E66-GAF-GR (QFN)

FIPS 140-2 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: 2.11

HP BIOS UEFI Specification Level version 2.11 supported with BIOS update

Class: 3

15. HP Services Scan is preinstalled and/or provided thru Windows Update and checks for service entitlement on each hardware device and downloads the applicable software agent automatically. To disable this feature, please follow the instructions at http://www.hpdaas.com/requirements. The HP Insights agent is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access with connection to the HP Insights agent is required. For full system requirements, please visit http://www.hpdaas.com/requirements. Not available in China.
16. HP Smart Support requires the HP Insights agent to be installed. For more information about how to enable or to download HP Smart Support, please visit http://www.hp.com/smart-support. HP Services Scan is preinstalled and/or provided thru Windows Update and will check entitlement on each hardware device to determine if an HP Insights agent-enabled service has been purchased, and will download applicable software automatically. HP Insights agent is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access is required. For full system requirements or to disable this feature, please visit https://www.hpdaas.com/requirements.
17. HP Support Assistant is available on Windows. For more information, please visit https://support.hp.com/us-en/help/hp-support-assistant.
18. Poly Lens Desktop requires a Windows OS.
19. HP Client Catalog not preinstalled, however available for download at (https://www.hp.com/us-en/solutions/client-management-solutions.html#tab=manageability-tools)
20. HP Client Management Script Library (https://www.hp.com/us-en/solutions/client-management-solutions.html#tab=manageability-tools).
21. 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/computer.

22. HP Driver Packs not preinstalled, however available for download at http://www.hp.com/go/clientmanagement.

23. HP Image Assistant not preinstalled, however available for download at (https://ftp.ext.hp.com/pub/caps-softpaq/cmit/HPIA.html),

24. HP Manageability Integration Kit not preinstalled, however available for downloaded from https://www.hp.com/us-en/solutions/client-management-solutions.html#tab=manageability-tools.

25. 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.

26. 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.

27. 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 smartphone app from the Android or Apple store.

28. HP Sure Click requires Windows 10 and higher. See https://bit.ly/2PrLT6A_SureClick for complete details.

29. 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.

30. HP Sure Run is available on select HP PCs and requires Windows 10 and higher.

31. HP Sure Sense requires Windows 10 and higher. See product specifications for availability. On units with WWAN shipping to China, HP Sure Sense is only available via Softpaq download.

32. HP Sure Start is available on select HP PCs and requires Windows 10 and higher.

33. 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/.

34. HP Fingerprint Reader is an optional feature that requires Windows 10 or 11 and must be configured at purchase.

35. HP BIOSphere Gen6 features may vary depending on the platform and configuration.

36. HP Secure Erase implements the methods outlined in the National Institute of Standards and Technology Special Publication 800-88r "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.

POWER

Power supply availability may vary by country.

Battery is internal. Serviceable by warranty.

Power Supply

HP 100W Slim USB Type-C® AC power adapter

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

HP 65W USB Type-C® Gallium Nitride AC power adapter

HP 65W Slim USB Type-C® AC power adapter

HP 65W Standard USB Type-C® Halogen Free AC power adapter

Power Cord

3-wired plug- 1.0m

Battery

HP Long Life 3 cell, 62Whr Polymer

HP Long Life 8 cell, 77Whr Polymer

Compliant with UL 1642/2054 Standard

Battery Recharge Time

Supports battery HP Fast Charge: approximately 50% in 30 minutes [37]

Battery life

Up to 16 hours 30 minutes with 62Whr battery (AMD HWPT R7, UMA graphic, brightness set to 250nits on a 16-inch WUXGA 400nits LP LCD display, 2x8GB DDR5 memory, 256GB SSD) [38]

Up to 20 hours 00 minutes with 77Whr battery (AMD HWPT R7, UMA graphic, brightness set to 250nits on a 16-inch WUXGA 400nits LP LCD display, 2x8GB DDR5 memory, 256GB SSD) [38]

37. 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.

38. Mobile Mark 25 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.

WEIGHT & DIMENSIONS

Product Weight

Starting at 1.69 kg (3.73 lb) with 62.00 Wh battery

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

Product Dimensions (w x d x h)

359.00 mm (W) x 250.00 mm (D) x 11.55 mm (front)/ 15.50 mm (rear) (14.13 in (W) x 9.84 in (D) x 0.45 in (front)/ 0.61 in (rear))

Maximum height 18.95 mm ~ 21.65mm (0.75~0.85) [39]

Front height measurement is near the front edge where the chassis bottom cover taper begins. Back height measurement is near the back edge where the chassis bottom cover taper ends.

Packaging and Pallet Dimensions

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.

39. 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 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 2.1) [40]

1 x HDMI 2.1

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) [41]

1 x Nano SIM card slot (Optional)

1 x Nano Security Slot (Integrated)

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

41. RJ-45 port must be configured at time of purchase and is not available in all regions.

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. [42]

42. 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	20.0V
Max Operating Power	UMA 100W
	Discrete 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	3048 m (10000 ft)
Non-operating	12192 m (40000 ft)
Industry Standard Certifications	
Regulatory Model Number	HSN-I63C-6
CSA/UL 62368-1	Yes
UL 62368-1	Yes
ENERGY STAR®	Yes [43]
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	Yes [44]
Low Blue Light	Yes
WW RoHS	Yes
CECP	TBD These are requirements from the Category PM, which usually occur after RTP. At this stage, no requests have been received yet.
Medical EMC: IEC 60601-1-2:2014 EN60601-1-2: 2015	Yes
SEPA	TBD These are requirements from the Category PM, which usually occur after RTP. At this stage, no requests have been received yet.
MIL-STD Testing	Yes [45]

43. Configurations that are ENERGY STAR® qualified are identified as ENERGY STAR on HP websites and on http://www.energystar.gov

44. 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.

45. 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

16.0 cm (6.3") diagonal, WUXGA (1920 x 1200), LCE, UWVA, Anti-Glare, WLED, 300 nits, sRGB 62.5%	**Active Area**	344.6784 x 215.424 mm (typ)
	Dimensions (W x H)	350.680 x 226.070 mm (max)
	Weight	390 g (max)
	Diagonal Size	16 inch
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1,000:1(typ)
	Refresh Rate	60 Hz (typ)
	Brightness	300 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	sRGB 62.5%
	Color Depth	8 bit
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	No
	Power Consumption	2.7 W (max) / 3.4 W (max)
16.0 cm (6.3") 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**	344.6784 x 215.424 mm (typ)
	Dimensions (W x H)	349.98 x 224.82 mm (max)
	Weight	280 g (max)
	Diagonal Size	16 inch
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	2,000:1 (typ)
	Refresh Rate	120 Hz (typ)
	Brightness	400 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	2560 x 1600 (2.5K)

	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	Adobe RGB 100% + DCI-P3 100%
	Color Depth	8 bit
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes
	Power Consumption	2.5 W (max) / 3.0 W (max)
16.0 cm (6.3") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Anti-Glare, WLED+Low Blue Light, 400 nits, Low Power, sRGB 100%	Active Area	344.678 x 215.424 mm (typ)
	Dimensions (W x H)	350.680 x 226.470 mm (max)
	Weight	330 g (max)
	Diagonal Size	16 inch
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1,000:1 (typ)
	Refresh Rate	60 Hz (typ)
	Brightness	400 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	sRGB 100%
	Color Depth	8 bit
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes
	Power Consumption	1.60 W (max) / 1.95 W (max)
16.0 cm (6.3") diagonal, WUXGA (1920 x 1200), LCD, UWVA, Anti-Glare, Low Blue Light, 800 nits, sRGB 100%, HP Sure View 5	Active Area	344.680 x 215.420 mm (typ)
	Dimensions (W x H)	349.980 x 224.82 mm (max)
	Weight	310 g (max)
	Diagonal Size	16 inch
	Surface Treatment	Anti-Glare
	Touch Enabled	No

	Contrast Ratio	1,500 : 1 (typ)
	Refresh Rate	60 Hz (typ)
	Brightness	800 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	sRGB 100%
	Color Depth	8 bit
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes
	Power Consumption	1.93 W (max) / 2.38 W (max)
16.0 cm (6.3") diagonal, WUXGA (1920 x 1200), LCD, Touch, UWVA, Anti-Glare, WLED, 300 nits, sRGB 62.5%	**Active Area**	344.680 x 215.420 mm (typ)
	Dimensions (W x H)	350.680 x 226.070 mm (max)
	Weight	400 g (max)
	Diagonal Size	16 inch
	Surface Treatment	Anti-Glare
	Touch Enabled	Yes
	Contrast Ratio	1,000 : 1(typ)
	Refresh Rate	60 Hz (typ)
	Brightness	300 nits (typ)
	Pixel Resolution	RGB
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Aspect Ratio	16:10
	Backlight	WLED
	Color Gamut Coverage	sRGB 62.5%
	Color Depth	8 bit
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	No
	Power Consumption	2.43 W (max) / 3.03 W (max)

STORAGE

All Gen5 SSDs on this system run at Gen4 speed.

For all SSDs, read and write speeds are an average of the maximum values measured under full load conditions. Actual performance may vary +/- 20%.

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.

2 TB PCIe® Gen5 NVMe™ SSD Value [1]	**Form Factor**	M.2 2280
	Capacity	2 TB
	NAND Type	Value
	Weight	10g (0.02 lb)
	Interface	PCIe Gen5 NVMe
	Maximum Sequential Read	7000 MB/s ±20% (in PCIe Gen4x4 slot)
	Maximum Sequential Write	6800 MB/s ±20% (in PCIe Gen4x4 slot)
	Logical Blocks	4,00,07,97,360
	Features	Pyrite 2.0; TRIM; L1.2 Not all features are available in all versions.
2 TB PCIe® Gen4x4 NVMe™ SSD Three Layer Cell [1]	**Form Factor**	M.2 2280
	Capacity	2TB
	NAND Type	TLC
	Weight	10 g (0.02 lb)
	Interface	PCIe NVMe Gen4X4
	Sequential Read	6400 MB/s ±20%
	Sequential Write	5000 MB/s ±20%
	Logical Blocks	4,000,797,360
	Features	Pyrite 2.0; TRIM; L1.2 Not all features are available in all versions.
1 TB PCIe® Gen5 NVMe™ SSD Value [1]	**Form Factor**	M.2 2280
	Capacity	1 TB
	NAND Type	Value
	Weight	10g (0.02 lb)

	Interface	PCIe Gen5 NVMe
	Maximum Sequential Read	7000 MB/s ±20% (in PCIe Gen4x4 slot)
	Maximum Sequential Write	6600 MB/s ±20% (in PCIe Gen4x4 slot)
	Logical Blocks	2,00,04,09,264
	Features	Pyrite 2.0; TRIM; L1.2
		Not all features are available in all versions.
1 TB PCIe® Gen5x4 NVMe™ Performance Self Encrypted OPAL2 SSD [1]	**Form Factor**	M.2 2280
	Capacity	1 TB
	NAND Type	Performance
	Weight	10g (0.02 lb)
	Interface	PCIe Gen5X4 NVMe
	Maximum Sequential Read	7000 MB/s ±20% (in PCIe Gen4x4 slot)
	Maximum Sequential Write	7000 MB/s ±20% (in PCIe Gen4x4 slot)
	Logical Blocks	2,00,04,09,264
	Features	TCG OPAL 2.0; TRIM; L1.2
		Not all features are available in all versions.
1 TB PCIe® Gen4x4 NVMe™ SSD Three Layer Cell [1]	**Form Factor**	M.2 2280
	Capacity	1TB
	NAND Type	TLC
	Weight	10 g (0.02 lb)
	Interface	PCIe NVMe Gen4X4
	Sequential Read	6400 MB/s ±20%
	Sequential Write	5000 MB/s ±20%
	Logical Blocks	2,000,409,264
	Features	Pyrite 2.0; TRIM; L1.2
		Not all features are available in all versions.
1 TB PCIe® NVMe™ SSD Value [1]	**Form Factor**	M.2 2280
	Capacity	1TB
	NAND Type	Value
	Weight	10 g (0.02 lb)

	Interface	PCIe NVMe Gen4X4
	Sequential Read	2200 MB/s ±20%
	Sequential Write	1600 MB/s ±20%
	Logical Blocks	2,000,409,264
	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 [1]	**Form Factor**	M.2 2280
	Capacity	512 GB
	NAND Type	Value
	Weight	10g (0.02 lb)
	Interface	PCIe Gen5 NVMe
	Maximum Sequential Read	7000 MB/s ±20% (in PCIe Gen4x4 slot)
	Maximum Sequential Write	6000 MB/s ±20% (in PCIe Gen4x4 slot)
	Logical Blocks	1,00,02,15,216
	Features	TCG OPAL 2.0; TRIM; L1.2
		Not all features are available in all versions.
512 GB PCIe® Gen5 NVMe™ SSD Value [1]	**Form Factor**	M.2 2280
	Capacity	512 GB
	NAND Type	Value
	Weight	10g (0.02 lb)
	Interface	PCIe Gen5 NVMe
	Maximum Sequential Read	7000 MB/s ±20% (in PCIe Gen4x4 slot)
	Maximum Sequential Write	6000 MB/s ±20% (in PCIe Gen4x4 slot)
	Logical Blocks	1,00,02,15,216
	Features	Pyrite 2.0; TRIM; L1.2
		Not all features are available in all versions.
512 GB PCIe® Gen4x4 NVMe™ SSD Three Layer Cell [1]	**Form Factor**	M.2 2280
	Capacity	512GB
	NAND Type	TLC
	Weight	10 g (0.02 lb)

	Interface	PCIe NVMe Gen4X4
	Sequential Read	6400 MB/s ±20%
	Sequential Write	3500 MB/s ±20%
	Logical Blocks	1,000,215,215
	Features	Pyrite 2.0; TRIM; L1.2
		Not all features are available in all versions.
512 GB PCIe® Gen4x4 NVMe™ Self Encrypted OPAL2 SSD Three Layer Cell [1]	**Form Factor**	M.2 2280
	Capacity	512GB
	NAND Type	TLC
	Weight	10 g (0.02 lb)
	Interface	PCIe NVMe Gen4X4
	Sequential Read	6400 MB/s ±20%
	Sequential Write	3500 MB/s ±20%
	Logical Blocks	1,000,215,215
	Features	TCG Opal 2.0; TRIM; L1.2
		Not all features are available in all versions.
512 GB PCIe® NVMe™ SSD Value [1]	**Form Factor**	M.2 2280
	Capacity	512 GB
	NAND Type	Value
	Weight	10 g (0.02 lb)
	Interface	PCIe NVMe Gen4X4
	Sequential Read	2200 MB/s ±20%
	Sequential Write	1000 MB/s ±20%
	Logical Blocks	1,000,215,215
	Features	Pyrite 2.0; TRIM; L1.2
		Not all features are available in all versions.
256 GB PCIe® NVMe™ Self Encrypted OPAL2 SSD Value [1]	**Form Factor**	M.2 2280
	Capacity	256 GB
	NAND Type	Value
	Weight	10 g (0.02 lb)

	Interface	PCIe NVMe Gen4X4
	Sequential Read	2000 MB/s ±20%
	Sequential Write	900 MB/s ±20%
	Logical Blocks	500,118,192
	Features	TCG Opal 2.0; TRIM; L1.2 Not all features are available in all versions.
256 GB PCIe® NVMe™ SSD Value [1]	**Form Factor**	M.2 2280
	Capacity	256 GB
	NAND Type	Value
	Weight	10 g (0.02 lb)
	Interface	PCIe NVMe Gen4X4
	Sequential Read	2000 MB/s ±20%
	Sequential Write	900 MB/s ±20%
	Logical Blocks	500118192
	Features	Pyrite 2.0; TRIM; L1.2 Not all features are available in all versions.

NETWORKING / COMMUNICATION

Mediatek RZ616 Wi-Fi 6E Bluetooth® 5.3 AIM-T 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 802.11j
		IEEE 802.11k
		IEEE 802.11mc
		IEEE 802.11n
		IEEE 802.11r
		IEEE 802.11v
		IEEE 802.11w
	Interoperability	Wi-Fi certified
	Frequency Band	802.11b/g/n/ax
		2.402 - 2.482 GHz
		802.11a/n/ac/ax
		5.15 - 5.25 GHz
		5.25 - 5.35 GHz
		5.47 - 5.725 GHz
		5.825 - 5.850 GHz
		5.925 - 7.125 GHz
	Data Rates	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
		802.11ac: MSC0~MCS9, (20MHz, 40MHz, 80MHz, 160MHz)
		802.11ax: MSC0~MCS11, (20MHz, 40MHz, 80MHz, 160MHz)
		802.11b: 1, 2, 5.5, 11 Mbps
		802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
		802.11n: MSC0~MCS15, (20MHz, 40MHz)
	Modulation	1024QAM, 16-QAM, 256-QAM, 64-QAM, BPSK, CCK, Direct

	Sequence Spread Spectrum, OFDM, QPSK
Security	802.1x authentication
	AES-CCMP: 128 bit in hardware
	IEEE 802.11i
	IEEE and WiFi certified 64 / 128 bit WEP encryption for a/b/g mode only
	WAPI
	WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.
	WPA2 certification
	WPA3 (personal) certification
Network Architecture	Ad-hoc (Peer to Peer)
Models	Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power	2.4GHz (MIMO, typical):
	▪ 802.11b : +18dBm
	▪ 802.11g : +16.5dBm
	▪ 802.11n/ac/ax (HT20/VHT20/HE20) : +16dBm
	▪ 802.11n/ac/ax (HT40/VHT40/HE40) : +12.5dBm
	5GHz (MIMO, typical):
	▪ 802.11a : +13dBm
	▪ 802.11n/ac/ax (HT20/VHT20/HE20) : +13.5dBm
	▪ 802.11n/ac/ax (HT40/VHT40/HE40) : +12.5dBm
	▪ 802.11ac/ax (VHT80/HE80) : +11.5dBm
	▪ 802.11ax HE160 : +11.5dBm
	6GHz LPI mode (MIMO, typical)::
	▪ 802.11a : 0dBm
	▪ 802.11ax HE20 : +1dBm
	▪ 802.11ax HE40 : +4dBm
	▪ 802.11ax HE80 : +7dBm
	▪ 802.11ax HE160 : +7.5dBm
Power Consumption	Transmit mode : 2.5 W
	Receive mode : 2.0 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[3]	2.4GHz (SISO): ▪802.11b, 11Mbps : -82dBm maximum ▪ 802.11g, 54Mbps : -71dBm maximum ▪ 802.11n, MCS7 : -64dBm maximum ▪ 802.11ac, MCS9 : -52dBm maximum ▪802.11ax, MCS11(HT40): -49dBm maximum 5GHz (SISO): ▪ 802.11a, 54Mbps : -71dBm maximum ▪ 802.11n, MCS07 : -64dBm maximum ▪ 802.11ac, MCS9 : -52dBm maximum ▪802.11ax, MCS11(HE80/HE160): -46dBm maximum 6GHz (SISO): ▪ 802.11a, 54Mbps : -71dBm maximum ▪ 802.11n, MCS7 : -64dBm maximum ▪ 802.11ac, MCS9 : -52dBm maximum ▪802.11ax, MCS11(HE160): -46dBm 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	30.00 x 22.00 x 2.30 mm (1.18 x 0.87 x 0.09 inch)
Weight	1. Type 2230: 2.8 g
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 1.5 Bluetooth device with a maximum transmit power of + 14 dBm and 10 dBm for BR and EDR, respectively.
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	Microsoft Windows ACPI, and USB Bus Support
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	2Mbps LE Advanced Audio Distribution Profile (A2DP) Basic Imaging Profile (BIP) Bluetooth 4.1 -ESR 5/6/7 Compliance Bluetooth 4.2 ESR08 Compliance Bluetooth 5.2 Bluetooth 5.3 wireless card Channel Selection Algo Encryption key size control enhancements ESR9/10 Compliance FAX Profile (FAX) Hands Free Profile (HFP) Headset Profile (HSP)

		LE Advertisement Extensions
		LE Data Packet Length Extension
		LE Dual Mode
		LE L2CAP Connection Oriented Channels
		LE Link Layer
		LE Link Layer Ping
		LE Long Range
		LE Low Duty Cycle Directed Advertising
		LE Privacy 1.2 -Extended Scanner Filter Policies
		LE Privacy 1.2 -Link Layer Privacy
		LE Secure Connection- Basic/Full
		Limited High Duty Cycle Non-Connectable Advertising
		Periodic Advertisement interval
		Train Nudging & Interlaced Scan
		Windows Bluetooth profiles support

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. And 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.

3.Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

Mediatek MT7925 Wi-Fi 7 Bluetooth® 5.4 AIM-T WW WLAN[1]	**Wireless LAN Standards**	IEEE 802.11a
		IEEE 802.11ac
		IEEE 802.11ax
		IEEE 802.11b
		IEEE 802.11be
		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
	2.402 - 2.482 GHz
	802.11a/n/ac/ax
	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	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
	802.11ac: MSC0~MCS9, (20MHz, 40MHz, 80MHz, 160MHz)
	802.11ax: MSC0~MCS11, (20MHz, 40MHz, 80MHz, 160MHz)
	802.11b: 1, 2, 5.5, 11 Mbps
	802.11be: MCS0~13, (20MHz, 40MHz, 80MHz, 160MHz)
	802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
	802.11n: MSC0~MCS15, (20MHz, 40MHz)
Modulation	1024QAM, 16-QAM, 256-QAM, 4096-QAM, 64-QAM, BPSK, CCK, Direct Sequence Spread Spectrum, OFDM, QPSK
Security	802.1x authentication
	AES-CCMP: 128 bit in hardware
	IEEE 802.11i
	IEEE and WiFi certified 64 / 128 bit WEP encryption for a/b/g mode only
	WAPI
	WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES.

	WPA2 certification
	WPA3 (personal) certification
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 minimum
	▪ 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) : +11.5dBm
	▪ 802.11be MCS13(EHT40)(6GHz) : +7.5dBm
	▪ 802.11be MCS13(EHT80)(6GHz) : +7.5dBm
	▪ 802.11be MCS13(EHT160)(6GHz) : +6.5dBm
Power Consumption	Transmit mode : 2.7 W
	Receive mode : 1.8 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[2]	▪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
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	30.00 x 22.00 x 2.30 mm (1.18 x 0.87 x 0.09 inch)
Weight	1. Type 2230: 2.8 g
Operating Voltage	3.3 v +/- 9 %
Integrated Bluetooth® specifications	
Bluetooth® Specification	4.0/4.1/4.2/5.0/5.1/5.2/5.3/5.4 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 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	Microsoft Windows Bluetooth Software
Supported Link Topology	
Power Management	Microsoft Windows ACPI, and USB Bus Support
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	2Mbps LE Advanced Audio Distribution Profile (A2DP) Basic Imaging Profile (BIP) Channel Selection Algo Encryption key size control enhancements ESR9/10 Compliance FAX Profile (FAX) Hands Free Profile (HFP) Headset Profile (HSP) LE Advertisement Extensions LE Data Packet Length Extension LE Dual Mode LE L2CAP Connection Oriented Channels LE Link Layer LE Link Layer Ping LE Long Range LE Low Duty Cycle Directed Advertising

		LE Privacy 1.2 - Extended Scanner Filter Policies
		LE Privacy 1.2 - Link Layer Privacy
		LE Secure Connection- Basic/Full
		Limited High Duty Cycle Non-Connectable Advertising
		Train Nudging & Interlaced Scan

1. 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.
2.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).

Qualcomm® Fast Connect 7800 Wi-Fi 7 Bluetooth® 5.4 AIM-T WW WLAN[1]	**Wireless LAN Standards**	IEEE 802.11a
		IEEE 802.11ac
		IEEE 802.11ax
		IEEE 802.11b
		IEEE 802.11be
		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
		2.402 - 2.482 GHz
		802.11a/n/ac/ax
		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	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11ac : MCS0 ~ MCS9, (20MHz, 40MHz, 80MHz, 160MHz) 802.11ax : MCS0 ~ MCS11, (20MHz, 40MHz, 80MHz, 160MHz) 802.11b: 1, 2, 5.5, 11 Mbps 802.11be : MCS0~13, (20MHz, 40MHz, ,80MHz, 160MHz, 320MHz) 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: MCS 0 ~ MCS 15, (20MHz, 40MHz)
Modulation	1024QAM, 16-QAM, 256-QAM, 4096QAM, 64-QAM, BPSK, CCK, Direct Sequence Spread Spectrum, OFDM, QPSK
Security	802.1x authentication AES-CCMP: 128 bit in hardware IEEE 802.11i IEEE and WiFi certified 64 / 128 bit WEP encryption for a/b/g mode only WAPI WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. WPA2 certification WPA3 (personal) certification
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 minimum ▪ 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) : 11.5dBm ▪ 802.11be MCS13(EHT40)(6GHz) : 7.5dBm ▪ 802.11be MCS13(EHT80)(6GHz) : 7.5dBm ▪ 802.11be MCS13(EHT160)(6GHz) : 6.5dBm ▪ 802.11be MCS13(EHT320)(6GHz) : 4.5dBm
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/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[2]	▪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	30.00 x 22.00 x 2.35 mm (1.18 x 0.87 x 0.09 inch)
Weight	1. Type 2230: 3.1 g
Operating Voltage	3.3 v +/- 9 %
Integrated Bluetooth® specifications	
Bluetooth® Specification	4.0/4.1/4.2/5.0/5.1/5.2/5.3/5.4 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 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	Microsoft Windows Bluetooth Software
Supported Link Topology	
Power Management	Microsoft Windows ACPI, and USB Bus Support
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	2Mbps LE
	Advanced Audio Distribution Profile (A2DP)
	Basic Imaging Profile (BIP)
	Bluetooth 4.1 -ESR 5/6/7 Compliance
	Bluetooth 4.2 ESR08 Compliance
	Bluetooth 5.2
	Bluetooth 5.3 wireless card
	Channel Selection Algo
	Encryption key size control enhancements
	ESR9/10 Compliance
	FAX Profile (FAX)
	Hands Free Profile (HFP)
	Headset Profile (HSP)
	LE Advertisement Extensions
	LE Data Packet Length Extension
	LE Dual Mode
	LE L2CAP Connection Oriented Channels
	LE Link Layer
	LE Link Layer Ping
	LE Long Range
	LE Low Duty Cycle Directed Advertising
	LE Privacy 1.2 -Extended Scanner Filter Policies
	LE Privacy 1.2 -Link Layer Privacy
	LE Secure Connection- Basic/Full

Limited High Duty Cycle Non-Connectable Advertising
Periodic Advertisement interval
Train Nudging & Interlaced Scan
Windows Bluetooth profiles support

1. 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.
2.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).

MediaTek T700 5G NR WWAN	**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 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)
Wireless protocol standards	5GNR Air Interface
	3GPP Rel15 5G NR sub-6
	LTE Rel15
	3GPP Release 8 UMTS Specification
GPS	Standalone/A-GPS (MS-A, MS-B)
GPS bands	GPS L1 (1575.42MHz), GLONASS L1 (1602MHz), Beidou B1 (1561.098MHz), Galileo E1 (1575.42MHz), QZSS (1575.42MHz)
Maximum data rates	SA 5G/NR sub-6 Peak: 4.67 Gbps(Download), 1.25 Gbps(Upload)
Maximum output power	HSPA+: 23.5 dBm
	LTE (all bands except B41): 23.0 dBm (Not support HPUE)
	NR (all band except n41, n77, n78, n79): 23.0 dBm (Not support HPUE)
	NR n41, n77, n78, n79 HPUE: 26.0 dBm (Support HPUE)
Maximum power consumption	5G Sub 6: 3,500 mA LTE: 2,500 mA (peak); mA (average)
Form Factor	M.2; 3052-S3 Key B

Weight	8.6 g (0.303 oz)
Dimensions (Length x Width x Thickness)	30.00 x 52.00 x 2.30 mm (1.18 x 2.05 x 0.09 inch)
embedded eSIM	Yes

1. 5G module is optional. WWAN-ready configuration must be selected at purchase to add WWAN module at a later date (WWAN After Market Option Kit). Module designed for 5G NR SA(standalone) and 5G NR NSA (non-standalone) Public and Private networks including 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 includes embedded eSIM. 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 and frequency bands supported.

MediaTek T700 4G LTE-Advanced Pro WWAN	**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 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)
Wireless protocol standards	LTE Rel15
	3GPP Release 8 UMTS Specification
GPS	Standalone/A-GPS (MS-A, MS-B)
GPS bands	GPS L1 (1575.42MHz), GLONASS L1 (1602MHz), Beidou B1 (1561.098MHz), Galileo E1 (1575.42MHz), QZSS (1575.42MHz)
Maximum data rates	UE Category DL 19 (1.6 Gbps Download) , UE Category UL 18 (211 Mbps Upload)
Maximum output power	LTE (all bands except B41): 23.0 dBm (Not support HPUE)
Maximum power consumption	LTE: 2,500 mA (peak)
Form Factor	M.2; 3052-S3 Key B
Weight	8.4 g (0.296 oz)
Dimensions (Length x Width x Thickness)	30.00 x 52.00 x 2.30 mm (1.18 x 2.05 x 0.09 inch)
embedded eSIM	Yes

1. Mobile Broadband is an optional feature. Connection requires wireless data service contract, network support, and is not available in all areas. Contact service provider to determine the coverage area and availability. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products or in all countries.

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 (PCD-VCD) Mode	ISO/IEC 14443 A
		ISO/IEC 14443 B
		ISO/IEC 15693
		MIFARE 1K
		MIFARE 4K
		MIFARE DESFire
		FeliCa
		Jewel and Topaz
	Card Emulation (PICC-VICC)	ISO/IEC 14443 A
	Mode	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	Operating: 0 °C to 70 °C (32 °F to 158 °F)
		Storage: -20 °C to 125 °C (-4 °F to 257 °F)
	Storage temperature	Operating: 10% - 90% (non-condensing)
		Non-Operating: 5% - 95% (non-condensing)

	Humidity	Operating: 10% - 90% (non-condensing) Non-Operating: 5% - 95% (non-condensing)
	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)	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.

1. Mobile Broadband is an optional feature. Connection requires wireless data service contract, network support, and is not available in all areas. Contact service provider to determine the coverage area and availability. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products or in all countries.

Realtek RTL8111EPP 1GbE Ethernet Controller	**Connector**	RJ-45
	System Interface	PCI (Intel proprietary) + SMBus/ USB
	Data rates supported	10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14), 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30), 1000 Mbit/s operation (1000BASE-T; IEEE 802.3ab; IEEE 802.3 clauses 40),
	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; Jumbo Frame 9K; Receiving Side Scaling;
	Power consumption	Cable Disconnetion: 25mW 100Mbps Full Run: 450mW 1000bp Full Run: 1000mW WoL Enable(S3/S4/S5): 50mW WoL Disable(S3/S4/S5): 25mW
	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));
	Security & Manageability	Support DASH 1.1 compliant/Software KVM ASF 2.0
Qualcomm 9205 LTE-M (CAT-M1 fSVC) [1]	**Technology/Operating bands**	FDD LTE: 1700/2100 (Band 4), 1700/2100 (Band 66), 1800 (Band 3), 1900 (Band 2), 1900 (Band 25), 2100 (Band 1), 700 (Band 12 lower), 700 (Band 13 upper), 700 (Band 14 upper), 700 (Band 28), 700 (band 85), 800 (Band 20), 800 (Band 27), 850 (Band 18 lower), 850 (Band 19 upper), 850 (Band 26), 850 (Band 5), 900 (Band 8) MHz GSM/GPRS/EGPRS: 1800, 1900, 850, 900 MHz
	Wireless protocol standards	3GPP TS 21.111 V10.0.0: USIM and IC card requirements 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) 3GPP TS 27.007 V10.0.8: AT command set for User Equipment

	(UE) 3GPP TS 31.102 V10.11.0: Characteristics of the Universal Subscriber Identity Module (USIM) application 3GPP TS 31.11 V10.16.0: Universal Subscriber Identity Module (USIM) Application Toolkit (USAT) 3GPP TS 36.124 V10.3.0: Electro Magnetic Compatibility (EMC) requirements for mobile terminals and ancillary equipment 3GPP TS 36.521-1 V14.3.0: User Equipment (UE) conformance specification; Radio transmission and reception; Part 1: Conformance testing 3GPP TS 51.010-1 V10.5.0: Mobile Station (MS) conformance specification; Part 1: Conformance specification 3GPP TS 51.011 V4.15.0: Specification of the Subscriber Identity Module -Mobile Equipment (SIM-ME) interface
GPS	Standalone GPS/Beidou/GLONASS/A-GPS (XTRA)
GPS bands	1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz, Beidou 1561.098 MHz
Maximum data rates	LTE FDD: 375.00 Kbps(Download), 1119.00 Kbps(Upload) GPRS: 107.00 Kbps(Download), 85.60 Kbps(Upload) EGPRS: 296.00 Kbps(Download), 236.80 Kbps(Upload)
Maximum output power	LTE (all bands except B41): 21.5 dBm GSM: 34.0 dBm
Maximum power consumption	LTE: 151 mA(peak), 16 mA(average)
Form Factor	M.2
Weight	4.0 g (0.141 oz)
Dimensions (Length x Width x Thickness)	22.00 x 42.00 x 2.30 mm (0.87 x 1.65 x 0.09 inch)
embedded eSIM	Support

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

POWER

Power supply availability may vary by country.

HP 100W Slim USB Type-C® AC power adapter	Weight (DC Cable Included)	340g ± 10g (Not including power cord. Power cord varies by country.)
	Input	100 ~ 240 Vac
	Input Efficiency	81.50% min at 115 Vac / 230 Vac @5.00V 86.70% min at 115 Vac / 230 Vac @9.00V 88.00% min at 115 Vac / 230 Vac @12.00V 89.00% min at 115 Vac / 230 Vac @15.00V 89.00% min at 115 Vac / 230 Vac @20.00V
	Input frequency range	47 ~ 63Hz
	Input AC current	Max. 1.6 A at 90 Vac
	Output	
	Output power	5V/15W 9V/27W 12V/60W 15V/75W 20V/100W
	DC output	5V/9V/12V/15V/20V
	Hold-up time	100% load 5ms at 115 Vac input / 80% load 10ms at 115 Vac input
	Output Over Current Protection	5V/9V/12V/15V<125% max current, 20V<135% max current
	AC Inlet Type	C6
	DC Cable Connector	USB type C
	DC Cable Material	PVC
	Connector	
	Connector	C6
	Environmental Design	
	Operating temperature	0° to 35° C (32° to 95° F)
	Non-operating (storage) temperature	-20° to 85° C (-4° to 185° F)

	Altitude	0 to 5,000 m (0 to 16,400 ft)
	Humidity	20% to 95%
	Storage Humidity	10% to 95%
	EMI and Safety Certifications	CE Mark - full compliance with LVD and EMC directives Worldwide safety standards - IEC60950-1, IEC 62368-1:2014 and IEC62368-1 : 2018, EN62368-1:2020+A11, UL 62368-1 Agency approvals - C-UL-US, TUV/GS, TUV/PSE, EN55032 Class B, FCC Class B, CISPR32 Class B, CCC, CU(EAC), KCC(Safety+EMC), NOM-001 NYCE, NRcan, NRCS, ISC, SEC, PSB, Argentina S-mark, Australia RCM, BIS, BSMI, UAE, UKCA DoC, Ukraine(CoC+DoC+RoHS+ECO)
HP 65W Standard USB Type-C® AC power adapter	Weight (DC Cable Included)	220g ± 10g (Not including power cord. Power cord varies by country.)
	Input	100 ~ 240 Vac
	Input Efficiency	81.50% min at 115 Vac / 230 Vac @5.00V 86.70% min at 115 Vac / 230 Vac @9.00V 88.00% min at 115 Vac / 230 Vac @12.00V 89.00% min at 115 Vac / 230 Vac @15.00V 89.00% min at 115 Vac / 230 Vac @20.00V
	Input frequency range	47 ~ 63Hz
	Input AC current	Max. 1.6 A at 90 Vac
	Output	
	Output power	5V/15W 9V/27W 12V/60W 15V/65W 20V/65W
	DC output	5V/9V/12V/15V/20V
	Hold-up time	100% load 5ms at 115 Vac input
	Output Over Current Protection	< 8.0A
	AC Inlet Type	C6

	DC Cable Connector	USB type C
	DC Cable Material	PVC
	Connector	
	Connector	C6
	Environmental Design	
	Operating temperature	0° to 35° C (32° to 95° F)
	Non-operating (storage) temperature	-20° to 85° C (-4° to 185° F)
	Altitude	0 to 5,000 m (0 to 16,400 ft)
	Humidity	20% to 95%
	Storage Humidity	10% to 95%
	EMI and Safety Certifications	CE Mark – full compliance with LVD and EMC directives Worldwide safety standards – IEC60950-1 and IEC62368-1 : 2018, EN62368-1:2014+A11, UL 62368-1 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 RCM, BIS, BSMI, UAE, UKCA DoC
HP 65W USB Type-C® Gallium Nitride AC power adapter	Weight (DC Cable Included)	105g ± 10g (Not including power cord. Power cord varies by country.)
	Input	100 ~ 240 Vac
	Input Efficiency	81.50% min at 115 Vac / 230 Vac @5.00V 86.70% min at 115 Vac / 230 Vac @9.00V 89.00% min at 115 Vac / 230 Vac @15.00V 89.00% min at 115 Vac / 230 Vac @20.00V
	Input frequency range	47 ~ 63Hz
	Input AC current	Max. 1.6 A at 90 Vac
	Output	
	Output power	5V/15W 9V/27W 15V/65W

		20V/65W
	DC output	5V/9V/15V/20V
	Hold-up time	100% load 5ms at 115 Vac input
	Output Over Current Protection	115% ~ 125%
	AC Inlet Type	C6
	DC Cable Connector	USB type C
	DC Cable Material	PVC
	Connector	
	Connector	C6
	Environmental Design	
	Operating temperature	0° to 35° C (32° to 95° F)
	Non-operating (storage) temperature	-20° to 85° C (-4° to 185° F)
	Altitude	0 to 5,000 m (0 to 16,400 ft)
	Humidity	20% to 95%
	Storage Humidity	10% to 95%
	EMI and Safety Certifications	CE Mark - full compliance with LVD and EMC directives Worldwide safety standards - IEC60950-1 and IEC62368-1 : 2018, EN62368-1:2014+A11, UL 62368-1 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 RCM, BIS, BSMI, UAE, UKCA DoC
HP 65W Slim USB Type-C® AC power adapter	Weight (DC Cable Included)	200g ± 10g (Not including power cord. Power cord varies by country.)
	Input	100 ~ 240Vac
	Input Efficiency	81.50% min at 115 Vac / 230 Vac @5.00V 86.70% min at 115 Vac / 230 Vac @9.00V 88.00% min at 115 Vac / 230 Vac @12.00V 89.00% min at 115 Vac / 230 Vac @15.00V

	89.00% min at 115 Vac / 230 Vac @20.00V
Input frequency range	47 ~ 63Hz
Input AC current	Max. 1.6 A at 90 Vac
Output	
Output power	5V/15W 9V/27W 12V/60W 15V/65W 20V/65W
DC output	5V/9V/12V/15V/20V
Hold-up time	100% load 5ms at 115 Vac input
Output Over Current Protection	< 8.0A
AC Inlet Type	C6
DC Cable Connector	USB type C
DC Cable Material	PVC
Connector	
Connector	C6
Environmental Design	
Operating temperature	0° to 35° C (32° to 95° F)
Non-operating (storage) temperature	-20° to 85° C (-4° to 185° F)
Altitude	0 to 5,000 m (0 to 16,400 ft)
Humidity	20% to 95%
Storage Humidity	10% to 95%
EMI and Safety Certifications	CE Mark - full compliance with LVD and EMC directives Worldwide safety standards - IEC60950-1 and IEC62368-1 : 2018, EN62368-1:2014+A11, UL 62368-1 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 RCM, BIS, BSMI, UAE, UKCA DoC

HP 65W Standard USB Type-C® Halogen Free AC power adapter	Weight (DC Cable Included)	220g ± 10g (Not including power cord. Power cord varies by country.)
	Input	100 ~ 240 Vac
	Input Efficiency	81.50% min at 115 Vac / 230 Vac @5.00V
		86.70% min at 115 Vac / 230 Vac @9.00V
		88.00% min at 115 Vac / 230 Vac @12.00V
		89.00% min at 115 Vac / 230 Vac @15.00V
		89.00% min at 115 Vac / 230 Vac @20.00V
	Input frequency range	47 ~ 63Hz
	Input AC current	Max. 1.6 A at 90 Vac
	Output	
	Output power	5V/15W
		9V/27W
		12V/60W
		15V/65W
		20V/65W
	DC output	5V/9V/12V/15V/20V
	Hold-up time	100% load 5ms at 115 Vac input
	Output Over Current Protection	< 8.0A
	AC Inlet Type	C6
	DC Cable Connector	USB type C
	DC Cable Material	Halogen Free
	Connector	
	Connector	C6
	Environmental Design	
	Operating temperature	0° to 35° C (32° to 95° F)
	Non-operating (storage) temperature	-20° to 85° C (-4° to 185° F)
	Altitude	0 to 5,000 m (0 to 16,400 ft)
	Humidity	20% to 95%
	Storage Humidity	10% to 95%
	EMI and Safety Certifications	CE Mark - full compliance with LVD and EMC directives

		Worldwide safety standards - IEC60950-1 and IEC62368-1 : 2018, EN62368-1:2014+A11, UL 62368-1 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 RCM, BIS, BSMI, UAE, UKCA DoC

Battery

Battery is internal. Serviceable by warranty.

HP Long Life 3 cell, 62Whr Polymer	Weight	Max 236.0 g (0.52 lb)
	Cells/Type	3 cell Lithium-Ion Polymer cell
	Energy	
	Voltage	11.58 V
	Amp-hour capacity	5355 mAh / 5086 mAh
	Watt-hour capacity	62 Whr
	Temperature	
	Operating (Charging)	0° C ~ 40° C (32˚ to 104˚ F)
	Operating (Discharging)	-10° C ~ 40° C (14˚ to 104˚ F)
	Optional Travel Battery Available	No
HP Long Life 8 cell, 77Whr Polymer	Weight	Max 300 g (0.66 lb)
	Cells/Type	8cell Lithium-Ion Polymer cell
	Energy	
	Voltage	15.44 V
	Amp-hour capacity	4988 mAh / 4738 mAh
	Watt-hour capacity	77 Whr
	Temperature	
	Operating (Charging)	0° C ~ 40° C (32˚ to 104˚ F)
	Operating (Discharging)	-10° C ~ 40° C (14˚ to 104˚ F)
	Optional Travel Battery Available	No

AUDIO

Codec	Realtek ALC3315
Audio I/O Ports	3.5mm Headset: CTIA only; Headphone-out
Internal Speaker Amplifier	Cirrus Logic High-Efficiency Boosted Class D 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 MSFT 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

OPTIONS

Category	Description	Part Number
Adapters	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 UC Carbon Black Earbuds +BT700 USB-C Adapter +Basic Charge Case	7Y8H4AA
	Poly Voyager Free 60 UC M Carbon Black Earbuds +BT700 USB-C Adapter +Basic Charge Case	7Y8L8AA
	Poly Voyager Free 60+ UC Carbon Black Earbuds +BT700 USB-C Adapter +Touchscreen Charge Case	7Y8G4AA,7Y8H2AA
	Poly Voyager Free 60+ UC M Carbon Black Earbuds +BT700 USB-C Adapter +Touchscreen Charge Case	7Y8H0AA
Audio - Headset	Poly Blackwire 3210 Monaural USB-C Headset +USB-C/A Adapter	8X214AA
	Poly Blackwire 3215 Monaural USB-C Headset +3.5mm Plug +USB-C/A Adapter	8X227AA
	Poly Blackwire 3220 Stereo USB-C Headset +USB-C/A Adapter	93S87AA,8X228AA
	Poly Blackwire 3310 Monaural Microsoft Teams Certified USB-C Headset +USB-C/A Adapter	8X216AA
	Poly Blackwire 3310 Monaural USB-C Headset +USB-C/A Adapter	8X215AA
	Poly Blackwire 3315 Monaural Microsoft Teams Certified USB-C Headset +3.5mm Plug +USB-C/A Adapter	8X218AA
	Poly Blackwire 3315 Monaural USB-C Headset +3.5mm Plug +USB-C/A Adapter	8X217AA
	Poly Blackwire 3320 Stereo Microsoft Teams Certified USB-C Headset +USB-C/A Adapter	8X220AA
	Poly Blackwire 3320 Stereo USB-C Headset +USB-C/A Adapter	8X219AA

Poly Blackwire 3325 Stereo Microsoft Teams Certified USB-C Headset +3.5mm Plug +USB-C/A Adapter	8X222AA
Poly Blackwire 3325 Stereo USB-C Headset +3.5mm Plug +USB-C/A Adapter	8X221AA
Poly Blackwire 5210 Monaural USB-C Headset +3.5mm Plug +USB-C/A Adapter	8X230AA
Poly Blackwire 5220 Stereo USB-C Headset +3.5mm Plug +USB-C/A Adapter	8X231AA,93S88AA
Poly Blackwire 8225 Stereo Microsoft Teams Certified USB-C Headset +USB-C/A Adapter	8X225AA
Poly Blackwire 8225 Stereo USB-C Headset +USB-C/A Adapter	8X223AA
Poly EncorePro 310 Monaural USB-A Headset	767G1AA
Poly EncorePro 310 Monoaural with Quick Disconnect Headset	77T43AA
Poly EncorePro 310 USB-C Monoaural Headset	760Q8AA
Poly EncorePro 320 Stereo USB-A Headset	767G0AA
Poly EncorePro 320 Stereo USB-C Headset	767F9AA
Poly EncorePro 320 with Quick Disconnect Binaural Headset	77T26AA
Poly EncorePro 510 Monaural Headset +Quick Disconnect	783Q2AA
Poly EncorePro 515 Microsoft Teams Certified Monoaural with USB-A Headset	783R1AA
Poly EncorePro 515 Monoaural with USB-A Headset	783R0AA
Poly EncorePro 520 Binaural Headset +Quick Disconnect	783P7AA
Poly EncorePro 525 Microsoft Teams Certified Stereo with USB-A Headset	783R2AA
Poly EncorePro 525 USB-A Stereo Headset	783R3AA
Poly EncorePro 530 Headset +Quick Disconnect	783P3AA
Poly EncorePro 540 Convertible Headset +Quick Disconnect	783P1AA
Poly EncorePro 715 USB-A Monoaural Headset	783N5AA
Poly EncorePro 720 Binaural Headset +Quick Disconnect	8R707AA
Poly EncorePro 725 USB-A Stereo Headset	783M6AA
Poly EncorePro HW710 Single Ear Headset +Carry Case +Quick Disconnect	8R708AA
Poly Savi 7310 Office DECT 1880-1900 MHz Single Ear	8D3G3AA

Headset (EMEA + APJ)	
Poly Savi 7310 Office Monaural DECT 1920-1930 MHz Headset (NA)	7S430AA
Poly Savi 7310 UC Monaural DECT 1880-1900 MHz Headset (EMEA + APJ)	8L561AA
Poly Savi 7310 UC Monaural DECT 1920-1930 MHz Headset (NA)	8L570AA
Poly Savi 7310 UC Monaural Microsoft Teams Certified DECT 1880-1900 MHz Headset (EMEA + APJ)	8L575AA
Poly Savi 7310 UC Monaural Microsoft Teams Certified DECT 1920-1930 MHz Headset (NA)	8L585AA
Poly Savi 7310-M Office DECT 1880-1900 MHz Single Ear Headset (EMEA + APJ)	8D3K7AA
Poly Savi 7310-M Office DECT 1920-1930 MHz Single Ear Headset (NA)	7S439AA
Poly Savi 7320 Office Stereo DECT 1880-1900 MHz Headset (EMEA + APJ)	8D3F7AA
Poly Savi 7320 Office Stereo DECT 1893-1906 MHz Headset (Japan)	8D3F8AA
Poly Savi 7320 Office Stereo DECT 1910-1920 MHz Headset (NA)	8D3G0AA
Poly Savi 7320 Office Stereo DECT 1920-1930 MHz Headset (NA)	7S429AA
Poly Savi 7320 UC Stereo DECT 1880-1900 MHz Headset (EMEA + APJ)	8L545AA
Poly Savi 7320 UC Stereo DECT 1893-1906 MHz Headset (Japan)	8L546AA
Poly Savi 7320 UC Stereo DECT 1920-1930 MHz Headset (NA)	8L549AA
Poly Savi 7320 UC Stereo Microsoft Teams Certified DECT 1880-1900 MHz Headset (EMEA + APJ)	8L553AA
Poly Savi 7320 UC Stereo Microsoft Teams Certified DECT 1893-1906 MHz Headset (Japan)	8L555AA
Poly Savi 7320 UC Stereo Microsoft Teams Certified DECT	8L559AA

1920-1930 MHz Headset (NA)	
Poly Savi 7320-M Office Stereo DECT 1880-1900 MHz Headset (EMEA + APJ)	8D3J6AA
Poly Savi 7320-M Office Stereo DECT 1893-1906 MHz Headset (Japan)	8D3K2AA
Poly Savi 7320-M Office Stereo DECT 1910-1920 MHz Headset (NA)	8D3K0AA
Poly Savi 7320-M Office Stereo DECT 1920-1930 MHz Headset (NA)	7S435AA
Poly Savi 7410 Office Monaural DECT 1880-1900 MHz Headset (EMEA + APJ)	8L589AA
Poly Savi 7410 Office Monaural DECT 1893-1906 MHz Headset (Japan)	8L591AA
Poly Savi 7410 Office Monaural DECT 1920-1930 MHz Headset (NA)	8L7D5AA
Poly Savi 7410 Office Monaural Microsoft Teams Certified DECT 1880-1900 MHz Headset (EMEA + APJ)	8L593AA
Poly Savi 7410 Office Monaural Microsoft Teams Certified DECT 1893-1906 MHz Headset (Japan)	8L594AA
Poly Savi 7410 Office Monaural Microsoft Teams Certified DECT 1910-1920 MHz Headset (NA)	8L597AA
Poly Savi 7410 Office Monaural Microsoft Teams Certified DECT 1920-1930 MHz Headset (NA)	8L7D7AA
Poly Savi 7420 Office Stereo DECT 1880-1900 MHz Headset (EMEA + APJ)	8L560AA
Poly Savi 7420 Office Stereo DECT 1893-1906 MHz Headset (Japan)	8L563AA
Poly Savi 7420 Office Stereo DECT 1910-1920 MHz Headset (NA)	8L564AA
Poly Savi 7420 Office Stereo DECT 1920-1930 MHz Headset (NA)	8L567AA
Poly Savi 7420 Office Stereo Microsoft Teams Certified DECT 1880-1900 MHz Headset (EMEA + APJ)	8L574AA

Poly Savi 7420 Office Stereo Microsoft Teams Certified DECT 1893-1906 MHz Headset (Japan)	8L576AA
Poly Savi 7420 Office Stereo Microsoft Teams Certified DECT 1910-1920 MHz Headset (NA)	8L579AA
Poly Savi 7420 Office Stereo Microsoft Teams Certified DECT 1920-1930 MHz Headset (NA)	8L583AA
Poly Savi 8210 Office DECT 1880-1900 MHz Single Ear Headset (EMEA + APJ)	8D3K5AA
Poly Savi 8210 Office DECT 1910-1920 MHz Single Ear Headset (NA)	8D3K6AA
Poly Savi 8210 Office DECT 1920-1930 MHz Single Ear Headset (NA)	7S445AA
Poly Savi 8210 UC DECT 1880-1900 MHz USB-A Headset (EMEA + APJ)	8D3E9AA
Poly Savi 8210 UC DECT 1920-1930 MHz USB-A Headset (NA)	77T29AA
Poly Savi 8210 UC Microsoft Teams Certified DECT 1880-1900 MHz USB-A Headset (EMEA + APJ)	8D3F1AA
Poly Savi 8210 UC Microsoft Teams Certified DECT 1920-1930 MHz USB-A Headset (NA)	77T31AA
Poly Savi 8210-M Office DECT 1880-1900 MHz Single Ear Headset (EMEA + APJ)	8D3J8AA
Poly Savi 8210-M Office DECT 1910-1920 MHz Single Ear Headset (NA)	8D3K1AA
Poly Savi 8210-M Office DECT 1920-1930 MHz Single Ear Headset (NA)	7S447AA
Poly Savi 8220 Office Stereo DECT 1880-1890 MHz Headset (EMEA + APJ)	8D3J1AA
Poly Savi 8220 Office Stereo DECT 1880-1900 MHz Headset (EMEA + APJ)	8D3J2AA
Poly Savi 8220 Office Stereo DECT 1910-1920 MHz Headset (NA)	8D3J4AA
Poly Savi 8220 Office Stereo DECT 1920-1930 MHz Headset (NA)	7S4B5AA

Poly Savi 8220 Stereo DECT 1880-1900 MHz Top +Charging Cradle (EMEA + APJ)	8Y9C4AA
Poly Savi 8220 UC DECT 1880-1900 MHz USB-A Headset (EMEA + APJ)	8D3F2AA
Poly Savi 8220 UC DECT 1920-1930 MHz USB-A Headset (NA)	77T33AA
Poly Savi 8220 UC Microsoft Teams Certified DECT 1880-1900 MHz USB-A Headset (EMEA + APJ)	8D3F5AA
Poly Savi 8220 UC Microsoft Teams Certified DECT 1920-1930 MHz USB-A Headset (NA)	77Y82AA
Poly Savi 8220-M Office Stereo DECT 1880-1900 MHz Headset (EMEA + APJ)	8D3H8AA
Poly Savi 8220-M Office Stereo DECT 1910-1920 MHz Headset (NA)	8D3J0AA
Poly Savi 8220-M Office Stereo DECT 1920-1930 MHz Headset (NA)	7S4B6AA
Poly Savi 8245 DECT 1880-1900 MHz Headset +USB-A to USB-C Cable +D400 (APJ)	8D3H2AA
Poly Savi 8245 Office DECT 1880-1900 MHz USB-A Headset (APJ)	8D3H1AA
Poly Savi 8245 Office DECT 1920-1930 MHz USB-A Headset (NA)	7W6D1AA
Poly Savi 8245-M Microsoft Teams Certified DECT 1880-1900 MHz USB-A Headset +D200 (APJ)	8D3F4AA
Poly Savi 8245-M Office Microsoft Teams Certified DECT 1880-1900 MHz USB-A Headset (APJ)	8D3H7AA
Poly Savi 8245-M Office Microsoft Teams Certified DECT 1920-1930 MHz USB-A Headset (NA)	7W069AA
Poly Savi 8410 Office Monaural DECT 1880-1900 MHz Headset (EMEA + APJ)	8L5A7AA
Poly Savi 8410 Office Monaural DECT 1920-1930 MHz Headset (NA)	8L7E6AA
Poly Savi 8410 Office Monaural Microsoft Teams Certified DECT 1880-1900 MHz Headset (EMEA + APJ)	8L5A9AA

Poly Savi 8410 Office Monaural Microsoft Teams Certified DECT 1920-1930 MHz Headset (NA)	8L7E9AA
Poly Savi 8420 Office Stereo DECT 1880-1900 MHz Headset (EMEA + APJ)	8L5B2AA
Poly Savi 8420 Office Stereo DECT 1920-1930 MHz Headset (NA)	8L7F2AA
Poly Savi 8420 Office Stereo Microsoft Teams Certified DECT 1880-1900 MHz Headset (EMEA + APJ)	8L5B3AA
Poly Savi 8420 Office Stereo Microsoft Teams Certified DECT 1920-1930 MHz Headset (NA)	8L7F5AA
Poly Savi 8445 Office DECT 1880-1900 MHz Convertible Headset (APJ)	8L5B4AA
Poly Savi 8445 Office DECT 1920-1930 MHz Convertible Headset (NA)	8L7F8AA
Poly Savi 8445 Office Microsoft Teams Certified DECT 1880-1900 MHz Convertible Headset (APJ)	8L5B6AA
Poly Savi 8445 Office Microsoft Teams Certified DECT 1920-1930 MHz Convertible Headset (NA)	8L7F1AA
Poly Voyager 4310 Microsoft Teams Certified Headset +BT700 dongle +Charging Stand	77Y93AA
Poly Voyager 4310 Microsoft Teams Certified USB-A Headset +BT700 dongle	77Y91AA
Poly Voyager 4310 Microsoft Teams Certified USB-C Headset +BT700 dongle	77Y95AA
Poly Voyager 4310 UC Monaural Headset +BT700 USB-A Adapter +Charging Stand	77Y92AA
Poly Voyager 4310 USB-A Headset +BT700 dongle	76U48AA
Poly Voyager 4310 USB-C Headset +BT700 dongle +Charging Stand	77Y96AA
Poly Voyager 4310 USB-C Headset +BT700 dongle	77Y94AA
Poly Voyager 4310-M Microsoft Teams Certified USB-C Headset +BT700 dongle +Charging Stand	77Y97AA
Poly Voyager 4310-M UC Headset +USB-A to USB-C Cable	7Y210AA

+BT700 dongle	
Poly Voyager 4320 Microsoft Teams Certified Headset +BT700 dongle +Charging Stand	77Z00AA
Poly Voyager 4320 Microsoft Teams Certified USB-A Headset +BT700 dongle	77Y98AA
Poly Voyager 4320 Microsoft Teams Certified USB-C Headset +BT700 dongle	77Z30AA
Poly Voyager 4320 UC Stereo USB-A Headset +BT700 USB-A Adapter +Charging Stand	77Y99AA
Poly Voyager 4320 USB-A Headset +BT700 dongle	76U49AA
Poly Voyager 4320 USB-C Headset +BT700 dongle +Charging Stand	77Z31AA
Poly Voyager 4320 USB-C Headset +BT700 dongle	76U50AA
Poly Voyager 4320-M +USB-A to USB-C Cable +BT700 dongle	7Y211AA
Poly Voyager 4320-M Microsoft Teams Certified Headset +BT700 dongle +Charging Stand	77Z32AA
Poly Voyager Focus 2 Microsoft Teams Certified USB-C-C Headset +USB-C/A Adapter +Charging Stand	9T9J6AA
Poly Voyager Focus 2 USB-C-C Headset +USB-C/A Adapter	9T9J3AA
Poly Voyager Focus 2 USB-C-C Headset +USB-C/A Adapter +Charging Stand	9T9J5AA
Poly Voyager Surround 80 UC Microsoft Teams Certified USB-C Black Headset +USB-C/A Adapter	9D452AA
Poly Voyager Surround 80 UC Microsoft Teams Certified USB-C Headset +USB-C/A Adapter	8H2G3AA,8G7U0AA
Poly Voyager Surround 80 UC Microsoft Teams Certified USB-C Headset +USB-C/A Adapter Demo	9C6W5AA
Poly Voyager Surround 80 UC USB-C Headset +USB-C/A Adapter	8G7T9AA
Poly Voyager Surround 85 UC Microsoft Teams Certified USB-C Headset +USB-C/A Adapter +Charging Stand	8G7T8AA
Poly Voyager Surround 85 UC USB-C Headset +USB-C/A Adapter +Charging Stand	8G7T7AA

Audio - Speaker phone	Poly Sync 10 Microsoft Teams Certified Speakerphone	77P34AA
	Poly Sync 10 Speakerphone +USB-A to USB-C Cable	7S4M6AA
	Poly Sync 10 USB-A USB-C Speakerphone	772C3AA
	Poly Sync 20 Microsoft Teams Certified USB-A Speakerphone	772C8AA
	Poly Sync 20 USB-A Speakerphone	772D2AA
	Poly Sync 20 USB-C Speakerphone	7F0J7AA
	Poly Sync 20+ Microsoft Teams Certified USB-A Speakerphone	772C9AA
	Poly Sync 20+ Microsoft Teams Certified USB-C Speakerphone	772D1AA
	Poly Sync 20+ USB-A Speakerphone	772C6AA
	Poly Sync 20+ USB-C Speakerphone	772D0AA
	Poly Sync 20+M Speakerphone +USB-A to USB-C Cable +BT700 dongle +Pouch	7Y215AA
	Poly Sync 20-M Microsoft Teams Certified USB-C Speakerphone	7F0J8AA
	Poly Sync 20-M Speakerphone +USB-A to USB-C Cable	7S4M1AA
	Poly Sync 40 Microsoft Teams Certified Speakerphone	77P35AA
	Poly Sync 40 USB-A USB-C Speakerphone	772C4AA
	Poly Sync 40+ Microsoft Teams Certified USB-A USB-C Speakerphone +BT700 USB-A Adapter	77P36AA
	Poly Sync 40+ USB-A USB-C Speakerphone +BT700 USB-A Adapter	772C5AA
	Poly Sync 60 Microsoft Teams Certified Speakerphone	77P41AA
	Poly Sync 60 Speakerphone	772C2AA
Camera	HP 625 Webcam	6Y7L1AA
	HP USB-A 325 Webcam	53X27AA,53X27UT
Cases	HP Campus XL Marble Stone Backpack	7K0E2AA
	HP Campus XL Tie Dye Backpack	7K0E3AA
	HP Convertible Laptop Stand	9C2H2AA
	HP Renew Business 17.3 Laptop Backpack	3E2U5UT
	HP Renew Business 17.3 Laptop Bag	3E2U6AA
	HP Renew Executive 16 Laptop Backpack	6B8Y1AA,6B8Y1UT
	HP Renew Executive 16 Laptop Bag	6B8Y2AA
Commodity	HP USB DVD-Writer External ODD	F2B56AA
	HP Combination Nano Cable Lock	63B28AA

	HP Essential Combination Nano Cable Lock	63B31AA
	HP Nano Keyed Cable Lock	1AJ39AA
	HP Nano Master Keyed Cable Lock	1AJ40AA
	HP SureKey Standard/Nano/Wedge Cable Lock	6UW42AA
Docking	HP Thunderbolt 4 100W G6 Dock	9X472UT
	HP Thunderbolt 4 Ultra 180W G6 Dock	9X481UT
	HP Thunderbolt 4 Ultra 280W G6 Dock	AW5M5UT
	HP Thunderbolt™ 120W G4 Dock	4J0A2AA
	HP Thunderbolt 280W G4 Dock w/Combo Cable	4J0G4AA
	HP USB-C™ 120W G5 Dock	5TW10AA
	HP USB-C™/A 120W G2 Universal Dock	5TW13AA
Hub	HP 4K USB-C Multiport Hub	6G843AA,6G843UT
	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	86S97AA,86S97UT
Keyboard	HP 125 G2 Wired USB Keyboard	AY2Y7AA
	HP 320K G2 Wired USB Keyboard	9SR37UT
	HP 405 Multi-Device Backlit Wired Keyboard	7N7C1AA,7N7C1UT
	HP 435 Programmable Wireless Keypad	7N7C3AA
	HP 455 Programmable Wireless Keyboard	4R177AA
	HP 475 Dual-Mode Wireless Keyboard	7N7B9AA,7N7B9UT
	HP 485 Comfort Wired Keyboard	8T6M2AA
	HP 685 Comfort Dual-Mode Keyboard	8T6L9AA,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 G2 White	AW5S6AA
	HP 655 Wireless Keyboard and Mouse Combo	4R009AA
	HP 655 Wireless Keyboard and Mouse Combo White	860P8AA
	HP 685 Comfort Dual-Mode Keyboard and Mouse Combo	8T6L7UT

	HP 725 Multi-Device Rechargeable Wireless Keyboard and Mouse Combo	9T5B0UT
	HP Wired Desktop 320MK Mouse and Keyboard	9SR36UT
Mouse	HP 105 Mouse Pad	8X595AA
	HP 205 Desk Mat	8X597AA
	HP 685 Comfort Dual-Mode Mouse	8T6M0UT
	HP 695 Qi-Charging Wireless Mouse	8F1Y4AA
	HP 715 Rechargeable Multi-Device Bluetooth Mouse	6E6F0AA
	HP 925 Ergonomic Vertical Wireless Mouse	6H1A5AA
	HP Creator Black 935 Wireless Mouse	1D0K8AA
	HP Multi-Device Black 635 Wireless Mouse	1D0K2AA
Power	HP 110W USB-C Laptop Charger	8B3Y2AA,8B3Y2UT
	HP 65W LC USB-C AC power adapter	1P3K6AA
	HP 65W GaN USB-C Laptop Charger	600Q8UT
	HP 65W USB-C Laptop Charger	671R3AA,671R3UT
Networking /Communications	HP 4G LTE-Advanced Pro Cat19 WWAN	B8BD3AA
	HP 5G Sub-6 WWAN	B8BD4AA

CHANGELOG

Date of change	Version History		Description of change
May 14, 2025	V1 to V2	Updated	Battery Life
May 22, 2025	V2 to V3	Updated	Docking Section Camera Section
May 26, 2025	V3 to V4	Updated	Ports Section
June 11, 2025	V4 to V5	Updated	Weight & Dimensions
June 17, 2025	V5 to V6	Updated	Audio/Multimedia
July 21, 2025	V6 to V7	Updated	Power Section
August 19, 2025	V7 to V8	Updated	Software and Security Section
September 1, 2025	V8 to V9	Updated	Networking /Communications Section Options Section
September 5, 2025	V9 to V10	Updated	Networking /Communications Section
September 15, 2025	V10 to V11	Updated	Software and Security Section
October 3, 2025	V11 to V12	Updated	Processors Section
October 24, 2025	V12 to V13	Updated	Weight & Dimensions Section
December 19, 2025	V13 to V14	Updated	Graphics Section
December 24, 2025	V14 to V15	Updated	Display Section
January 29, 2026	V15 to V16	Updated	Callouts Section Ports Section
May 27, 2026	V16 to V17	Updated	Storage and Drives Section
July 29, 2026	V17 to V18	Updated	Processor Section
August 12, 2026	V18 to V19	Updated	Networking /Communications Section
September 2, 2026	V19 to V20	Updated	Storage and Drives Section
September 11, 2026	V20 to V21	Updated	Storage Section
November 19, 2026	V21 to V22	Updated	Software and Security Section

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