

Overview

HP EliteBook 830 13 inch G10 Notebook PC



Left

- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Internal Microphones (2) 2. Ambient Light Sensor (Optional) 3. Webcam 4. Camera Shutter 5. IR Camera (Optional) 6. IR Camera LEDs (Optional) 7. NFC Sensor | <ul style="list-style-type: none"> 8. Glass Clickpad 9. Smartcard Reader (Optional) 10. LED Indicator 11. Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)¹ 12. Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)¹ 13. SuperSpeed USB Type-A 5Gbps signaling rate (USB 3.2 Gen 1) 14. HDMI 2.1 Port (Cable not included) |
|---|--|

1. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

Overview



Right

- | | |
|--|---|
| 1. Power Button Key | 5. SIM Card Slot (Optional) |
| 2. Audio Combo Jack | 6. Touch Fingerprint Sensor (Select models) |
| 3. SuperSpeed USB Type-A 5Gbps signaling rate (Charging) (USB 3.2 Gen 1) | |
| 4. Nano Security Lock Slot (Lock sold separately) | |

Overview

At a Glance

- Preinstalled with Windows 11 versions or FreeDOS
- Premium ultraslim design with precision-crafted all-metal chassis for a premium look and feel
- 13th Generation Intel® Core™ i5, i7 U-series Processors up to ten-core
- New LPDDR5-4800MHz memory with up to 32GB capacity
- 5MP camera with increased 88° field of view allows you to move around more freely in front of the camera or accommodate a group
- Optional ultrabright displays with HP Eye Ease, ambient light and ambient color sensors
- Choice of displays:
 - 33.8 cm (13.3") diagonal WUXGA IPS Anti-Glare LED-backlit non-touch, 250 nits, 45% NTSC
 - 33.8 cm (13.3") diagonal WUXGA IPS Anti-Glare On-Cell LED-backlit touch, 250 nits, 45% NTSC
 - 33.8 cm (13.3") diagonal WUXGA IPS Anti-Glare LED-backlit non-touch, 400 nits, 100% sRGB with HP Eye Ease
 - 33.8 cm (13.3") diagonal WUXGA IPS Anti-Glare LED-backlit non-touch, 1000 nits, 100% sRGB with HP Sure View Reflect with HP Eye Ease
- New enhanced HP Auto Frame provides improved face tracking and more natural framing movement
- New "Be Right Back" functionality allows you to set an image and notify meeting participants you'll "BRB" when you need to leave for a few minutes
- Choose from 38Whr or 51Whr battery options
- HP Wolf Security for Business creates a hardware-enforced, always-on, resilient defense
- Connectivity with optional Intel® 5000 5G/WWAN, and Thunderbolt™ Docking (Dock sold separately)
- Undergoes MIL-STD 810H tests¹
- Supports fast charging (50% in 30 minutes) with no impact on battery recharge cycles
- Can be wiped up to 10,000 times with germicidal cleaning wipes²

1. MIL-STD 810H is not intended to demonstrate fitness of 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.

2. Approved germicidal wipes for use on Select HP Platforms

<https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-9819ENW>

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

Technical Specifications

PRODUCT NAME

HP EliteBook 830 13 inch G10 Notebook PC

OPERATING SYSTEMS

- Preinstalled
- Windows 11 Pro ¹

Windows 11 Pro Education ¹

Windows 11 Home - HP recommends Windows 11 Pro for Business¹

Windows 11 Home Single Language – HP recommends Windows 11 Pro for Business ¹

Windows 11 Pro (Windows 11 Enterprise or Windows 10 Enterprise available with a Volume Licensing Agreement) ¹

Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade) ^{1,2}

FreeDOS

1. Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 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>.

2. This system is preinstalled with Windows 10 Pro software and also comes with a license for Windows 11 Pro software and provision for recovery software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.

PROCESSORS

Processor 3,4,5,6,7	Cores	Number of P-cores	Number of E-cores	Threads	L3 Cache	Max Turbo Frequency		Base Frequency		Intel SIPP/vPro® Enterprise	Intel vPro® Essentials
						P- cores	E- cores	P- cores	E- cores		
Intel® Core™ i7-1365U	10	2	8	12	12 MB	5.2 GHz	3.9 GHz	1.8 GHz	1.3 GHz	X	
Intel® Core™ i7-1355U	10	2	8	12	12 MB	5.0 GHz	3.7 GHz	1.7 GHz	1.2 GHz		
Intel® Core™ i5-1345U	10	2	8	12	12 MB	4.7 GHz	3.5 GHz	1.6 GHz	1.2 GHz	X	
Intel® Core™ i5-1335U	10	2	8	12	12 MB	4.6 GHz	3.4 GHz	1.3 GHz	0.9 GHz		X

3. 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’s numbering, branding and/or naming is not a measurement of higher performance.

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

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5. Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.
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>
7. Intel vPro® requires Windows 10 Pro 64 bit or higher, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or Wi-Fi 6E WLAN and TPM 2.0. Some functionality requires additional 3rd party software in order to run. Features of vPro® Essentials and Enterprise vary. See <http://intel.com/vpro>

CHIPSET

Chipset is integrated with processor

GRAPHICS

Integrated

Intel® Iris® Xe Graphics ⁸

Supports

Support HD decode, DX12, HDMI 2.1, HDCP 2.3 ⁹

8. Intel® Iris® Xe Graphics capabilities require system to be configured with Intel® Core™ i5 or i7 processors and dual channel memory. Intel® Iris® Xe Graphics with Intel® Core™ i5 or 7 processors and single channel memory will only function as UHD graphics.

9. HDMI cable sold separately

DISPLAY

Non-Touch

33.8 cm (13.3") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP camera (1920 x 1200) ^{10,11}

33.8 cm (13.3") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP+IR camera (1920 x 1200) ^{10,11}

33.8 cm (13.3") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for WWAN (1920 x 1200) ^{10,11}

33.8 cm (13.3") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP camera for WWAN (1920 x 1200) ^{10,11}

33.8 cm (13.3") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP+IR camera for WWAN (1920 x 1200) ^{10,11}

33.8 cm (13.3") diagonal WUXGA Bent, anti-glare UWVA eDP1.2, micro-edge, 250 nits, 45% NTSC, Narrow Bezel (1920 x 1200) ^{10,11}

33.8 cm (13.3") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP+PSR, 400 nits, 100% sRGB, Low Power, Ambient Light Sensor+Ambient Color Sensor for 5MP Camera (1920 x 1200) with HP Eye Ease ^{10,11}

33.8 cm (13.3") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP+PSR, 400 nits, 100% sRGB, Low Power, Ambient Light Sensor+Ambient Color Sensor for 5MP+IR Camera (1920 x 1200) with HP Eye Ease ^{10,11}

33.8 cm (13.3") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP+PSR, 400 nits, 100% sRGB, Low Power, Ambient Light Sensor+Ambient Color Sensor for 5MP+IR Camera for WWAN (1920 x 1200) with HP Eye Ease ^{10,11}

33.8 cm (13.3") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP+PSR, 1000 nits, 100% sRGB with HP Sure View Reflect integrated privacy screen, Ambient Light Sensor+Ambient Color Sensor for 5MP camera (1920 x 1200) with HP Eye Ease ^{10,11,12,13}

Technical Specifications

33.8 cm (13.3") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP+PSR, 1000 nits, 100% sRGB with HP Sure View Reflect integrated privacy screen, Ambient Light Sensor+Ambient Color Sensor for 5MP+IR camera (1920 x 1200) with HP Eye Ease ^{10,11,12,13}

33.8 cm (13.3") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP1.3+PSR, 1000 nits, 100% sRGB with HP Sure View Reflect integrated privacy screen, Ambient Light Sensor+Ambient Color Sensor for 5MP+IR camera for WWAN (1920 x 1200) with HP Eye Ease ^{10,11,12,13}

Touch

33.8 cm (13.3") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP+IR camera Touch on Panel (1920 x 1200) ^{10,11,13}

33.8 cm (13.3") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP+IR camera for WWAN Touch on Panel (1920 x 1200) ^{10,11,13}

DisplayPort™ 1.4

HDMI 2.1 Support resolution up to 4K @60 Hz ⁹

Displays support

Supports dual display through the dock

Display Size (Diagonal)

13.3" diagonal

33.8 cm (13.3") diagonal

9. HDMI cable sold separately

10. HD content required to view HD images.

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

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

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

DOCKING (Sold Separately)

Docking station model #1	HP Thunderbolt 120W G4 Dock
Docking station model #2	HP Thunderbolt 280W G4 Dock
Docking station model #3	HP USB-C Dock G5
Docking station model #4	HP USB-C/A Universal Dock G2
Docking station model #5	HP USB-C G5 Essential Dock

For additional aftermarket options and docking specs please see page 43.

Technical Specifications

STORAGE AND DRIVES

Primary Storage

2 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ¹⁴
1 TB PCIe® Gen4x4 NVMe™ SED TLC OPAL2¹⁴
1 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ^{14,15}
512 GB PCIe® Gen4x4 NVMe™ SED TLC OPAL2 ¹⁴
512 GB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ¹⁴
512 GB PCIe® NVMe™ Value M.2 SSD ¹⁴
256 GB PCIe® Gen4x4 NVMe™ Value SED TLC OPAL2¹⁴
256 GB PCIe® NVMe™ Value M.2 SSD ¹⁴

14. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.

15. Available only to HK (Hong Kong), TW (Taiwan) and CN (China).

MEMORY

Maximum Memory

32 GB LPDDR5-4800MHz RAM ¹⁶

Memory

32 GB LPDDR5-4800MHzRAM ¹⁶
16 GB LPDDR5-4800MHzRAM¹⁶
8GB LPDDR5-4800MHzRAM¹⁶

Memory Slots

Memory soldered down
LPDDR5, System runs at: 4800MHz
Supports Dual Channel Memory

16. 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.

Technical Specifications

NETWORKING/COMMUNICATIONS

WLAN

Intel® AX211 Wi-Fi6E+ Bluetooth® 5.3 M.2 160MHz CNVi World-Wide WLAN vPro Wireless Card ¹⁷

Intel® AX211 Wi-Fi6E+ Bluetooth® 5.3 M.2 160MHz CNVi World-Wide WLAN non-vPro Wireless Card ¹⁷

WWAN

Intel® 5000 5G Solution WWAN ^{18,19}

Intel® XMM 7560 R+ LTE-Advanced Pro WWAN (Cat 16) ¹⁸

NFC

Near Field Communication (NFC) module ²⁰

HP Module with NXP NFC Controller NPC300 I2C NCI

Miracast

Native Miracast Support ²¹

17. 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.

18. WWAN module is an optional feature, requires factory configuration and requires separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions.

19. Intel 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.

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

21. Sold separately or as an optional feature.

Technical Specifications

AUDIO/MULTIMEDIA

Audio

Audio by Bang & Olufsen
2 Integrated stereo speakers
Discrete Amplifiers
Integrated dual array microphone

Speaker Power

1W/8ohm Per speaker

Camera

5 MP camera ²¹
5 MP+IR camera ²¹
5 MP + IR camera for face authentication with Windows Hello

Sensors

ALS (ambient light sensor)
Adaptive Color Sensor
Hall effect Sensor Motion AI LSM6DSL
Thermal Sensor
HP Tamper Lock ²²

²¹. Sold separately or as an optional feature.

²². HP Tamper Lock must be enabled by the customer or your administrator.

Technical Specifications

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

HP Premium Keyboard, spill resistant, Backlit keyboard and DuraKeys ²³

HP Premium Keyboard, spill resistant, Non-Backlit keyboard and DuraKeys

HP Premium Keyboard, spill resistant, Backlit keyboard and DuraKeys Privacy

Pointing Device

Clickpad with multi-touch gesture support, taps enabled as default

Microsoft Precision Touchpad Default Gestures Support

Function Keys

ESC: system information

F1 - Display Switching

F2 - Blank or Privacy

F3 - Brightness Down

F4 - Brightness Up

F5 - Audio Mute

F6 - Volume Down

F7 - Volume Up

F8 - Mic Mute

F9 - Blank or Backlit Toggle

F10 - Insert

F11 - Airplane Mode

F12 - HP Command Center

home

end

Power Button (with LED)

Delete

Hidden Function Keys

Fn+R - Break

Fn+S - Sys Rq

Fn+C - Scroll Lock

[23. Backlit keyboard is an optional feature.](#)

Technical Specifications

SOFTWARE AND SECURITY

Preinstalled Software

Software

HP Easy Clean ²⁴

HP PC Hardware Diagnostics Windows

myHP

HP Smart Support ²⁵

HP Services Scan ²⁶

HP Connection Optimizer

HP Hotkey Support

HP Support Assistant²⁷

HP Notifications

HP Privacy Settings

HP Power Manager ²⁸

Microsoft Office sold separately and requires Internet access for activation.

Manageability Features

HP Connect ²⁹

HP Image Assistant Gen5 (download)

HP Manageability Integration Kit (download) ³⁰

HP Client Management Script Library (download)

HP Patch Assistant (download) ³¹

HP Driver Packs (download)

HP Client Catalog (download)

HP Cloud Recovery ³²

Security Management

HP Wolf Security for Business ³³ includes:

HP Sure Click ³⁴

HP Sure Sense ³⁵

HP Sure Run ³⁶

HP Sure Recover³⁷

HP Sure Start ³⁸

HP Tamper Lock³⁹

HP Sure Admin ⁴⁰

BIOS

HP BIOSphere Gen6 ⁴¹

HP Secure Erase ⁴²

Absolute Persistence Module ⁴³

BIOS Update via Network

HP Wake on WLAN

Secured-Core PC Enable ⁴⁴

TPM 2.0 Embedded Security Chip (Common Criteria EAL4+ Certified) (FIPS 140-2 Level 2 Certified)

HP Fingerprint Sensor ⁴⁵

Security

TPM

Model: Nuvoton NPCT760HABYX

Technical Specifications

Version: 7.2.3.1

Revision: TPM 2.0

FIPS 140-2 Compliant: Yes

Smartcard Reader

Model number: Alcor AU9560

FIPS 201 Compliant: Yes

IPv6 Support

Yes

FirstNet Certified

Yes

The BIOS on this notebook implements ISO/IEC 19678:2015 guidelines (formerly NIST 800-147).

UEFI version: 2.7

Class: 3

24. HP Easy Clean requires Windows 10 RS3 and higher and will disable the keyboard, touchscreen, and clickpad only. Ports are not disabled. See user guide for cleaning instructions.

25. HP Smart Support requires HP TechPulse to be installed. For more information about how to enable or to download HP Smart Support, please visit <http://www.hp.com/smart-support>.

26. HP Services Scan is provided with Windows Update on select products and will check entitlement on each hardware device to determine if an HP TechPulse-enabled service has been purchased, and will download applicable software automatically. HP TechPulse is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP TechPulse follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access with connection to TechPulse portal is required. For full system requirements or to disable this feature, please visit <http://www.hpdaas.com/requirements>. Not applicable in China.

27. HP Support Assistance requires Windows and Internet Access

28. HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.

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 Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.

31. 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>.

32. 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, wired network connection. **NOTE:** You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Details please refer to: <https://support.hp.com/us-en/document/c05115630>.

33. HP Wolf Security for Business requires Windows 10 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 and OS requirement.

34. HP Sure Click requires Windows 10 Pro or higher or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.

35. HP Sure Sense is available on select HP PCs with Windows 10 Pro, Windows 10 Enterprise, Windows 11 Pro, or Windows 11 Enterprise OS

36. HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.

Technical Specifications

- 37. HP Sure Recover Gen5 with Embedded Reimaging is an optional feature which requires Windows 10 and higher must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module
 - 38. HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher.
 - 39. HP Tamper Lock must be enabled by the customer or your administrator.
 - 40. HP Sure Admin requires Windows 10 or higher, HP BIOS, HP Manageability Integration Kit from <http://www.hp.com/go/clientmanagement> and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store
 - 41. HP BIOSphere Gen6 features may vary depending on the platform and configuration.
 - 42. HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.
 - 43. Absolute 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/>
 - 44. 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.
 - 45. HP Fingerprint sensor is an optional feature that must be configured at purchase.
-

Technical Specifications

POWER

Power Supply

HP Smart 65 W USB Type-C® adapter ⁴⁶

HP Smart 45 W USB Type-C® adapter ⁴⁶

Battery

HP Long Life 3-cell, 38 Wh Polymer ^{47,48}

HP Long Life 3-cell, 38 Wh Polymer SET ^{47,48}

HP Long Life 3-cell, 51 Wh Polymer ^{47,48}

Power Cord

3-wire plug - 1m ⁴⁶

2-wire plug - 1m ⁴⁶

Battery Life

Up to 15 hours (U15, HP Long Life 3-cell, 51 Wh Li-ion Polymer, UMA graphic, display set to 200nits, 32GB LPDDR5 memory, 512GB NVMe SSD)⁴⁹

46. Availability may vary by country.

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

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

49. MM18 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.

Technical Specifications

WEIGHTS & DIMENSIONS

Product Weight - 38Whr⁵⁰

Starting at 2.79 lb

Starting at 1.266 kg

Product Weight - 51 Whr⁵⁰

Starting at 2.86 lb

Starting at 1.30 kg

Product Dimensions (W x D x H)

11.81 x 8.46 x 0.76 in

30.01 x 21.5 x 1.92 cm

Pallet Dimensions (W x D x H)⁵¹

12"-15" boxes (305mm height): 1200mm x 1000mm x 1080mm

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

51. Product packaging size varies based on options chosen. Please contact your HP representative for your packaging size details.

PORTS/SLOTS

2 Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)⁵²

2 Super Speed USB Type-A 5Gbps signaling rate (1 charging)

1 HDMI 2.1⁹

1 Headphone/microphone combo jack

1 Nano Security Lock Slot (Lock sold separately)

1 Smartcard reader (Optional)

1 nano SIM card slot

52. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

9. HDMI cable sold separately.

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SERVICE AND SUPPORT

1-year warranty and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty except for HP Long Life batteries which will follow the one or three year warranty of the platform. Refer to <http://www.hp.com/support/batterywarranty/> for additional battery information. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: <http://www.hp.com/go/cpc>.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.

Technical Specifications

SYSTEM UNIT

**Stand-Alone Power Requirements
(AC Power)**

Nominal Operating Voltage	Type-C Adapter AC 20V
Average Operating Power	
Integrated graphics	Yes
Discrete Graphics	N/A
Max Operating Power	65W

Temperature

Operating	32° to 95° F (0° to 35° C) (No sustained direct exposure to sunlight) (System performance may be reduced above 32°C (89.6°F))
Non-operating	-4° to 140° F (-20° to 60° C)

Relative Humidity

Operating	10% to 90% (non-condensing)
Non-operating	5% to 95% (38.7° C (101.6° F) maximum wet bulb tempera-ture; non-condensing)

Shock

Operating	40 G, 2 ms, half-sine
Non-operating	240 G, 2 ms, half-sine

Random Vibration

Operating	1.043 grams
Non-operating	3.5 grams

Altitude (unpressurized)

Operating	10,000 ft (3,048 m)
Non-operating	40,000 ft (12,192 m)

Planned Industry Standard**Certifications**

Regulatory Model Number	HSN-I45C-3
CSA/UL 62368-1	Yes
ENERGY STAR®	Yes ⁵⁴
EPEAT®	EPEAT® Gold in the United States ⁵⁵
FCC/ICES/CISPR/VCCI	Yes
CE MARKING	Yes
GS Mark	Yes
	Related commodity should comply with ISO 9241 Standards.
China CCC/SRRC	Yes
Taiwan BSMI/NCC	Yes
Korea KCC/KC/KES	Yes
Ukraine NSoC/TEC	Yes
EAEU Compliance	Yes
Saudi Arabian Compliance	Yes
TCO	Yes
Low Blue Light	Yes
WW RoHS	Yes

Technical Specifications

54. Configurations of the HP EliteBook 830 13 inch G10 Notebook PC that are ENERGY STAR® qualified are identified as HP HP EliteBook 830 13 inch G10 Notebook PC ENERGY STAR on HP websites and on <http://www.energystar.gov>.

55. 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.

DISPLAYS

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

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

13.3 in WUXGA (1920 x 1200) Anti-Glare UWVA WLED+LBL sRGB NB2Y 1000 eDP 1.3+PSR 100 PrivacyG4 Plus bent LCD Panel	Outline Dimensions (W x H x D)	291.380 x 188.640 (max)
	Active Area	286.080 x 178.800 (typ)
	Weight	210 (max)
	Diagonal Size	13.3
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1500:1 (typ)
	Refresh Rate	60 Hz
	Brightness	1000 nits ¹
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Backlight	RGB
	Pixel Resolution	WLED
	Color Gamut Coverage	sRGB 100%
	Color Depth	8
	Viewing Angle	UWVA 85/85/85/85
	Low Blue Light	Yes
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	N/A

13.3 in WUXGA (1920 x 1200) Anti-Glare UWVA LED NTSC NB2X 250 eDP 1.2 w/o PSR 45 bent LCD Panel	Outline Dimensions (W x H x D)	292.040 x 189.830 (max)
	Active Area	286.040 x 178.780 (typ)
	Weight	280 (max)
	Diagonal Size	13.3
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1000:1 (typ)
	Refresh Rate	60 Hz
	Brightness	250 nits ¹
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Backlight	RGB

Technical Specifications

Pixel Resolution	WLED
Color Gamut Coverage	NTSC 45%
Color Depth	6+2
Viewing Angle	UWVA 89/89/89/89
Low Blue Light	No
Power Consumption (W, EBL@ 150nits max/ 200nits max)	2.26 (max) / 2.78 (max)

13.3 in WUXGA (1920 x 1200) Anti-Glare UWVA LED NTSC NB2X 250 TOP eDP 1.2 w/o PSR 45 bent LCD Panel	Outline Dimensions (W x H x D)	292.040 x 189.830 (max)
	Active Area	286.040 x 178.780 (typ)
	Weight	280 (max)
	Diagonal Size	13.3
	Surface Treatment	Anti-Glare
	Touch Enabled	Yes
	Contrast Ratio	800:1(typ)
	Refresh Rate	60 Hz
	Brightness	250 nits ¹
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Backlight	RGB
	Pixel Resolution	WLED
	Color Gamut Coverage	NTSC 45%
	Color Depth	6+2
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	No
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	2.39 (max) / 2.94 (max)

13.3 in WUXGA (1920 x 1200) Anti-Glare UWVA WLED+LBL sRGB NB2X 400 eDP 1.4+PSR2 Low-Power 100 bent LCD Panel	Outline Dimensions (W x H x D)	292.040 x 189.830 (max)
	Active Area	286.040 x 178.780 (typ)
	Weight	185 (max)
	Diagonal Size	13.3
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1200:1(typ)
	Refresh Rate	60 Hz
	Brightness	400 nits ¹
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Backlight	RGB
	Pixel Resolution	WLED

Technical Specifications

Color Gamut Coverage	sRGB 100%
Color Depth	8
Viewing Angle	UWVA 89/89/89/89
Low Blue Light	Yes
Power Consumption (W, EBL@ 150nits max/ 200nits max)	1.21 (max) / 1.45 (max)

Technical Specifications

STORAGE AND DRIVES

For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.

SSD 512GB 2280 PCIe-4x4 NVMe Three Layer Cell	Form Factor	M.2 2280
	Capacity	512GB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s ± 10%
	Minimum Sequential Write	3500 MB/s ± 10%
	Logical Blocks	1,000,215,215
	Features	Pyrite 2.0; TRIM; L1.2

SSD 1TB 2280 PCIe-4x4 NVMe Three Layer Cell¹	Form Factor	M.2 2280
	Capacity	1TB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	3200 MB/s ± 10%
	Minimum Sequential Write	2700 MB/s ± 10%
	Logical Blocks	2,000,409,264
	Features	Pyrite 2.0; TRIM; L1.2

1. Available only to HK (Hong Kong), TW (Taiwan) and CN (China).

SSD 2TB 2280 PCIe-4x4 NVMe Three Layer Cell	Capacity	2TB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s ± 10%
	Minimum Sequential Write	5000 MB/s ± 10%
	Logical Blocks	4,000,797,360
	Features	Pyrite 2.0; TRIM; L1.2

256GB PCIe 2280 NVMe Self Encrypted OPAL2 Value Solid State Drive	Capacity	256GB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	2000 MB/s ± 10%
	Minimum Sequential Write	900 MB/s ± 10%
	Logical Blocks	500,118,192
	Features	TCG Opal 2.0; TRIM; L1.2

Technical Specifications

512GB PCIe-4x4 2280 NVMe Self Encrypted OPAL2 Three Layer Cell Solid State Drive	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s $\pm$ 10%
	Minimum Sequential Write	3500 MB/s $\pm$ 10%
	Logical Blocks	1,000,215,215
	Features	TCG Opal 2.0; TRIM; L1.2

1TB PCIe-4x4 2280 NVMe Self Encrypted OPAL2 Three Layer Cell Solid State Drive	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s $\pm$ 10%
	Minimum Sequential Write	5000 MB/s $\pm$ 10%
	Logical Blocks	2,000,409,264
	Features	TCG Opal 2.0; TRIM; L1.2

SSD 256GB 2280 PCIe NVMe Value	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	2000 MB/s $\pm$ 10%
	Minimum Sequential Write	900 MB/s $\pm$ 10%
	Logical Blocks	500,118,192
	Features	Pyrite 2.0; TRIM; L1.2

SSD 512GB 2280 PCIe NVMe Value	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	2200 MB/s $\pm$ 10%
	Minimum Sequential Write	1000 MB/s $\pm$ 10%
	Logical Blocks	1,000,215,215
	Features	Pyrite 2.0; TRIM; L1.2

Technical Specifications

NETWORKING/COMMUNICATIONS

Intel® AX211 Wi-Fi 6E + Bluetooth® 5.3 M.2 160MHz CNVi World-wide WLAN non-vPro Wireless Card¹	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax 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 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	• 802.11b: 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
	Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
	Security ²	• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • WPA3 certification • IEEE 802.11i • WAPI
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points

Technical Specifications

Output Power ³	• 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 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 : -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, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications	
Form Factor	PCI-Express M.2 MiniCard	
Dimensions	1. Type 2230: 2.3 x 22.0 x 30.0 mm	
Weight	1. Type 2230: 2.8g	
Operating Voltage	3.3v +/- 9%	
Temperature	Operating	14° to 158° F (–10° to 70° C)
	Non-operating	–40° to 176° F (–40° to 80° C)
Humidity	Operating	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
Altitude	Operating	0 to 10,000 ft (3,048 m)

Technical Specifications

	Non-operating	0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED OFF – Radio ON	
HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2/5.3 Wireless Card		
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.	

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. 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.
2. Check latest software/driver release for updates on supported security features.
3. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.
4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

Technical Specifications

Intel® AX211 Wi-Fi 6E +Bluetooth® 5.3 M.2 160MHz CNVi World-Wide WLAN vPro Wireless Card 1@ 5.3 M.2 160MHz CNVi World-wide WLAN non- vPro	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax 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 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	• 802.11b: 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
	Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
	Security²	• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • WPA3 certification • IEEE 802.11i • WAPI
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power³	• 802.11b : +17dBm minimum • 802.11g : +16dBm minimum

Technical Specifications

	• 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 10mW • Radio disabled 8 mW
Power Management	ACPI and PCI Express compliant power management 802.11 compliant power saving mode
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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
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Temperature	Operating 14° to 158° F (–10° to 70° C) Non-operating –40° to 176° F (–40° to 80° C)
Humidity	Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing)
Altitude	Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m)
LED Activity	LED Amber – Radio OFF; LED OFF – Radio ON

HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2/5.3 Wireless Card



Technical 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)
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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. 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.
2. Check latest software/driver release for updates on supported security features.
3. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.
4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

Technical Specifications

Intel® 5G Solution 5000¹ 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)

5G NR 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)

n7: 2500 to 2570 MHz (UL), 2620 to 2690 MHz (DL)

n8: 880 to 915 MHz (UL), 925 to 960 MHz (DL)

n20: 832 to 862 MHz (UL), 791 to 821 MHz (DL)

n25: 1850 to 1915 MHz (UL), 1930 to 1995 MHz (DL)

n28: 703 to 748 MHz (UL), 758 to 803 MHz (DL)

n38: 2570 to 2620 MHz (UL/DL)

n40: 2300 to 2400 MHz (UL/DL)

Technical Specifications

	n41: 2496 to 2690 MHz (UL/DL) 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	5G NR Air Interface 3GPP Rel15 5G NR sub-6 LTE Rel14 20 layers and 2 Gbps downlink (DL) throughput – 4 × 4 MIMO across 5x CA 200 Mbps/uplink (UL) throughput – 40 MHz ULCA and 256 QAM WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification
GPS	Standalone, A-GPS (MS-A, MS-B)
GPS bands	GPS: L1 (1575.42MHz) GLONASS: L1 (1602MHz) BeidouB1(1561.098MHz) Galileo E1 (1575.42) QZSS(1575.42 MHz)
Maximum data rates	SA 5G/NR sub-6 Peak: DL4.67Gbps/ UL 1.25Gbps 5G NSA sub 6G : DL: 3.8 Gbps/UL 700Mbps LTE: ue-CategoryDL 19, (DL : 1.6 Gbps) ue-CategoryUL 18 , (UL: 211Mbps)
Maximum output power	DC-HSPA+: 42 Mbps (Download), 11.5 Mbps (Upload) LTE: 23 dBm in all band except B41 LTE B41 HPUE = 26dBm NR: 23 dBm in all band except n41, n77, n78 and n79 LTE n41, n77, n78 and n79 HPUE = 26dBm HSPA+: 23.5 dBm
Maximum power consumption	5G Sub 6 : 2500 mA LTE: 1,300 mA (peak); 1100 mA (average) HSPA+: 1,100 mA (peak); 800 mA (average)
Form Factor	M.2, 3052-S3 Key B
Weight	8 g
Dimensions (Length x Width x Thickness)	52 mm × 30 mm × 2.3 mm
embedded eSIM Support	embedded eSIM Support

1. Intel® 5G module is optional and must be configured at the factory. Module designed for 5G SA (standalone), and 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.

Technical Specifications

Intel® XMM™ 7560 R+ LTE-Advanced Pro ¹	Technology/Operating bands	FDD LTE: 2100 (Band 1), 1900 (Band 2), 1800 (Band 3), 1700/2100 (Band 4), 850 (Band 5), 2600 (Band 7), 900 (Band 8), 700 (Band 12 lower), 700 (Band 13 upper), 700 (Band 14 upper), 700 (Band 17 lower), 850 (Band 18 lower), 850 (Band 19 upper), 800 (Band 20), 1900 (Band 25), 850 (Band 26), 700 (Band 28), 700 (Band 29 RX only), 2300 (Band 30), 1700/2100 (Band 66), 600 (band 71). TDD LTE: 2100 (Band 34), 2600 (Band 38), 1900 (Band 39), 2400 (Band 40), 2500 (Band 41), 3500 (Band 42), 3700 (Band 43), 3700 (band 48), 5200 (Band 46 RX only) MHz; HSPA+: 2100 (Band 1), 1900 (Band 2), 1700/2100 (Band 4), 850 (Band 5), 900 (Band 8) MHz
	Wireless protocol standards	3GPP Release 12 LTE Specification DL-CAT.16, DL 100MHz BW throughput up to 978Mbps; UL-CAT.13 40MHz throughput up to 150Mbps WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification
	GPS	Standalone GPS/Beidou/Glonass, A-GPS (MS-A, MS-B)
	GPS bands	1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz, Beidou 1561.098 MHz
	Maximum data rates	LTE: 978 Mbps (Download), 150 Mbps (Upload) DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload) HSPA+: 21Mbps (Download), 5.76 Mbps (Upload)
	Maximum output power	LTE: 23 dBm in all band except B41 LTE B41 HPUE = 26dBm HSPA+: 23.5 dBm
	Maximum power consumption	LTE: 1,200 mA (peak); 900 mA (average) HSPA+: 1,100 mA (peak); 800 mA (average)
	Form Factor	M.2, 3042-S3 Key B
	Weight	6 g
	Dimensions (Length x Width x Thickness)	42 x 30 x 2.3 mm

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.

Technical Specifications

NFC NXP NPC300	Dimensions (L x W x H)	17x10x2.0 mm
	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	Tag Type 1, Type 2, Type3 and Type 4, NFCIP-1 and NFCIP-2
	Reader (PCD-VCD) Mode	ISO/IEC 14443 A ISO/IEC 14443 up to 4B ISO/IEC 15693 MIFARE 1K MIFARE 4K MIFARE DESFire FeliCa Jewel and Topaz cards
	Card Emulation (PICC-VICC) Mode	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, 212, 424, 848 kbps
	Operating temperature	0°C to 70°C
	Storage temperature	-20°C to 125°C
	Humidity	10-90% operating 5-95% non-operating
	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

Technical Specifications

Antenna	Antenna connector, 0.5mm pitch, 7 connector FPC. Antenna matching is external to module.
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Technical Specifications

POWER

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

AC Adapter 45 Watt nPFC Standard USB Type C® Straight 1.8m	Dimensions (H x W x D)	3.701 x 1.693 x 1.071 in (9.4 x 4.3 x 2.72 cm)
	Weight	0.44 lb (200 g) max (Not including power cord. Power cord varies by country.)
	Input	100~240VAC
	Input Efficiency	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec: 5V: 81.5% 9V: 86.7% 12V: 87.4% 15V: 87.8%
	Input frequency range	47 ~ 63Hz
	Input AC current	Max. 1.4 A at 90 Vac
	Output	Output power 5V/15W 9V/27W 12V/36W 15V/45W
	DC output	5V/9V/12V/15V
	Hold-up time	100% load 5ms at 115 Vac input
	Output current limit	<5.0A
Connector	USB Type-C®	
Environmental Design	Operating temperature	32°F to 95°F (0°to 35°C)
	Non-operating (storage) temperature	-4°F to 185°F (-20°to 85°C)
	Altitude	0 to 16,400 ft (0 to 5000m)
	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, 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 RCM, BIS, BSMI, UAE, UKCA DoC, USB-IF, Ukraine (CoC+DoC+RoHS+ECO)	

AC Adapter 65 Watt nPFC Standard USB Type C® Straight 1.8m	Dimensions (H x W x D)	3.543 x 2.008 x 1.122 in (9.0 x 5.1 x 2.85 cm)
	Weight	0.53 lb (240 g) max (Not including power cord. Power cord varies by country.)
		100-240Vac



Technical Specifications

Input	Input Efficiency	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec: 5V : 81.5% 9V : 86.7% 12V : 88.0% 15V : 89.0% 20V : 89.0%
	Input frequency range	47-63Hz
Output	Input AC current	Max. 1.6 A at 90 Vac
	Output power	5V/15W 9V/27W 12V/60W 15V/65W 20V/65W
Connector	DC output	5V/9V/12V/15V/20V
	Hold-up time	100% load 5ms at 115 Vac input
Environmental Design	Output current limit	< 8.0A
	USB Type-C®	
EMI and Safety Certifications	Operating temperature	32°F to 95°F (0° to 35°C)
	Non-operating (storage) temperature	-4°F to 185°F (-20° to 85°C)
	Altitude	0 to 16,400 ft (0 to 5000m)
	Humidity	20% to 95%
	Storage Humidity	10% to 95%
	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-C®
Straight AC Power
Adapter**

Dimensions (H x W x D)	3.819 x 2.106 x 0.827 in (9.7x5.35x2.1 cm)		
Weight	0.49 lb (220 g) max (Not including power cord. Power cord varies by country.)		
Input	100-240Vac		
	Input Efficiency	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec: 5V : 81.5% 9V : 86.7% 12V : 88.0% 15V : 89.0% 20V : 89.0%	

Technical Specifications

Output	Input frequency range	47-63Hz
	Input AC current	Max. 1.6 A at 90 Vac
	Output power	5V/15W 9V/27W 12V/60W 15V/65W 20V/65W
	DC output	5V/9V/12V/15V/20V
Connector	Hold-up time	100% load 5ms at 115 Vac input
	Output current limit	< 8.0A
	USB TYPE C®	
	Environmental Design	
	Operating temperature	32°F to 95°F (0° to 35°C)
	Non-operating (storage) temperature	-4°F to 185°F (-20° to 85°C)
	Altitude	0 to 16,400 ft (0 to 5000m)
	Humidity	20% to 95%
EMI and Safety Certifications	Storage Humidity	10% to 95%
	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 3-cell Long Life Li-Ion (WQ 38Wh)¹	Weight	0.178kg +/- 10g(0.392lb)
	Cells/Type	3cell Lithium-Ion Polymer cell / 604975
	Energy	Voltage 11.55V Amp-hour capacity 3.291Ah Watt-hour capacity¹ 38Wh
	Temperature	Operating (Charging) 32° to 113° F (0° to 45° C) Operating (Discharging) 14° to 140° F (-10° to 60° C) Optional Travel Battery Available No

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

Technical Specifications

HP 3-cell Long Life Li-Ion (51 Wh) ¹	Weight	0.229kg +/- 10g (0.505 lb)	
	Cells/Type	3cell Lithium-Ion Polymer cell / 566075	
	Energy	Voltage	11.58V
		Amp-hour capacity	4.431Ah
		Watt-hour capacity ¹	51.3Wh
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 140° F (-10° to 60° C)
		Optional Travel Battery Available	No

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

Technical Specifications

AUDIO

HD Stereo Codec	Realtek ALC3315
Audio I/O Ports	Headset: CTIA only and 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. Following MSFT Behavior
Sampling	DAC:48kHz ADC:48kHz
Wavetable Syntheses	N/A
Analog Audio	Support 3.5mm Headset: CTIA only and Headphone-out
# of Channels on Line-Out	N/A
Internal Speaker	Yes

FINGERPRINT READER

Sensor vendor	Main source: Synaptics FS7605 2nd source: ELAN 80SW
Sensor type	Capacitive
DPI resolution	Main source: 363 DPI 2nd source: 508 DPI
Scan area	Main source: 104 x 86 pixels 2nd source: 80x80 pixels
False Rejection Rate	FRR= $\leq$ 3%
False Acceptance Rate	Main source: FAR 1/100K 2nd source: < 0.001%
Mobile Voltage Operation	Main source: 3.0V to 3.6V 2nd source: 2.7V~3.6V
Operating Temperature	Main source: 0°C~60°C 2nd source: -20°C - +80°C
Current Consumption	Main source: 100mA max
Image	2nd source: 35mA peak
Low Latency Wait For Finger	Main source: 260uA 2nd source: 300uA
Capture Rate	Main source: Image transmitter output frequency 9.6MHz 2nd source: 50 frame/sec
ESD Resistance	IEC 61000-4-2 4B (+15KV)
Detection Matrix	Main source: 363 dpi / 7.4x6mm sensor area 2nd source: 508 dpi / 4x4mm sensor area

Technical Specifications

ENVIRONMENTAL DATA

Eco-Label Certifications & declarations	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. • TCO Certified • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • Korea Eco-label • Japan PC Green label*		
Sustainable Impact Specifications	• Product Carbon Footprint (hp.com) • Ocean-bound plastic in Speaker • 60% post-consumer recycled plastic • 65% recycled metal • Low halogen • Outside Box and corrugated cushions are 100% sustainably sourced and recyclable • Molded Paper Pulp Cushion inside box is 100% sustainably sourced and recyclable • Bulk packaging available		
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook”.		
Energy Consumption (in accordance with US ENERGY STAR® test method)	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Sort idle)	4.92 W	5.21 W	5.01 W
Normal Operation (Long idle)	1.09 W	1.05 W	0.93 W
Sleep	1.09 W	1.05 W	0.93 W
Off	0.41 W	0.42 W	0.4 W
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	16.8 BTU/hr	17.8 BTU/hr	17.1 BTU/hr

Technical Specifications

Normal Operation (Long idle)	3.7 BTU/hr	3.6 BTU/hr	3.2 BTU/hr
Sleep	3.7 BTU/hr	3.6 BTU/hr	3.2 BTU/hr
Off	1.4 BTU/hr	1.4 BTU/hr	1.4 BTU/hr
	* NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.		
Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	Sound Power (L _{WAd} , bels)	Sound Pressure (L _{pAm} , decibels)	
Typically Configured – Idle	2.6	14.0	
Fixed Disk – Random writes	3.4	23.4	
Optical Drive – Sequential reads	4.0	33.0	
Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the		
	Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product is 93.2% recycle-able when properly disposed of at end of life.		
Packaging Materials	External:	PAPER/Corrugated	220 g
		PAPER/Corrugated	41 g
		PAPER/Molded Pulp	54 g
		PAPER/Molded Pulp	62 g
		PAPER/Paper	3 g
	Internal:	PLASTIC/Polyethylene low density - LDPE	14 g
	The plastic packaging material contains at least 0.0% recycled content.		
	The corrugated paper packaging materials contains at least 56.5% recycled content.		
RoHS Compliance	HP Inc. complies fully with materials regulations. We were among the first companies to extend the restrictions in the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive to our products worldwide through the HP GSE. HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam. We believe the RoHS directive and similar laws play an important role in promoting industry-wide elimination of substances of concern. We have supported the inclusion of additional		

Technical Specifications

	substances—including PVC, BFRs, and certain phthalates—in future RoHS legislation that pertains to electrical and electronics products. We met our voluntary objective to achieve worldwide compliance with the new EU RoHS requirements for virtually all relevant products by July 2013, and we will continue to extend the scope of the commitment to include further restricted substances as regulations continue to evolve. To obtain a copy of the HP RoHS Compliance Statement, see HP RoHS position statement.
Material Usage	This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html): • Asbestos • Certain Azo Colorants • Certain Brominated Flame Retardants – may not be used as flame retardants in plastics • Cadmium • Chlorinated Hydrocarbons • Chlorinated Paraffins • Bis(2-Ethylhexyl) phthalate (DEHP) • Benzyl butyl phthalate (BBP) • Dibutyl phthalate (DBP) • Diisobutyl phthalate (DIBP) • Formaldehyde • Halogenated Diphenyl Methanes • Lead carbonates and sulfates • Lead and Lead compounds • Mercuric Oxide Batteries • Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user. • Ozone Depleting Substances • Polybrominated Biphenyls (PBBs) • Polybrominated Biphenyl Ethers (PBBEs) • Polybrominated Biphenyl Oxides (PBBOs) • Polychlorinated Biphenyl (PCB) • Polychlorinated Terphenyls (PCT) • Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications. • Radioactive Substances • Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)

Technical Specifications

Packaging Usage	HP follows these guidelines to decrease the environmental impact of product packaging: • Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials. • Eliminate the use of ozone-depleting substances (ODS) in packaging materials. • Design packaging materials for ease of disassembly. • Maximize the use of post-consumer recycled content materials in packaging materials. • Use readily recyclable packaging materials such as paper and corrugated materials. • Reduce size and weight of packages to improve transportation fuel efficiency. • Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.
End-of-life Management and Recycling	HP offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.
HP, Inc. Corporate Environmental Information	For more information about HP's commitment to the environment: Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html ISO 14001 certificates: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842 and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf
footnotes	• Percentage of ocean-bound plastic contained in each component varies by product • Recycled plastic content percentage is based on the definition set in the IEEE 1680.1 - 2018 standard. • External power supplies, WWAN modules, power cords, cables and peripherals excluded. • 100% outer box packaging and corrugated cushions made from sustainably sourced certified and recycled fibers. • Fiber cushions made from 100% recycled wood fiber and organic materials. • Plastic cushions are made from >90% recycled plastic.\ • Recycled metal is expressed as a percentage of the total weight of the metal according to ISO 14021 definitions for metal parts over 25 grams.

COUNTRY OF ORIGIN

China

Options and Accessories (Sold separately and availability may vary by country)

DOCKING (Sold Separately)

Docking station model #1	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 TB hosts or USB-C hosts DP 1.4 with DSC in high res mode
Dock Connectors	2xDP, 1xHDMI, 1xTB, 1xUSB-C Alt Mode
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.
Docking station model #2	HP Thunderbolt 280W G4 Dock
Total number of supported displays (incl. the notebook display)	4
Max. resolutions supported	Quad 4K @60Hz Dual 8K single cable@30 for TB hosts or USB-C hosts DP 1.4 with DSC in high res mode
Dock Connectors	2xDP, 1xHDMI, 1xTB, 1xUSB-C Alt Mode
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.
Docking station model #3	HP USB-C Dock G5

Options and Accessories (Sold separately and availability may vary by country)

Total number of supported displays (incl. the notebook display)	3
Max. resolutions supported	Dual 5K@ 30Hz + (1) 4K UHD (multi-function mode)
Dock Connectors	1xHDMI, 2xDP
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 #4	HP USB-C/A Universal Dock G2
Total number of supported displays (incl. the notebook display)	3
Max. resolutions supported	Dual 4K @ 60Hz Single 5K @ 60Hz
Dock Connectors	1xHDMI, 2xDP
Technical limitations	Maximum resolution and display support is dependent on the maximum capability of the notebook. The best resolution for dual or triple displays is 4K UHD@ 60Hz. For use with the USB-A adapter that comes in the box the maximum number of displays supported is (2) 4k x 60 Hz on the Type-A Gen 1 connection from the host.
Docking station model #5	HP USB-C G5 Essential Dock
Total number of supported displays (incl. the notebook display)	3
Max. resolutions supported	For hosts that support DisplayPort 1.4 with Display Stream Compression: 3x FHD @ 60 Hz 3x QHD @ 60 Hz 3x 4K @ 60 Hz For hosts that support DisplayPort 1.3/1.4: 3x FHD @ 60 Hz 3x QHD @ 60 Hz 2x 4K @ 60 Hz
Dock Connectors	1 x HDMI, 2 x DP
Technical limitations	Video resolution depends on the capability of the host machine. This dock provides up to 65W of power delivery to the host machine.

Options and Accessories (Sold separately and availability may vary by country)

Type	Description	Part Number
Audio	HP Wired USB-A Stereo Headset	428K6AA
	HP Wired 3.5mm Stereo Headset	428K7AA
	HP 365 BT Speaker	567D3AA#ACJ
Video	HP 325 FHD USB-A Webcam	53X27AA
	HP 965 4K USB-A STR Webcam	695J5AA
Cases	HP Prelude G2 15.6 Backpack	1E7D6AA
	HP Prelude G2 15.6 Top Load	1E7D7AA
	HP Prelude Pro Recycled 15.6 Backpack	1X644AA
	HP Prelude Pro Recycled 15.6 Top Load	1X645AA
	HP Renew 14 Laptop Sleeve	2E6U9AA
	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	3E2U5AA
	HP Renew Business 17.3 Laptop Bag	3E2U6AA
	HP Renew Executive 14.1 Laptop Sleeve	6B8Y3AA
	HP Renew Executive 16 Laptop Backpack	6B8Y1AA
	HP Renew Executive 16 Laptop Bag	6B8Y2AA
	HP Reversible 13.3 Sleeve	7ZE82AA
	HP Travel 18L 15.6 Iron Gray Laptop Backpack	6H2D9AA
	HP Travel 25L 15.6 Iron Gray Laptop Backpack	6H2D8AA
Docking	HP USB-C 120W G5 Dock	5TW10AA
	HP USB-C/A 120W G2 Universal Dock	5TW13AA
	HP Thunderbolt 120W G4 Dock	4J0A2AA
	HP Thunderbolt 280W G4 Dock	4J0G4AA
Hub	HP 4K USB-C Multiport Hub	6G842AA
	HP Universal USB-C Multiport Hub	50H55AA
	HP USB-C Travel Dock G2	7PJ38AA
	HP USB-C to USB-A Hub	Z6A00AA
Adapter	HP USB-C to RJ45 Adapter G2	4Z527AA
	HP USB 3.0 to Gigabit RJ45 Adapter G2	4Z7Z7AA
	HP HDMI to VGA Adapter	H4F02AA
	HP USB-C to DisplayPort Adapter	N9K78AA
	HP USB-C to HDMI 2.0 Adapter	1WC36AA

Options and Accessories (Sold separately and availability may vary by country)

	HP USB-C to USB 3.0 Adapter	N2Z63AA
	HP USB-C to VGA Adapter	N9K76AA
Keyboard/Combo	HP 125 WD USB Keyboard	266C9AA
	HP 320K WD USB Keyboard	9SR37AA
	HP 355 Compact Multi-Device BT Keyboard	69ZS9AA
	HP 455 Programmable Wireless Keyboard	4R177AA
	HP 975 USB+BT Dual-Mode Wireless Keyboard	3Z726AA
	HP 155 Wired Mouse and Keyboard Combo	5B8C0AA#ACJ
	HP 225 Antimicrobial Wired Mouse and Keyboard Combo	286K3AA#AB2
	HP 225 Wired Mouse and Keyboard Combo	286J4AA
	HP 235 Wireless Mouse and Keyboard Combo	1Y4D0AA
	HP 655 Wireless Keyboard and Mouse Combo	4R009AA
	HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA
	HP Wireless Rechargeable 950MK Mouse and Keyboard	3M165AA
Mouse	HP 125 USB-A Wired Mouse	265A9AA
	HP 128 USB Laser Wired Mouse	265D9AA
	HP 155 USB-A Wired Mouse	5B8B7AA#ACJ
	HP 235 Wireless 2.4GHz Slim Wireless Mouse	4E407AA
	HP 320M USB-A Wired Mouse	9VA80AA
	HP 435 Bluetooth 5.0 + Wireless 2.4GHz Multi-Device Wireless Mouse	3B4Q5AA
	HP 715 Rechargeable Multi-Device Bluetooth 5.0 + Wireless 2.4GHz Bluetooth Mouse	6E6F0AA
	HP 925 Ergonomic Vertical Bluetooth 5.0 + Wireless 2.4GHz Wireless Mouse	6H1A5AA
	HP Creator USB-A+Bluetooth 935 Wireless Mouse Black	1D0K8AA
	HP USB Premium Wireless Mouse	1JR31AA
	HP USB-A+Bluetooth Multi-Device 635 Wireless Mouse Black	1D0K2AA
	HP USB-A+Bluetooth Travel Bluetooth Mouse	6SP30AA
Power	HP 45W USB-C LC Dali AC Power Adapter	1MZ01AA
	HP 65W GaN USB-C Laptop Charger	600Q7AA
	HP 65W USB-C Laptop Charger	671R3AA
	HP 65W USB-C LC AC Power Adapter	1P3K6AA
Commodity	HP USB DVD-Writer EXT ODD	F2B56AA
	HP Nano Keyed Cable Lock	1AJ39AA
	HP Nano Master Keyed Cable Lock	1AJ40AA
	HP SureKey Standard/Nano/Wedge Cable Lock	6UW42AA
	HP Combination Nano Cable Lock	63B28AA

Options and Accessories (Sold separately and availability may vary by country)

HP Essential Combination Nano Cable Lock

63B31AA



Change Log

Date of change:	Version History:		Description of change:
March 27, 2023	V1 to V2	Updated	LPDDR5 memory speed and added Battery life
April 6, 2023	V2 to V3	Added	Environmental Data and updated DisplayPort™
April 11, 2023	V3 to V4	Updated	Integrated Graphics
May 9, 2023	V4 to V5	Updated	Product weight in Weight and Dimensions section
May 18, 2023	V5 to V6	Updated	Storage and Drives section
June 5, 2023	V6 to V7	Updated	Storage and Drives section
August 2, 2023	V7 to V8	Updated	Environmental Data and Memory section
August 14, 2023	V8 to V9	Updated	Graphics section
October 11, 2023	V9 to V10	Updated	Panel Color Depth in Display section
October 31, 2023	V10 to V11	Updated	Panel Color Depth in Display section
November 2, 2023	V11 to V12	Updated	Storage and Drive section
	V12 to V13		

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HP EliteBook 835 13 inch G10 Notebook PC

Engineered for the hybrid worker

Overcome obstacles to hybrid work with the HP EliteBook 835. The latest AMD processor² and features that enhance online meetings let you listen, be heard, and look your best.⁹ Work confidently knowing your PC has a suite of enterprise-ready security and manageability.

Designed for the enterprise. Made for you.

Highly secure and easy to manage remotely with AMD PRO manageability, the HP EliteBook 865 has the performance you for complex workloads and a sophisticated design.

Collaborate with confidence

Bring authenticity to your online meetings in a hybrid work world with optional 5G connectivity.⁴ Make virtual meetings more human and interactive with HP Presence^{17,5} technology like a 5MP IR auto tracking camera with an 88-degree wide-viewing angle, and Audio by Bang & Olufsen.

Protected by HP Wolf Security

HP Wolf Security for Business creates a hardware-enforced, always-on, resilient defense. From the BIOS to the browser, above, in, and below the OS, these constantly evolving solutions help protect your PC from modern threats.⁶



*Product image may differ from actual product

Sustainability in action

Outer box packaging 100% sustainably sourced⁸

This PC contains at least 30-percent post-consumer recycled plastic in the bezel, at least 50-percent post-consumer recycled plastic in the keycaps⁷, and the outer box packaging is 100-percent sustainably sourced.⁸



HP EliteBook 835 13 inch G10 Notebook PC

Featuring

Easy battery management

Manage battery performance and customize charging options with the easy-to-use HP Power Manager dashboard.⁹

Dual video stream

Stream one video of you and another of an object with support for dual video streams and camera switching.¹⁰

HP Presence

Move freely, and look your best, even in low light conditions during video calls enhanced by HP Presence.^{5,11}

Be right back

When you need a break during calls change your video feed to a still picture with Be Right Back.¹¹

HP Keystone Correction

HP Keystone Correction automatically crops and flattens the image feed of whiteboards and documents.¹¹

myHP

Enable hardware and software innovations from HP with the myHP application.¹²

HP Auto Frame

Move around a little without losing viewers' attention during video calls with optional HP Auto Frame.¹¹

Background Adjustment

Keep a consistent look across all your videoconferencing apps with Background Adjustment.¹¹

Aware of its surroundings

HP Context Aware provides AI-based optimization to maximize performance, comfort, and responsiveness.¹³

See colors as they should be

Make the color of your screen look consistent in any light with the Adaptive Color.¹²

Comfortable viewing

Optional TÜV certified HP Eye Ease low blue light panels help remove blue light waves.¹⁴

Fast and efficient wireless LAN

Get a fast and reliable connection in dense wireless environments with gigabit data rate Wi-Fi 6E.^{15,16}



HP EliteBook 835 13 inch G10 Notebook PC

Technical specifications

Available Operating Systems	Windows 11 Pro ¹ Windows 11 Pro Education ¹ Windows 11 Home ¹ Windows 11 Home Single Language – HP recommends Windows 11 Pro for business ¹ Windows 11 Pro (Windows 11 Enterprise or Windows 10 Enterprise available with a Volume Licensing Agreement) ¹ Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade) ^{1,2} FreeDOS ¹
Processor family ³	AMD Ryzen™ 5 processor AMD Ryzen™ 7 processor
Available Processors ^{3,4,5,6}	AMD Ryzen™ 7 7840U with AMD Radeon™ Graphics (3.5 GHz base clock, up to 4.9 GHz max boost clock, 16 MB L3 cache, 8 cores, 16 threads) AMD Ryzen™ 5 7540U with AMD Radeon™ Graphics (3.5 GHz base clock, up to 4.9 GHz max boost clock, 16 MB L3 cache, 6 cores, 12 threads) AMD Ryzen™ 3 7440U with AMD Radeon™ Graphics (3.0 GHz base clock, up to 4.7 GHz max boost clock, 8 MB L3 cache, 4 cores, 8 threads)
Maximum memory	32 GB LPDDR5-6400 MHz RAM; (Transfer rates up to 6400 MT/s.) Onboard memory. Non customer accessible/upgradeable.
Internal storage	512 GB up to 2 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ⁷ 256 GB up to 512 GB PCIe® Gen4x4 NVMe™ M.2 SED SSD TLC ⁷ 256 GB up to 512 GB PCIe® NVMe™ Value M.2 SSD ⁷
Display size (diagonal, metric)	33.8 cm (13.3")
Display	33.8 cm (13.3") diagonal, WUXGA (1920 x 1200), touch, IPS, anti-glare, 250 nits, 45% NTSC; 33.8 cm (13.3") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 250 nits, 45% NTSC; 33.8 cm (13.3") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 1000 nits, 100% sRGB, HP Sure View Reflect integrated privacy screen with HP Eye Ease; 33.8 cm (13.3") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 250 nits, 45% NTSC with HP Eye Ease ^{12,13,14}
Available Graphics	Integrated: AMD Radeon™ Graphics ¹² (Support HD decode, DX12, HDMI 2.0, HDCP 2.3.)
Audio	Bang & Olufsen, dual stereo speakers, dual array microphones
Wireless technologies	Realtek Wi-Fi 6E RTL8852CE 802.11a/b/g/n/ax (2x2) and Bluetooth® 5.3 wireless card; MediaTek Wi-Fi 6E RZ616 (2x2) and Bluetooth® 5.3 wireless card (Compatible with Miracast-certified devices.) NFC Mirage WNC XR4V-1
Ports and connectors	2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4); 2 USB Type-A 5Gbps signaling rate (1 charging); 1 HDMI 2.1; 1 stereo headphone/microphone combo jack ⁸ ; (HDMI cable sold separately.)
Input devices	HP Premium Keyboard – spill-resistant with optional backlit keyboard; Clickpad with multi-touch gesture support, taps enabled as default
Communications	Intel® XMM™ 7560 LTE Advanced Pro; Intel® 5G Solution 5000
Camera	HP True Vision 5 MP camera with integrated dual array digital microphones
Software	HP Connection Optimizer; HP Hotkey Support; HP Support Assistant; HP Easy Clean; HP Power Manager; myHP; HP Privacy Settings; HP Notifications; HP PC Hardware Diagnostics Windows; HP Services Scan; HP Smart Support (download) Buy Office (Sold separately) ^{15,16,17,18,19}
Security management	Absolute persistence module; HP Secure Erase; HP Sure Click; HP Sure Recover; HP Sure Run; HP Sure Sense; BIOS Update via Network; HP Sure Admin; HP BIOSphere Gen6; TPM 2.0 embedded security chip (Common Criteria EAL4+ and FIPS 140-2 Level 2 Certified); HP Sure Start Gen7; HP Wake on WLAN; HP Tamper Lock; Secured-Core PC Enable
Security Software Licenses	HP Wolf Pro Security Edition ⁵⁶
Fingerprint reader	Fingerprint sensor (select models)



HP EliteBook 835 13 inch G10 Notebook PC

Technical specifications

Management features	HP Client Management Script Library (download); HP Driver Packs (download); HP Client Catalog (download); HP Manageability Integration Kit Gen4 (download); HP Image Assistant Gen5 (download); HP Patch Assistant (download); HP Cloud Recovery; HP Connect for Microsoft Endpoint Manager ^{20,21,22,23}
Power	HP Smart 65 W USB Type-C® adapter ²⁵
Battery type	HP Long Life 3-cell, 38 Wh polymer; HP Long Life 3-cell, 51 Wh polymer ²⁴ . Battery is internal and not replaceable by customer. Serviceable by warranty.
Battery life	Up to 17 hours and 30 minutes
Dimensions	30.01 x 21.48 x 1.92 cm; 2.71 x 19.01 x 12 in 6.9 x 48.3 x 30.5 cm (Package)
Weight	Starting at 1.27 kg; (Weight will vary by configuration. Does not include power adapter.)
Ecolabels	EPEAT® Gold registered; SEPA; TCO Certified ²⁷
Energy star certified (series fixed)	ENERGY STAR® certified
Certification and compliance	CCC; GS Mark
Warranty	1-year and 3-year limited warranties and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty. Refer to http://www.hp.com/support/batterywarranty/ for additional battery information. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/cpc .



HP EliteBook 835 13 inch G10 Notebook PC

Footnotes

Key Selling Points Footnotes

- ² Multi-core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. AMD's numbering is not a measurement of clock speed.
- ³ Sold separately or as an optional feature.
- ⁴ Intel® 5G module is optional and must be configured at the factory. Module designed for 5G SA (standalone), and 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.
- ⁵ Select HP Products are enhanced with HP Presence. Features vary by platform.
- ⁶ HP Wolf Security for Business requires Windows 10 Pro and higher, includes various HP security features and is available on HP Pro, Elite, Workstation, and RPOS products. See product details for included security features.
- ⁷ Recycled plastic content percentage is based on the definition set in the IEEE 16801-2018 standard.
- ⁸ 100% outer box packaging made from sustainably sourced certified and recycled fibers. Fiber cushions made from 100% recycled wood fiber and organic material. Any plastic cushions are made from >90% recycled plastic.
- ⁹ HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.
- ¹⁰ Dual video streams and camera switching with Multi-Camera requires second camera that is sold separately or as an optional feature and requires myHP application.
- ¹¹ Requires myHP application and Windows OS.
- ¹² Requires Windows OS.

Feature Messaging Footnotes

- ¹³ Available on select HP PCs with Windows 10.
- ¹⁴ Low blue light panel is only available with 400nit, non-touch, models without HP Sure View Reflect.
- ¹⁵ 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.
- ¹⁶ Wi-Fi® supporting gigabit data rate is achievable with Wi-Fi 6E (802.11ax) when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 160MHz channels.
- ¹⁷ HP conferencing features require Windows and the latest myHP app, available over the air or for download via sofpaq on the HP Support website. Planned availability in spring 2023.

Technical Specifications Footnotes

- 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>.
- ² This system is preinstalled with Windows 10 Pro software and also comes with a license for Windows 11 Pro software and provision for recovery software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.
- ³ 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>.
- ⁴ 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.
- ⁵ Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
- ⁶ Max Boost clock frequency performance varies depending on hardware, software and overall system configuration.
- ⁷ For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.
- ⁸ SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.
- ¹² HD content required to view HD images.
- ¹³ Actual brightness will be lower with touchscreen or Sure View.
- ¹⁴ HP Sure View Reflect integrated privacy screen is an optional feature that must be configured at purchase and is designed to function in landscape orientation.
- ¹⁵ HP Smart Support requires HP TechPulse to be installed. For more information about how to enable or to download HP Smart Support, please visit <http://www.hp.com/smart-support>.
- ¹⁶ HP Services Scan is provided with Windows Update on select products and will check entitlement on each hardware device to determine if an HP TechPulse-enabled service has been purchased, and will download applicable software automatically. HP TechPulse is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP TechPulse follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access with connection to TechPulse portal is required. For full system requirements or to disable this feature, please visit <http://www.hpdaas.com/requirements>. Not applicable in China.
- ¹⁷ HP Support Assistance requires Windows and Internet Access
- ¹⁸ HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.
- ¹⁹ Microsoft Office sold separately and requires Internet access for activation.
- ²⁰ 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.
- ²¹ HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.
- ²² 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>.
- ²³ 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, wired network connection. Note: You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Details please refer to: <https://support.hp.com/us-en/document/c05115630>.
- ²⁴ Actual battery Watt-hours (Wh) will vary from design capacity. Battery capacity will naturally decrease with shelf life, time, usage, environment, temperature, system configuration, loaded apps, features, power management settings and other factors.
- ²⁵ Availability may vary by country.
- ²⁶ HP Fingerprint sensor is an optional feature that must be configured at purchase.
- ²⁷ Based on US EPEAT® registration according to IEEE 16801-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.
- ²⁸ HP Sure Click requires Windows 10 Pro or higher or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.
- ³⁰ HP Sure Sense is available on select HP PCs with Windows 10 Pro, Windows 10 Enterprise, Windows 11 Pro, or Windows 11 Enterprise OS25. HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.
- ³¹ HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.
- ³² HP Sure Recover Gen5 with Embedded Reimaging is an optional feature which requires Windows 10 and higher must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module
- ³³ HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher.
- ³⁴ HP Sure Admin requires Windows 10 or higher, HP BIOS, HP Manageability Integration Kit from <http://www.hp.com/go/clientmanagement> and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store.
- ³⁵ HP Client Security Manager Gen7 requires Windows and is available on the select HP Elite and Pro PCs.
- ³⁶ HP BIOSphere Gen6 features may vary depending on the platform and configuration.
- ³⁷ HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.
- ³⁸ Absolute 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/>.
- ³⁹ 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.
- ⁵⁶ HP Wolf Pro Security Edition (including HP Sure Click Pro and HP Sure Sense Pro) is available preloaded on select SKUs and, depending on the HP product purchased, includes a paid 1-year or 3-year license. The HP Wolf Pro Security Edition software is licensed under the license terms of the HP Wolf Security Software - End-User license Agreement (EULA) that can be found at: https://support.hp.com/us-en/document/ish_3875769-3873014-16 as that EULA is modified by the following: "7. Term. Unless otherwise terminated earlier pursuant to the terms contained in this EULA, the license for the HP Wolf Pro Security Edition (HP Sure Sense Pro and HP Sure Click Pro) is effective upon activation and will continue for either a twelve (12) month or thirty-six (36) month license term ("Initial Term"). At the end of the Initial Term you may either (a) purchase a renewal license for the HP Wolf Pro Security Edition from HP.com, HP Sales or an HP Channel Partner, or (b) continue using the standard versions of HP Sure Click and HP Sure Sense at no additional cost with no future software updates or HP Support."





HP EliteBook 840 14 inch G10 Notebook PC

The right PC for hybrid work

Take the guesswork out of setting up your PC for hybrid work and show up to your online meetings looking and sounding your best with the HP EliteBook 840. Powered by the latest Intel® processor², this distinctive PC includes enterprise-ready security and manageability.



*Product image may differ from actual product

HP recommends Windows 11 Pro for business

Designed for the enterprise. Made for you.

- Highly secure and easy to manage remotely with a sophisticated design, the HP EliteBook 840 has the performance you need for complex workloads.

Collaborate with confidence

- Bring authenticity to your online meetings in a hybrid work world with optional 5G connectivity.^{3,12} Make virtual meetings more human and interactive with HP Presence⁴ technology like a 5MP IR auto tracking camera with and 88-degree wide-viewing angle and Audio by Bang & Olufsen.

Protected by HP Wolf Security

- HP Wolf Security for Business creates a hardware-enforced, always-on, resilient defense. From the BIOS to the browser, above, in, and below the OS, these constantly evolving solutions help protect your PC from modern threats.⁵

Outer box packaging 100% sustainably sourced

- This PC contains at least 30-percent post-consumer recycled plastic in the bezel, at least 50-percent post-consumer recycled plastic in the keycaps⁷, and the outer box packaging is 100-percent sustainably sourced.⁸
- Manage and monitor your battery's performance and condition and customize charging options with the easy-to-use HP Power Manager dashboard.⁶
- This PC contains at least 30-percent post-consumer recycled plastic in the bezel, at least 50-percent post-consumer recycled plastic in the keycaps, and the outer box packaging is 100 percent sustainably sourced.^{7,8}
- Support for dual video streams and camera switching with Multi-Camera Experience software makes it easy to stream one video of an object while the other camera stays on you.⁹
- Get captivating definition and color on the optional 14-inch diagonal QHD display.¹⁰
- Move freely, and look your best, even in low light conditions during video calls enhanced by HP Presence. HP Auto Frame, low light improvement, and HP Appearance Filter work together so you appear more natural and can make personal connections.^{4,10}
- When you need a break during calls change your video feed to a still picture with Be Right Back.¹⁰
- Your audience can easily read a document or whiteboard with HP Keystone Correction that automatically crops and flattens the image of the camera feed.¹⁰
- Enable hardware and software innovations from HP with the myHP application. This single dashboard houses access to settings for audio, video, the programmable key, and more.¹¹
- Move around a little without losing viewers' attention during video calls with HP Auto Frame.¹⁰
- Keep a consistent look across all your videoconferencing apps with Background Adjustment that has two ways to mask your background. Set Background Blur or choose an image once in myHP instead of adjusting settings in multiple apps.¹⁰
- HP Context Aware provides AI-based optimization to maximize performance when you're working at a table, comfort when you're working from your lap, and responsiveness when you're working on the go.⁹
- Make the color of your screen look consistent in any light with Adaptive Color that adjusts your display automatically to the ambient light in the room to represent the true color of the content being displayed.¹¹

HP EliteBook 840 14 inch G10 Notebook PC Specifications Table



*Product image may differ from actual product

Available Operating Systems	Windows 11 Pro ¹ Windows 11 Pro Education ¹ Windows 11 Home – HP recommends Windows 11 Pro for business ¹ Windows 11 Home Single Language ¹ Windows 11 Pro (Windows 11 Enterprise available with a Volume Licensing Agreement) ¹ Windows 10 Pro (available through downgrade rights from Windows 11 Pro) ^{1,2} FreeDOS
Processor family ⁶	13th Generation Intel® Core™ i7 processor; 13th Generation Intel® Core™ i5 processor
Available Processors ^{3,4,5,6,42}	Intel® Core™ i7-1360P (1.4 GHz E-core base frequency, 1.9 GHz P-core base frequency, up to 3.9 GHz E-core Max Turbo frequency, up to 5.2 GHz P-core Max Turbo frequency, 18 MB L3 cache, 4 P-cores and 8 E-core, 16 threads); Intel® Core™ i7-1355U (1.2 GHz E-core base frequency, 1.7 GHz P-core base frequency, up to 3.7 GHz E-core Max Turbo frequency, up to 5.0 GHz P-core Max Turbo frequency, 12 MB L3 cache, 2 P-cores and 8 E-cores, 12 threads); Intel® Core™ i5-1340P (1.4 GHz E-core base frequency, 1.9 GHz P-core base frequency, up to 3.4 GHz E-core Max Turbo frequency, up to 4.6 GHz P-core Max Turbo frequency, 12 MB L3 cache, 4 P-cores and 8 E-cores, 16 threads); Intel® Core™ i5-1335U (0.9 GHz E-core base frequency, 1.3 GHz P-core base frequency, up to 3.4 GHz E-core Max Turbo frequency, up to 4.6 GHz P-core Max Turbo frequency, 12 MB L3 cache, 2 P-cores and 8 E-cores, 12 threads); Intel® Core™ i7-1370P (1.4 GHz E-core base frequency, 1.9 GHz P-core base frequency, up to 3.9 GHz E-core Max Turbo frequency, up to 5.2 GHz P-core Max Turbo frequency, 24 MB L3 cache, 6 P-cores and 8 E-cores, 20 threads); Intel® Core™ i5-1350P (1.4 GHz E-core base frequency, 1.9 GHz P-core base frequency, up to 3.5 GHz E-core Max Turbo frequency, up to 4.7 GHz P-core Max Turbo frequency, 12 MB L3 cache, 4 P-cores and 8 E-cores, 16 threads); Intel® Core™ i5-1345U (1.2 GHz E-core base frequency, 1.6 GHz P-core base frequency, up to 3.5 GHz E-core Max Turbo frequency, up to 4.7 GHz P-core Max Turbo frequency, 12 MB L3 cache, 2 P-cores and 8 E-cores, 12 threads); Intel® Core™ i7-1365U (1.3 GHz E-core base frequency, 1.8 GHz P-core base frequency, up to 3.9 GHz E-core Max Turbo frequency, up to 5.2 GHz P-core Max Turbo frequency, 12 MB L3 cache, 2 P-cores and 8 E-cores, 12 threads). supports Intel® vPro® Technology
Maximum memory	64 GB DDR5-4800 MHz RAM ⁷ Slots are non customer accessible/upgradeable. Supports dual channel memory (select models).
Memory slots	2 SODIMM
Internal storage	512 GB up to 2 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ⁸ 256 GB up to 1 TB PCIe® Gen4x4 NVMe™ M.2 SED SSD TLC ⁸ 256 GB up to 512 GB PCIe® NVMe™ M.2 SSD ⁸
Display size (diagonal, metric)	35.6 cm (14")
Display	14" diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 250 nits, 45% NTSC; 14" diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 400 nits, low power, 100% sRGB with HP Eye Ease; 14" diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 1000 nits, 100% sRGB, HP Sure View Reflect integrated privacy screen with HP Eye Ease; 14" diagonal, WUXGA (1920 x 1200), IPS, BrightView, 1000 nits, 100% sRGB, HP Sure View Reflect integrated privacy screen with HP Eye Ease; 14" diagonal, WUXGA (1920 x 1200), touch, IPS, BrightView, 250 nits, 45% NTSC ^{16,17,18,19,43} 35.6 cm (14") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 250 nits, 45% NTSC; 35.6 cm (14") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 400 nits, low power, 100% sRGB with HP Eye Ease; 35.6 cm (14") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 1000 nits, 100% sRGB, HP Sure View Reflect integrated privacy screen with HP Eye Ease; 35.6 cm (14") diagonal, WUXGA (1920 x 1200), touch, IPS, BrightView, 250 nits, 45% NTSC ^{16,17,18,19,43}
Available Graphics	Integrated: Intel® Iris® X® Graphics ¹³ (Support HD decode, DX12, HDMI 2.1.)
Audio	Audio by Bang & Olufsen, dual stereo speakers, dual microphones enhanced by AI noise reduction
Wireless technologies	(Compatible with Miracast-certified devices.)
Ports and connectors	2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4); 2 USB Type-A 5Gbps signaling rate (1 charging); 1 HDMI 2.1; 1 stereo headphone/microphone combo jack ; Optional Ports: 1 Smartcard reader (optional)
Input devices	HP Premium Keyboard – spill-resistant with optional backlit keyboard and DuraKeys; HP Premium Keyboard – spill-resistant, backlit keyboard with drain and DuraKeys ¹⁴ ; Clickpad with multi-touch gesture support, taps enabled as default; Microsoft Precision Touchpad;
Communications	HP Module with NXP NFC Controller NPC300 I2C NCI ; Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card, vPro®; Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card, non-vPro® ^{9,10,11,12} ; Intel® XMM™ 7560 LTE Advanced Pro Cat 16; Intel® 5G Solution 5000 ; Optional Near Field Communication (NFC) module
Camera	5 MP camera; IR Camera (select models) ¹⁵
Software	HP Connection Optimizer; HP Hotkey Support; HP Support Assistant; HP Easy Clean; HP Power Manager; myHP; HP Privacy Settings; HP Notifications; HP PC Hardware Diagnostics Windows; HP Smart Support; HP Services Scan; Buy Office (Sold separately) ^{20,21,22,45,44}
Security management	Absolute persistence module; HP Secure Erase; HP Sure Click; HP Sure Sense; BIOS Update via Network; HP Sure Admin; HP BIOSphere Gen6; TPM 2.0 embedded security chip (Common Criteria EAL4+ and FIPS 140-2 Level 2 Certified); HP Sure Start Gen7; HP Wake on WLAN; HP Tamper Lock; HP Sure Run Gen5; HP Sure Recover Gen5; Secured-Core PC Enable; ^{27,28,29,30,31,32,33,34,35,36,37,38}
Security Software Licenses	HP Wolf Pro Security Edition ³⁶
Fingerprint reader	Fingerprint sensor (select models)
Management features	HP Client Management Script Library (download); HP Driver Packs (download); HP Client Catalog (download); HP Manageability Integration Kit Gen4 (download); HP Image Assistant Gen5 (download); HP Patch Assistant (download); HP Cloud Recovery; HP Connect for Microsoft Endpoint Manager ^{23,24,25,26}
Power	HP Smart 65 W USB Type-C® adapter; HP Smart 45 W USB Type-C® adapter ⁴⁰
Battery type	HP Long Life 3-cell, 38 Wh polymer; HP Long Life 3-cell, 51 Wh polymer ³⁹
Dimensions	12.42 x 8.82 x 0.76 in; 31.56 x 22.4 x 1.92 cm
Weight	Starting at 3.01 lb (touch); Starting at 1.36 kg; (Weight will vary by configuration. Does not include power adapter.)
Ecolabels	CECP; EPEAT® Gold registered in the U.S.; SEPA; Taiwan Green Mark; Japan PC Green Label; KOECO; TCO Certified ⁴¹
Energy star certified (series fixed)	ENERGY STAR® certified
Certification and compliance	GS Mark
Sustainable impact specifications	Low Halogen; Bulk packaging available; Molded paper pulp cushion inside box is 100% sustainably sourced and recyclable; Outside box and corrugated cushions are 100% sustainably sourced and recyclable; 60% post-consumer recycled plastic; Ocean-bound plastic in speaker enclosure(s); 65% recycled metal
Warranty	1-year warranty and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty except for HP Long Life batteries which will follow the one or three year warranty of the platform. Refer to http://www.hp.com/support/batterywarranty/ for additional battery information. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/cpc .

HP EliteBook 840 14 inch G10 Notebook PC

Messaging Footnotes

- 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's numbering, branding and/or naming is not a measurement of higher performance.
- ³ Intel® 5G module is optional and must be configured at the factory. Module designed for 5G SA (standalone), and 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.
- ⁴ Select HP Products are enhanced with HP Presence. Features vary by platform.
- ⁵ HP Wolf Security for Business requires Windows 10 Pro and higher, includes various HP security features and is available on HP Pro, Elite, Workstation, and RPOS products. See product details for included security features.
- ⁶ HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.
- ⁷ Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard.
- ⁸ 100% outer box packaging made from sustainably sourced certified and recycled fibers. Fiber cushions made from 100% recycled wood fiber and organic material. Any plastic cushions are made from >90% recycled plastic.
- ⁹ Dual video streams and camera switching with Multi-Camera requires second camera that is sold separately or as an optional feature and requires myHP application and Windows OS.
- ¹⁰ Requires myHP application and Windows OS.
- ¹¹ Requires Windows OS.
- ¹² HP conferencing features require Windows and the latest myHP app, available over the air or for download via sofpaq on the HP Support website. Planned availability in spring 2023.

Technical Specifications Footnotes

- 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>.
- ² This system is preinstalled with Windows 10 Pro software and also comes with a license for Windows 11 Pro software and provision for recovery software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.
- ³ 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's numbering, branding and/or naming is not a measurement of higher performance.
- ⁴ Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
- ⁵ Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.
- 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>.
- 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.
- ⁸ For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.
- ⁹ Wireless access point and internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 is backwards compatible with prior 802.11 specs.
- ¹⁰ For full Intel® vPro™ functionality, Windows, a vPro supported processor, vPro enabled chipset, vPro enabled WLAN card and discrete TPM 2.0 are required. See <https://www.intel.com/content/www/us/en/architecture-and-technology/vpro/vpro-platform-general.html>.
- ¹¹ WWAN module is an optional feature, requires factory configuration and requires separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions.
- ¹² Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.
- ¹³ Intel® Iris® X* Graphics capabilities require system to be configured with Intel® Core™ i5 or i7 processors and dual channel memory. Intel® Iris® X* Graphics with Intel® Core™ i5 or i7 processors and single channel memory will only function as UHD graphics.
- ¹⁴ Backlit keyboard is an optional feature.
- ¹⁵ Sold separately or as an optional feature.
- ¹⁶ HDMI cable sold separately.
- ¹⁷ HD content required to view HD images.
- ¹⁸ Resolutions are dependent upon monitor capability, and resolution and color depth settings.
- ¹⁹ HP Sure View Reflect integrated privacy screen is an optional feature that must be configured at purchase and is designed to function in landscape orientation.
- ²⁰ HP Smart Support requires HP TechPulse to be installed. For more information about how to enable or to download HP Smart Support, please visit <http://www.hp.com/smart-support>.
- ²¹ HP Services Scan is provided with Windows Update on select products and will check entitlement on each hardware device to determine if an HP TechPulse-enabled service has been purchased, and will download applicable software automatically. HP TechPulse is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP TechPulse follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access with connection to TechPulse portal is required. For full system requirements or to disable this feature, please visit <http://www.hpdaas.com/requirements>. Not applicable in China.
- ²² HP Support Assistance requires Windows and Internet Access.
- ²³ 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.
- ²⁴ HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.
- ²⁵ 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>.
- ²⁶ 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, wired network connection. Note: You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Details please refer to: <https://support.hp.com/us-en/document/c05115630>.
- ²⁷ HP Sure Click requires Windows 10 Pro or higher or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.
- ²⁸ HP Sure Sense is available on select HP PCs with Windows 10 Pro, Windows 10 Enterprise, Windows 11 Pro, or Windows 11 Enterprise 0525. HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher. 26. HP Sure Recover Gen5 with Embedded Reimaging is an optional feature which requires Windows 10 and higher must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module.
- ²⁹ HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.
- ³⁰ HP Sure Recover Gen5 with Embedded Reimaging is an optional feature which requires Windows 10 and higher must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module.
- ³¹ HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher.
- ³² HP Sure Admin requires Windows 10 or higher, HP BIOS, HP Manageability Integration Kit from <http://www.hp.com/go/clientmanagement> and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store.
- ³³ HP Client Security Manager Gen7 requires Windows and is available on the select HP Elite and Pro PCs.
- ³⁴ HP BIOSphere Gen6 features may vary depending on the platform and configuration.
- ³⁵ HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.
- ³⁶ Absolute 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/>.
- ³⁷ Secured-Core PC Enable requires an Intel® vPro®, AMD Ryzen™ Pro processor or Qualcomm® processor with SDB50 or higher and requires 8 GB or more system memory. Secured-core PC is enabled from the factory.
- ³⁸ HP Fingerprint sensor is an optional feature that must be configured at purchase.
- ³⁹ Actual battery Watt-hours (Wh) will vary from design capacity. Battery capacity will naturally decrease with shelf life, time, usage, environment, temperature, system configuration, loaded apps, features, power management settings and other factors.
- ⁴⁰ Availability may vary by country.
- ⁴¹ Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.
- ⁴² Intel vPro® requires Windows 10 Pro 64 bit or higher, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or Wi-Fi 6E WLAN and TPM 2.0. Some functionality requires additional 3rd party software in order to run. Features of vPro® Essentials and Enterprise vary. See <http://intel.com/vpro>.
- ⁴³ HDMI 2.1 Support resolution up to 4K @60 Hz.
- ⁴⁴ Microsoft Office sold separately and requires Internet access for activation.
- ⁴⁵ HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.
- ⁴⁶ HP Wolf Pro Security Edition (including HP Sure Click Pro and HP Sure Sense Pro) is available preloaded on select SKUs and, depending on the HP product purchased, includes a paid 1-year or 3-year license. The HP Wolf Pro Security Edition software is licensed under the license terms of the HP Wolf Security Software - End-User license Agreement (EULA) that can be found at: https://support.hp.com/us-en/document/ish_3875769-3873014-16 as that EULA is modified by the following: "7. Term. Unless otherwise terminated earlier pursuant to the terms contained in this EULA, the license for the HP Wolf Pro Security Edition (HP Sure Sense Pro and HP Sure Click Pro) is effective upon activation and will continue for either a twelve (12) month or thirty-six (36) month license term ("Initial Term"). At the end of the Initial Term you may either (a) purchase a renewal license for the HP Wolf Pro Security Edition from HP.com, HP Sales or an HP Channel Partner, or (b) continue using the standard versions of HP Sure Click and HP Sure Sense at no additional cost with no future software updates or HP Support."
- ⁴⁷ Windows MM18 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.

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#us-en#, September 2023

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HP EliteBook 845 14 inch G10 Notebook PC

Engineered for the hybrid worker

Overcome obstacles to hybrid work with the HP EliteBook 845. The latest AMD processor², up to 64GB DDR5 memory³, and features that enhance online meetings let you listen, be heard⁹, and look your best. Work confidently knowing your PC has a suite of enterprise-ready security and manageability.

Designed for the enterprise. Made for you.

Highly secure and easy to manage remotely with AMD PRO manageability, the HP EliteBook 865 has the performance you for complex workloads and a sophisticated design.

Collaborate with confidence

Bring authenticity to your online meetings in a hybrid work world with optional 5G connectivity.⁴ Make virtual meetings more human and interactive with HP Presence^{17,5} technology like a 5MP IR auto tracking camera with an 88-degree wide-viewing angle, and Audio by Bang & Olufsen.

Protected by HP Wolf Security

HP Wolf Security for Business creates a hardware-enforced, always-on, resilient defense. From the BIOS to the browser, above, in, and below the OS, these constantly evolving solutions help protect your PC from modern threats.⁶



*Product image may differ from actual product

Sustainability in action

Outer box packaging 100% sustainably sourced⁸

This PC contains at least 30-percent post-consumer recycled plastic in the bezel, at least 50-percent post-consumer recycled plastic in the keycaps⁷, and the outer box packaging is 100-percent sustainably sourced.⁸



HP EliteBook 845 14 inch G10 Notebook PC

Featuring

Easy battery management

Manage battery performance and customize charging options with the easy-to-use HP Power Manager dashboard.⁹

Dual video stream

Stream one video of you and another of an object with support for dual video streams and camera switching.¹⁰

HP Presence

Move freely, and look your best, even in low light conditions during video calls enhanced by HP Presence.^{5,11}

Be right back

When you need a break during calls change your video feed to a still picture with Be Right Back.¹¹

HP Keystone Correction

HP Keystone Correction automatically crops and flattens the image feed of whiteboards and documents.¹¹

myHP

Enable hardware and software innovations from HP with the myHP application.¹²

HP Auto Frame

Move around a little without losing viewers' attention during video calls with optional HP Auto Frame.¹¹

Background Adjustment

Keep a consistent look across all your videoconferencing apps with Background Adjustment.¹¹

Aware of its surroundings

HP Context Aware provides AI-based optimization to maximize performance, comfort, and responsiveness.¹³

See colors as they should be

Make the color of your screen look consistent in any light with the Adaptive Color.¹²

Comfortable viewing

Optional TÜV certified HP Eye Ease low blue light panels help remove blue light waves.¹⁴

Fast and efficient wireless LAN

Get a fast and reliable connection in dense wireless environments with gigabit data rate Wi-Fi 6E.^{15,16}



HP EliteBook 845 14 inch G10 Notebook PC

Technical specifications

Available Operating Systems	Windows 11 Pro ¹ Windows 11 Pro Education ¹ Windows 11 Home ¹ Windows 11 Home Single Language – HP recommends Windows 11 Pro for business ¹ Windows 11 Pro (Windows 11 Enterprise or Windows 10 Enterprise available with a Volume Licensing Agreement) ¹ Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade) ^{1,2} FreeDOS ¹
Processor family ³	AMD Ryzen™ 5 processor AMD Ryzen™ 7 processor
Available Processors ^{3,4,5,6}	AMD Ryzen™ 7 7840U with AMD Radeon™ Graphics (3.5 GHz base clock, up to 4.9 GHz max boost clock, 16 MB L3 cache, 8 cores, 16 threads) AMD Ryzen™ 5 7540U with AMD Radeon™ Graphics (3.5 GHz base clock, up to 4.9 GHz max boost clock, 16 MB L3 cache, 6 cores, 12 threads) AMD Ryzen™ 7 7840HS with Radeon™ Graphics (3.8 GHz base clock, up to 5.1 GHz max boost clock, 16 MB L3 cache, 8 cores, 16 threads) AMD Ryzen™ 9 7940HS with Radeon™ Graphics (4.0 GHz base clock , up to 5.2 GHz max boost clock, 16 MB L3 cache, 8 cores, 16 threads) AMD Ryzen™ 3 7440U with AMD Radeon™ Graphics (3.0 GHz base clock, up to 4.7 GHz max boost clock, 8 MB L3 cache, 4 cores, 8 threads)
Maximum memory	64 GB DDR5-5600 MHz RAM; ²⁸ Dual channel support.
Memory slots	2 SODIMM
Internal storage	256 GB up to 2 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ⁷ 256 GB up to 1 TB PCIe® Gen4x4 NVMe™ M.2 SED SSD TLC ⁷ 256 GB up to 512 GB PCIe® NVMe™ Value M.2 SSD ⁷
Display size (diagonal, metric)	35.6 cm (14")
Display	35.6 cm (14") diagonal, WUXGA (1920 x 1200), touch, IPS, anti-glare, 250 nits, 45% NTSC; 35.6 cm (14") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 250 nits, 45% NTSC; 35.6 cm (14") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 400 nits, low power, 100% sRGB with HP Eye Ease; 35.6 cm (14") diagonal, WQXGA (2560 x 1600), IPS, micro-edge, anti-glare, 500 nits, 100% sRGB, HP DreamColor; 35.6 cm (14") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 1000 nits, 100% sRGB with HP Eye Ease ^{12,13,14}
Available Graphics	Integrated: AMD Radeon™ Graphics ¹² (Support HD decode, DX12, HDMI 2.0, HDCP 2.3.)
Audio	Bang & Olufsen, dual stereo speakers, dual array microphones
Wireless technologies	Realtek Wi-Fi 6E RTL8852CE 802.11a/b/g/n/ax (2x2) and Bluetooth® 5.3 wireless card; MediaTek Wi-Fi 6E RZ616 (2x2) and Bluetooth® 5.3 wireless card (Compatible with Miracast-certified devices.) NFC Mirage WNC XRAV-1
Ports and connectors	2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4); 2 USB Type-A 5Gbps signaling rate (1 charging); 1 HDMI 2.0; 1 stereo headphone/microphone combo jack ⁸ ; (HDMI cable sold separately.)
Input devices	HP Premium Keyboard – spill-resistant with optional backlit keyboard; Clickpad with multi-touch gesture support, taps enabled as default
Communications	Intel® XMM™ 7560 LTE Advanced Pro
Camera	HP True Vision 5 MP camera with integrated dual array digital microphones
Software	HP Connection Optimizer; HP Hotkey Support; HP Support Assistant; HP Easy Clean; HP Power Manager; myHP; HP Privacy Settings; HP Notifications; HP PC Hardware Diagnostics Windows; HP Services Scan; HP Smart Support (download) Buy Office (Sold separately) ^{15,16,17,18,19}
Security management	Absolute persistence module; HP Secure Erase; HP Sure Click; HP Sure Recover; HP Sure Run; HP Sure Sense; BIOS Update via Network; HP Sure Admin; HP BIOSphere Gen6; TPM 2.0 embedded security chip (Common Criteria EAL4+ and FIPS 140-2 Level 2 Certified); HP Sure Start Gen7; HP Wake on WLAN; HP Tamper Lock; Secured-Core PC Enable
Security Software Licenses	HP Wolf Pro Security Edition ⁵⁶
Fingerprint reader	Fingerprint sensor (select models)



HP EliteBook 845 14 inch G10 Notebook PC

Technical specifications

Management features	HP Client Management Script Library (download); HP Driver Packs (download); HP Client Catalog (download); HP Manageability Integration Kit Gen4 (download); HP Image Assistant Gen5 (download); HP Patch Assistant (download); HP Cloud Recovery; HP Connect for Microsoft Endpoint Manager ^{20,21,22,23}
Power	HP Smart 65 W USB Type-C® adapter ²⁵
Battery type	HP Long Life 3-cell, 38 Wh polymer; HP Long Life 3-cell, 51 Wh polymer ²⁴ . Battery is internal and not replaceable by customer. Serviceable by warranty.
Battery life	Up to 18 hours
Dimensions	31.56 x 22.4 x 1.92 cm; 2.71 x 19.01 x 12 in 6.9 x 48.3 x 30.5 cm (Package)
Weight	Starting at 1.38 kg; (Weight will vary by configuration. Does not include power adapter.)
Ecolabels	EPEAT® Gold registered; SEPA; TCO Certified ²⁷
Energy star certified (series fixed)	ENERGY STAR® certified
Certification and compliance	CCC; CECP; GS Mark
Sustainable impact specifications	Bulk packaging available; Ocean-bound plastic in base and speaker enclosure(s); Molded paper pulp cushion inside box is 100% sustainably sourced and recyclable; Outside box and corrugated cushions are 100% sustainably sourced and recyclable; 60% post-consumer recycled plastic; 65% recycled metal
Warranty	1-year and 3-year limited warranties and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty. Refer to http://www.hp.com/support/batterywarranty/ for additional battery information. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/cpc .



HP EliteBook 845 14 inch G10 Notebook PC

Footnotes

Key Selling Points Footnotes

- ² Multi-core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. AMD's numbering is not a measurement of clock speed.
- ³ Sold separately or as an optional feature.
- ⁴ Intel® 5G module is optional and must be configured at the factory. Module designed for 5G SA (standalone), and 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.
- ⁵ Select HP Products are enhanced with HP Presence. Features vary by platform.
- ⁶ HP Wolf Security for Business requires Windows 10 Pro and higher, includes various HP security features and is available on HP Pro, Elite, Workstation, and RPOS products. See product details for included security features.
- ⁷ Recycled plastic content percentage is based on the definition set in the IEEE 16801-2018 standard.
- ⁸ 100% outer box packaging made from sustainably sourced certified and recycled fibers. Fiber cushions made from 100% recycled wood fiber and organic material. Any plastic cushions are made from >90% recycled plastic.
- ⁹ HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.
- ¹⁰ Dual video streams and camera switching with Multi-Camera requires second camera that is sold separately or as an optional feature and requires myHP application.
- ¹¹ Requires myHP application and Windows OS.
- ¹² Requires Windows OS.

Feature Messaging Footnotes

- ¹³ Available on select HP PCs with Windows 10.
- ¹⁴ Low blue light panel is only available with 400nit, non-touch, models without HP Sure View Reflect.
- ¹⁵ 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.
- ¹⁶ Wi-Fi® supporting gigabit data rate is achievable with Wi-Fi 6E (802.11ax) when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 160MHz channels.
- ¹⁷ HP conferencing features require Windows and the latest myHP app, available over the air or for download via sofpaq on the HP Support website. Planned availability in spring 2023.

Technical Specifications Footnotes

- 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>.
- ² This system is preinstalled with Windows 10 Pro software and also comes with a license for Windows 11 Pro software and provision for recovery software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.
- ³ 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>.
- ⁴ 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.
- ⁵ Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
- ⁶ Max Boost clock frequency performance varies depending on hardware, software and overall system configuration.
- ⁷ For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.
- ⁸ SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.
- ⁹ HD content required to view HD images.
- ¹⁰ Actual brightness will be lower with touchscreen or Sure View.
- ¹¹ HP Sure View Reflect integrated privacy screen is an optional feature that must be configured at purchase and is designed to function in landscape orientation.
- ¹² HP Smart Support requires HP TechPulse to be installed. For more information about how to enable or to download HP Smart Support, please visit <http://www.hp.com/smart-support>.
- ¹³ HP Services Scan is provided with Windows Update on select products and will check entitlement on each hardware device to determine if an HP TechPulse-enabled service has been purchased, and will download applicable software automatically. HP TechPulse is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP TechPulse follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access with connection to TechPulse portal is required. For full system requirements or to disable this feature, please visit <http://www.hpdaas.com/requirements>. Not applicable in China.
- ¹⁴ HP Support Assistance requires Windows and Internet Access.
- ¹⁵ HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.
- ¹⁶ Microsoft Office sold separately and requires Internet access for activation.
- ¹⁷ 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.
- ¹⁸ HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.
- ¹⁹ 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>.
- ²⁰ HP Cloud Recovery is available for Z by HP, HP HP Elite and Pro desktops and laptops PCs with Intel® or AMD processors and requires an open, wired network connection. Note: You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Details please refer to: <https://support.hp.com/us-en/document/c05115630>.
- ²¹ Actual battery Watt-hours (Wh) will vary from design capacity. Battery capacity will naturally decrease with shelf life, time, usage, environment, temperature, system configuration, loaded apps, features, power management settings and other factors.
- ²² Availability may vary by country.
- ²³ HP Fingerprint sensor is an optional feature that must be configured at purchase.
- ²⁴ Based on US EPEAT® registration according to IEEE 16801-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.
- ²⁵ 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.
- ²⁶ HP Sure Click requires Windows 10 Pro or higher or Enterprise. See <https://bit.ly/2PrLT6A>, SureClick for complete details.
- ²⁷ HP Sure Sense is available on select HP PCs with Windows 10 Pro, Windows 10 Enterprise, Windows 11 Pro, or Windows 11 Enterprise OS25. HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.
- ²⁸ HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.
- ²⁹ HP Sure Recover Gen5 with Embedded Reimaging is an optional feature which requires Windows 10 and higher must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module.
- ³⁰ HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher.
- ³¹ HP Sure Admin requires Windows 10 or higher, HP BIOS, HP Manageability Integration Kit from <http://www.hp.com/go/clientmanagement> and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store.
- ³² HP Client Security Manager Gen7 requires Windows and is available on the select HP Elite and Pro PCs.
- ³³ HP BIOSphere Gen6 features may vary depending on the platform and configuration.
- ³⁴ HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.
- ³⁵ Absolute 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/>.
- ³⁶ 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.
- ³⁷ HP Wolf Pro Security Edition (including HP Sure Click Pro and HP Sure Sense Pro) is available preloaded on select SKUs and, depending on the HP product purchased, includes a paid 1-year or 3-year license. The HP Wolf Pro Security Edition software is licensed under the license terms of the HP Wolf Pro Security Software - End User License Agreement (EULA) that can be found at: https://support.hp.com/us-en/document/ish_3875769-3873014-16 as that EULA is modified by the following: "7. Term. Unless otherwise terminated earlier pursuant to the terms contained in this EULA, the license for the HP Wolf Pro Security Edition (HP Sure Sense Pro and HP Sure Click Pro) is effective upon activation and will continue for either a twelve (12) month or thirty-six (36) month license term ("Initial Term"). At the end of the Initial Term you may either (a) purchase a renewal license for the HP Wolf Pro Security Edition from HP.com, HP Sales or an HP Channel Partner, or (b) continue using the standard versions of HP Sure Click and HP Sure Sense at no additional cost with no future software updates or HP Support."



Overview

HP EliteBook 860 16 inch G10 Notebook PC



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- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Internal Microphones (2) 2. Ambient Light Sensor (Optional) 3. Webcam 4. Camera Shutter 5. IR Camera (Optional) 6. IR Camera LEDs (Optional) 7. NFC Sensor | <ol style="list-style-type: none"> 8. Glass Clickpad 9. Smartcard Reader (Optional) 10. LED Indicator 11. Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)¹ 12. Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)¹ 13. SuperSpeed USB Type-A 5Gbps signaling rate (USB 3.2 Gen 1) 14. HDMI 2.1 Port (Cable not included) |
|---|--|

1. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

Overview



Right

- | | |
|--|---|
| 1. Power Button Key | 4. Nano Security Lock Slot (Lock sold separately) |
| 2. Audio Combo Jack | 5. SIM Card Slot (Optional) |
| 3. SuperSpeed USB Type-A 5Gbps signaling rate (Charging) (USB 3.2 Gen 1) | 6. Touch Fingerprint Sensor (Select models) |

Overview

At a Glance

- Preinstalled with Windows 11 versions or FreeDOS
- Premium ultraslim design with precision-crafted all-metal chassis for a premium look and feel
- 13th Generation Intel® Core™ i5, i7 U series and i5, i7 P series Processors up to fourteen-core
- Up to DDR5-5200 memory with 64GB capacity
- 5MP camera with 88° field of view allows you to move around more freely in front on the camera or accommodate a group.
- New optional OLED display brings deep blacks for rich contrast and enhanced color depth
- Choice of displays:
 - 40.6 cm (16") diagonal WUXGA IPS Anti-Glare LED-backlit non-touch, 250 nits, 45% NTSC
 - 40.6 cm (16") diagonal WUXGA IPS Anti-Glare On-Cell LED-backlit touch, 250 nits, 45% NTSC
 - 40.6 cm (16") diagonal WUXGA IPS Anti-Glare LED-backlit non-touch, 400 nits, 100% sRGB with HP Eye Ease
 - 40.6 cm (16") diagonal WUXGA IPS Anti-Glare LED-backlit non-touch, 1000 nits, 100% sRGB with HP Sure View Reflect with HP Eye Ease
- New enhanced HP Auto Frame provides improved face tracking and more natural framing movement
- New "Be Right Back" functionality allows you to set an image and notify meeting participants you'll "BRB" when you need to leave for a few minutes
- Choose from 51Whr or 76Whr battery options
- HP Wolf Security for Business creates a hardware-enforced, always-on, resilient defense
- Connectivity with optional Intel® 5000 5G/WWAN, and Thunderbolt™ Docking (Dock sold separately)
- Undergoes MIL-STD 810H tests¹
- Supports fast charging (50% in 30 minutes) with no impact on battery recharge cycles
- Designed to support all HP docking options including the HP Universal Dock G5
- Can be wiped up to 10,000 times with germicidal cleaning wipes²

1. MIL-STD 810H is not intended to demonstrate fitness of 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.

2. Approved germicidal wipes for use on Select HP Platforms

(<https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-9819ENW>)

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

Technical Specifications

PRODUCT NAME

HP EliteBook 860 16 inch G10 Notebook PC

OPERATING SYSTEMS

- Preinstalled
- Windows 11 Pro¹

Windows 11 Pro Education¹

Windows 11 Home - HP recommends Windows 11 Pro for Business¹

Windows 11 Home Single Language – HP recommends Windows 11 Pro for Business¹

Windows 11 Pro (Windows 11 Enterprise or Windows 10 Enterprise available with a Volume Licensing Agreement)¹

Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade)^{1,2}

FreeDOS

1. Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 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>.

2. This system is preinstalled with Windows 10 Pro software and also comes with a license for Windows 11 Pro software and provision for recovery software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.

PROCESSORS

Processor 3,4,5,6,7	Cores	Number of P-cores	Number of E-cores	Threads	L3 Cache	Max Turbo Frequency		Base Frequency		Intel SIPP/vPro® Enterprise	Intel vPro® Essentials
						P- cores	E- cores	P- cores	E- cores		
Intel® Core™ i7-1370P	14	6	8	20	24 MB	5.2 GHz	3.9 GHz	1.9 GHz	1.4 GHz	X	
Intel® Core™ i7-1360P	12	4	8	16	18 MB	5.0 GHz	3.7 GHz	1.9 GHz	1.4 GHz		X
Intel® Core™ i5-1350P	12	4	8	16	12 MB	4.7 GHz	3.5 GHz	1.9 GHz	1.4 GHz	X	
Intel® Core™ i7-1365U	10	2	8	12	12 MB	5.2 GHz	3.9 GHz	1.8 GHz	1.3 GHz	X	
Intel® Core™ i7-1355U	10	2	8	12	12 MB	5.0 GHz	3.7 GHz	1.7 GHz	1.2 GHz		X
Intel® Core™ i5-1345U	10	2	8	12	12 MB	4.7 GHz	3.5 GHz	1.6 GHz	1.2 GHz	X	
Intel® Core™ i5-1340P	12	4	8	16	12 MB	4.6 GHz	3.4 GHz	1.9 GHz	1.4 GHz		X

Technical Specifications

Intel® Core™ i5-1335U	10	2	8	12	12 MB	4.6 GHz	3.4 GHz	1.3 GHz	0.9 GHz		X
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3. 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's numbering, branding and/or naming is not a measurement of higher performance.

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

5. Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.

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>

7. Intel vPro® requires Windows 10 Pro 64 bit or higher, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or Wi-Fi 6E WLAN and TPM 2.0. Some functionality requires additional 3rd party software in order to run. Features of vPro® Essentials and Enterprise vary. See <http://intel.com/vpro>

CHIPSET

Chipset is integrated with processor

GRAPHICS

Integrated

Intel® Iris® Xe Graphics (2x DIMM) ⁸

Intel® UHD Premium Graphics (1x DIMM)

Supports

Support HD decode, DX12, HDMI 2.1, HDCP 2.3 ⁹

8. Intel® Iris® Xe Graphics capabilities require system to be configured with Intel® Core™ i5 or i7 processors and dual channel memory. Intel® Iris® Xe Graphics with Intel® Core™ i5 or 7 processors and single channel memory will only function as UHD graphics.

9. HDMI cable sold separately

Technical Specifications

DISPLAY

Non-Touch

40.64 cm (16") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP camera (1920 x 1200) ^{10,11}

40.64 cm (16") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP+IR camera (1920 x 1200) ^{10,11}

40.64 cm (16") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for WWAN (1920 x 1200) ^{10,11}

40.64 cm (16") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP camera for WWAN (1920 x 1200) ^{10,11}

40.64 cm (16") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP+IR camera for WWAN (1920 x 1200) ^{10,11}

40.64 cm (16") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for WWAN (1920 x 1200) ^{10,11}

40.64 cm (16") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP+PSR, 400 nits, 100% sRGB, Low Power, Ambient Light Sensor for 5MP Camera (1920 x 1200) with HP Eye Ease ^{10,11}

40.64 cm (16") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP+PSR, 400 nits, 100% sRGB, Low Power, Ambient Light Sensor+Ambient Color Sensor for 5MP+IR Camera (1920 x 1200) with HP Eye Ease ^{10,11}

40.64 cm (16") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP+PSR, 400 nits, 100% sRGB, Low Power, Ambient Light Sensor+Ambient Color Sensor for 5MP Camera for WWAN (1920 x 1200) with HP Eye Ease ^{10,11}

40.64 cm (16") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP+PSR, 400 nits, 100% sRGB, Low Power, Ambient Light Sensor+Ambient Color Sensor for 5MP+IR Camera for WWAN (1920 x 1200) with HP Eye Ease ^{10,11}

40.64 cm (16") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP1.3+PSR, 1000 nits, 100% sRGB with HP Sure View Reflect integrated privacy screen, Ambient Light Sensor+Ambient Color Sensor for 5MP camera (1920 x 1200) with HP Eye Ease ^{10,11,12,13}

40.64 cm (16") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP1.3+PSR, 1000 nits, 100% sRGB with HP Sure View Reflect integrated privacy screen, Ambient Light Sensor+Ambient Color Sensor for 5MP+IR camera (1920 x 1200) with HP Eye Ease ^{10,11,12,13}

40.64 cm (16") diagonal WUXGA Bent, Low Blue Light, anti-glare UWVA eDP1.3+PSR, 1000 nits, 100% sRGB with HP Sure View Reflect integrated privacy screen, Ambient Light Sensor+Ambient Color Sensor for 5MP+IR camera for WWAN (1920 x 1200) with HP Eye Ease ^{10,11,12,13}

Touch

40.64 cm (16") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP+IR camera Touch on Panel (1920 x 1200) ^{10,11,12,13}

40.64 cm (16") diagonal WUXGA Bent, anti-glare UWVA, 250 nits, 45% NTSC for 5MP+IR camera for WWAN Touch on Panel (1920 x 1200) ^{10,11,12,13}

DisplayPort™ 1.4

HDMI 2.1 Support resolution up to 4K @60 Hz ⁹

Displays support

Supports dual display through the dock

Display Size (Diagonal)

16"
40.64 cm (16")

9. HDMI cable sold separately

10. HD content required to view HD images.

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

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

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

Technical Specifications

DOCKING (Sold Separately)

Docking station model #1	HP Thunderbolt 120W G4 Dock
Docking station model #2	HP Thunderbolt 280W G4 Dock
Docking station model #3	HP USB-C Dock G5
Docking station model #4	HP USB-C/A Universal Dock G2
Docking station model #5	HP USB-C G5 Essential Dock

For additional aftermarket options and docking specs please see page 43.

STORAGE AND DRIVES

Primary Storage

2 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ¹⁴
1 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ^{14,15}
1 TB GB PCIe® Gen4x4 NVMe™ SED TLC OPAL2 ¹⁴
512 GB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ¹⁴
512 GB PCIe® Gen4x4 NVMe™ SED TLC OPAL2 ¹⁴
512 GB PCIe® NVMe™ Value M.2 SSD ¹⁴
256 GB PCIe® Gen4x4 NVMe™ Value SED TLC OPAL2 ¹⁴
256 GB PCIe® NVMe™ Value M.2 SSD ¹⁴

14. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.

15. Available only to HK (Hong Kong), TW(Taiwan) and CN (China).

MEMORY

Maximum Memory

64 GB DDR5-5200 MHz RAM (2 x 32 GB) ¹⁶

Memory

64 GB DDR5-4800 MHz RAM (2 x 32 GB) ¹⁶
32 GB DDR5-5200 MHz RAM (2 x 16 GB) ¹⁶
32 GB DDR5-5200 MHz RAM (1 x 32 GB) ¹⁶
32 GB DDR5-4800 MHz RAM (2 x 16 GB) ¹⁶
32 GB DDR5-4800 MHz RAM (1 x 32 GB) ¹⁶
16 GB DDR5-5200 MHz RAM (2 x 8 GB) ¹⁶
16 GB DDR5-5200 MHz RAM (1 x 16 GB) ¹⁶
16 GB DDR5-4800 MHz RAM (2 x 8 GB) ¹⁶
16 GB DDR5-4800 MHz RAM (1 x 16 GB) ¹⁶
8 GB DDR5-5200 MHz RAM (1 x 8 GB) ¹⁶
8 GB DDR5-4800 MHz RAM (1 x 8 GB) ¹⁶

Memory Slots

2 SODIMM



Technical Specifications

DDR5 SODIMMS, system runs at 4800
DDR5 SODIMMS, system runs at 5200
Supports Dual Channel Memory (Optional)

16. Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.

NETWORKING/COMMUNICATIONS

WLAN

Intel® AX211 Wi-Fi6E+ Bluetooth® 5.3 M.2 160MHz CNVi World-Wide WLAN vPro Wireless Card ¹⁷
Intel® AX211 Wi-Fi6E+ Bluetooth® 5.3 M.2 160MHz CNVi World-Wide WLAN non-vPro Wireless Card ¹⁷

WWAN

Intel® 5000 5G Solution WWAN ^{18,19}
Intel® XMM 7560 R+ LTE-Advanced Pro WWAN (Cat 16) ¹⁹

NFC

Near Field Communication (NFC) module ²⁰
HP Module with NXP NFC Controller NPC300 I2C NCI

Miracast

Native Miracast Support ²¹

17. 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.

18. WWAN module is an optional feature, requires factory configuration and requires separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions.

19. Intel 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.

20. Sold separately or as an optional feature.

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

Technical Specifications

AUDIO/MULTIMEDIA

Audio

Audio by Bang & Olufsen
2 Integrated stereo speakers
Discrete Amplifiers
Integrated dual array microphone

Speaker Power

1W/8ohm Per speaker

Camera

5 MP camera ²⁰
5 MP+IR camera ²⁰
5 MP + IR camera for face authentication with Windows Hello

Sensors

ALS (ambient light sensor)
Adaptive Color Sensor
Hall effect Sensor
Motion AI LSM6DSL
Thermal Sensor
HP Tamper Lock ²²

20. Sold separately or as an optional feature.

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

Technical Specifications

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

HP Premium Keyboard, spill resistant, Backlit keyboard and DuraKeys ²³

HP Premium Keyboard, spill resistant, Non-Backlit keyboard and DuraKeys

HP Premium Keyboard, spill resistant, Backlit keyboard and DuraKeys Privacy

Pointing Device

Clickpad with multi-touch gesture support, taps enabled as default

Microsoft Precision Touchpad Default Gestures Support

Function Keys

ESC: system information

F1 - Display Switching

F2 - Blank or Privacy

F3 - Brightness Down

F4 - Brightness Up

F5 - Audio Mute

F6 - Volume Down

F7 - Volume Up

F8 - Mic Mute

F9 - Blank or Backlit Toggle

F10 - Insert

F11 - Airplane Mode

F12 - HP Command Center

Print Screen

Power Button (with LED)

delete

home

end

pg up

pg dn

Hidden Function Keys

Fn+R - Break

Fn+S - Sys Rq

Fn+C - Scroll Lock

[23. Backlit keyboard is an optional feature.](#)

Technical Specifications

SOFTWARE AND SECURITY

Preinstalled Software

Software

HP Easy Clean ²⁴

HP PC Hardware Diagnostics Windows

myHP

HP Smart Support ²⁵

HP Services Scan ²⁶

HP Connection Optimizer

HP Hotkey Support

HP Support Assistant ²⁷

HP Notifications

HP Privacy Settings

HP Power Manager ²⁸

Microsoft Office sold separately and requires Internet access for activation

Manageability Features

HP Connect ²⁹

HP Image Assistant Gen5 (download)

HP Manageability Integration Kit (download) ³⁰

HP Client Management Script Library (download)

HP Patch Assistant (download) ³¹

HP Driver Packs (download)

HP Client Catalog (download)

HP Cloud Recovery ³²

Security Management

HP Wolf Security for Business ³³ includes:

HP Sure Click ³⁴

HP Sure Sense ³⁵

HP Sure Run ³⁶

HP Sure Recover ³⁷

HP Sure Start ³⁸

HP Tamper Lock ³⁹

HP Sure Admin ⁴⁰

BIOS

HP BIOSphere Gen6 ⁴¹

HP Secure Erase ⁴²

Absolute Persistence Module ⁴³

BIOS Update via Network

HP Wake on WLAN

Secured-Core PC Enable ⁴⁴

TPM 2.0 Embedded Security Chip (Common Criteria EAL4+ Certified) (FIPS 140-2 Level 2 Certified)

HP Fingerprint Sensor ⁴⁵

Security

TPM

Model: Nuvoton NPCT760HABYX

Technical Specifications

Version: 7.2.3.1

Revision: TPM 2.0

FIPS 140-2 Compliant: Yes

Smartcard Reader

Model number: Alcor AU9560

FIPS 201 Compliant: Yes

IPv6 Support

Yes

FirstNet Certified

Yes

The BIOS on this notebook implements ISO/IEC 19678:2015 guidelines (formerly NIST 800-147).

UEFI version: 2.7

Class: 3

24. HP Easy Clean requires Windows 10 RS3 and higher and will disable the keyboard, touchscreen, and clickpad only. Ports are not disabled. See user guide for cleaning instructions.

25. HP Smart Support requires HP TechPulse to be installed. For more information about how to enable or to download HP Smart Support, please visit <http://www.hp.com/smart-support>.

26. HP Services Scan is provided with Windows Update on select products and will check entitlement on each hardware device to determine if an HP TechPulse-enabled service has been purchased, and will download applicable software automatically. HP TechPulse is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP TechPulse follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access with connection to TechPulse portal is required. For full system requirements or to disable this feature, please visit <http://www.hpdaas.com/requirements>. Not applicable in China.

27. HP Support Assistance requires Windows and Internet Access.

28. HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.

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 Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.

31. 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>.

32. 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, wired network connection. **NOTE:** You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Details please refer to: <https://support.hp.com/us-en/document/c05115630>.

33. HP Wolf Security for Business requires Windows 10 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 and OS requirement.

34. HP Sure Click requires Windows 10 Pro or higher or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.

35. HP Sure Sense is available on select HP PCs with Windows 10 Pro, Windows 10 Enterprise, Windows 11 Pro, or Windows 11 Enterprise OS

36. HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.

Technical Specifications

- 37. HP Sure Recover Gen5 with Embedded Reimaging is an optional feature which requires Windows 10 and higher must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module
 - 38. HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher.
 - 39. HP Tamper Lock must be enabled by the customer or your administrator.
 - 40. HP Sure Admin requires Windows 10 or higher, HP BIOS, HP Manageability Integration Kit from <http://www.hp.com/go/clientmanagement> and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store
 - 41. HP BIOSphere Gen6 features may vary depending on the platform and configuration.
 - 42. HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.
 - 43. Absolute 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/>
 - 44. 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.
 - 45. HP Fingerprint sensor is an optional feature that must be configured at purchase.
-

Technical Specifications

POWER

Power Supply

HP Smart 65 W USB Type-C® adapter ⁴⁶

HP Smart 45 W USB Type-C® adapter ⁴⁶

HP 100W+10W Slim USB-C+USB-A AC power adapter ⁴⁶

Battery

HP Long Life 3-cell, 51 Wh Polymer ^{47,48}

HP Long Life 6-cell, 76 Wh Polymer ^{47,48}

Power Cord

3-wire plug - 1m ⁴⁶

2-wire plug - 1m ⁴⁶

Battery Life

Up to 11 hours 45 min (U15, HP Long Life 3-cell, 51 Wh Li-ion Polymer, UMA graphic, display set to 200nits, 2*8GB DDR5 memory, 512GB NVMe SSD) ⁴⁹

Up to 19 hours 30 min (U15, HP Long Life 6-cell, 76Wh Li-ion Polymer, UMA graphic, display set to 200nits, 2*8GB DDR5 memory, 512GB NVMe SSD) ⁴⁹

46. Availability may vary by country.

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

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

49. MM18 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.

WEIGHTS & DIMENSIONS

Product Weight- 51 Wh ⁵⁰

Starting at 3.81 lb

Starting at 1.73 kg

Product Dimensions (W x D x H)

14.12 x 9.88 x 0.76 in

35.87 x 25.1 x 1.92 cm

Packaging Dimensions (W x D x H) ⁵¹

16"-17" boxes (345mm height): 1200mm x 1000mm x 1200mm

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

51. Product packaging size varies based on options chosen. Please contact your HP representative for your packaging size details.

Technical Specifications

PORTS/SLOTS

- 2 Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4) ⁵²
- 2 Super Speed USB Type-A 5Gbps signaling rate (1 charging)
- 1 HDMI 2.1 ⁹
- 1 Headphone/microphone combo jack
- 1 Nano Security Lock Slot (Lock sold separately)
- 1 Smartcard reader (Optional)
- 1 nano SIM card slot

52. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

9. HDMI cable sold separately.

SERVICE AND SUPPORT

1-year warranty and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty except for HP Long Life batteries which will follow the one or three year warranty of the platform. Refer to <http://www.hp.com/support/batterywarranty/> for additional battery information. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: <http://www.hp.com/go/cpc>. 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.

Technical Specifications

SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	Type-C® Adapter
Nominal Operating Voltage	AC 20V
Average Operating Power	
Integrated graphics	Yes
Discrete Graphics	N/A
Max Operating Power	110W
Temperature	
Operating	32° to 95° F (0° to 35° C) (No sustained direct exposure to sunlight) (System performance may be reduced above 32°C (89.6°F))
Non-operating	-4° to 140° F (-20° to 60° C)
Relative Humidity	
Operating	10% to 90% (non-condensing)
Non-operating	5% to 95% (38.7° C (101.6° F) maximum wet bulb tempera-ture; non-condensing)
Shock	
Operating	40 G, 2 ms, half-sine
Non-operating	240 G, 2 ms, half-sine
Random Vibration	
Operating	1.043 grams
Non-operating	3.5 grams
Altitude (unpressurized)	
Operating	10,000 ft (3,048 m)
Non-operating	40,000 ft (12,192 m)
Planned Industry Standard Certifications	
Regulatory Model Number	HSN-I45C-6
CSA/UL 62368-1	Yes
ENERGY STAR®	Yes ⁵⁴
EPEAT®	EPEAT® Gold in the United States ⁵⁵
FCC/ICES/CISPR/VCCI	Yes
CE MARKING	Yes
GS Mark	Yes
	Related commodity should comply with ISO 9241 Standards.
China CCC/SRRC	Yes
Taiwan BSMI/NCC	Yes
Korea KCC/KC/KES	Yes
Ukraine NSoC/TEC	Yes
EAEU Compliance	Yes
Saudi Arabian Compliance	Yes
TCO	Yes
Low Blue Light	Yes
WW RoHS	Yes

Technical Specifications

54. Configurations of the HP EliteBook 860 16 inch G10 Notebook PC that are ENERGY STAR® qualified are identified as HP HP EliteBook 860 16 inch G10 Notebook PC ENERGY STAR on HP websites and on <http://www.energystar.gov>.

55. 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.

DISPLAYS

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

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

16.0 in 2.8K (2880 x 1800) BrightView UWVA OLED+LBL DCI-P3 NBZ2 400 eDP 1.4+PSR 100 48H-120Hz (VRR) bent OLED Panel	Outline Dimensions (W x H x D)	348.078 x 224.19 (max)
	Active Area	344.448 x 215.280 (typ)
	Weight	220 (max)
	Diagonal Size	16
	Surface Treatment	Bright View
	Touch Enabled	No
	Contrast Ratio	100,000:1 (typ)
	Refresh Rate	120 Hz
	Brightness	400 nits ¹
	Pixel Resolution - Format	2880 x 1800 (WQUXGA)
	Backlight	RGB
	Pixel Resolution	OLED
	Color Gamut Coverage	DCI-P3 100%
	Color Depth	8 bits + 2FRC
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	N/A (max)/ 7.5 (max)

16.0 in WUXGA (1920 x 1200) Anti-Glare UWVA WLED+LBL sRGB NB2Y 1000 eDP 1.3+PSR 100 PrivacyG4 Plus bent LCD Panel	Outline Dimensions (W x H x D)	349.980 x 225.420 (max)
	Active Area	344.680 x 215.420 (typ)
	Weight	310 (max)
	Diagonal Size	16
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1500:1 (typ)
	Refresh Rate	60 Hz
	Brightness	1000 nits ¹
	Pixel Resolution - Format	1920 x1200 (WUXGA)
	Backlight	RGB



Technical Specifications

Pixel Resolution	WLED
Color Gamut Coverage	sRGB 100%
Color Depth	8
Viewing Angle	UWVA 85/85/85/85
Low Blue Light	Yes
Power Consumption (W, EBL@ 150nits max/ 200nits max)	N/A

16.0 in WUXGA (1920 x 1200) Anti-Glare UWVA WLED+LBL sRGB NB2Y 400 eDP 1.4+PSR2 Low-Power 100 bent LCD Panel

Outline Dimensions (W x H x D)	350.680 x 226.470 (max)
Active Area	344.678 x 215.424 (typ)
Weight	330 (max)
Diagonal Size	16
Surface Treatment	Anti-Glare
Touch Enabled	No
Contrast Ratio	1000:1 (typ)
Refresh Rate	60 Hz
Brightness	400 nits ¹
Pixel Resolution - Format	1920 x 1200 (WUXGA)
Backlight	RGB
Pixel Resolution	WLED
Color Gamut Coverage	sRGB 100%
Color Depth	8
Viewing Angle	UWVA 89/89/89/89
Low Blue Light	Yes
Power Consumption (W, EBL@ 150nits max/ 200nits max)	1.60 (max)/ 1.95 (max)

16.0 in WUXGA (1920 x 1200) Anti-Glare UWVA LED NTSC NB2X 250 eDP 1.2 w/o PSR 45 bent LCD Panel

Outline Dimensions (W x H x D)	350.380 x 226.170 (max)
Active Area	344.678 x 215.424 (typ)
Weight	390 (max)
Diagonal Size	16
Surface Treatment	Anti-Glare
Touch Enabled	No
Contrast Ratio	1000:1 (typ)
Refresh Rate	60 Hz
Brightness	250 nits ¹
Pixel Resolution - Format	1920 x 1280 (WUXGA)
Backlight	RGB
Pixel Resolution	WLED

Technical Specifications

	Color Gamut Coverage	NTSC 45%
	Color Depth	6+2
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	No
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	2.70 (max) / 2.40 (max)

16.0 in WUXGA (1920 x 1200) Anti-Glare UWVA LED NTSC NB2X 250 TOP eDP 1.2 w/o PSR 45 bent LCD Panel	Outline Dimensions (W x H x D)	350.680 x 226.470 (max)
	Active Area	344.680 x 215.420 (typ)
	Weight	400 (max)
	Diagonal Size	16
	Surface Treatment	Anti-Glare
	Touch Enabled	Yes ¹
	Contrast Ratio	1000:1 (typ)
	Refresh Rate	60 Hz
	Brightness	250 nits ¹
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Backlight	RGB
	Pixel Resolution	WLED
	Color Gamut Coverage	NTSC 45%
	Color Depth	6+2
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	No
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	2.70 (max) / 3.40 (max)

Technical Specifications

STORAGE AND DRIVES

For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.

SSD 512GB 2280 PCIe-4x4 NVMe Three Layer Cell	Form Factor	M.2 2280
	Capacity	512GB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s ± 10%
	Minimum Sequential Write	3500 MB/s ± 10%
	Logical Blocks	1,000,215,215
	Features	Pyrite 2.0; TRIM; L1.2

SSD 1TB 2280 PCIe-4x4 NVMe Three Layer Cell	Form Factor	M.2 2280
	Capacity	1TB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	3200 MB/s ± 10%
	Minimum Sequential Write	2700 MB/s ± 10%
	Logical Blocks	2,000,409,264
	Features	Pyrite 2.0; TRIM; L1.2

1. Available only to HK (Hong Kong), TW (Taiwan) and CN (China).

SSD 2TB 2280 PCIe-4x4 NVMe Three Layer Cell	Capacity	2TB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s ± 10%
	Minimum Sequential Write	5000 MB/s ± 10%
	Logical Blocks	4,000,797,360
	Features	Pyrite 2.0; TRIM; L1.2

256GB PCIe 2280 NVMe Self Encrypted OPAL2 Value Solid State Drive	Capacity	256GB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	2000 MB/s ± 10%
	Minimum Sequential Write	900 MB/s ± 10%
	Logical Blocks	500,118,192
	Features	TCG Opal 2.0; TRIM; L1.2

Technical Specifications

512GB PCIe-4x4 2280 NVMe Self Encrypted OPAL2 Three Layer Cell Solid State Drive	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s $\pm$ 10%
	Minimum Sequential Write	3500 MB/s $\pm$ 10%
	Logical Blocks	1,000,215,215
	Features	TCG Opal 2.0; TRIM; L1.2

1TB PCIe-4x4 2280 NVMe Self Encrypted OPAL2 Three Layer Cell Solid State Drive	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s $\pm$ 10%
	Minimum Sequential Write	5000 MB/s $\pm$ 10%
	Logical Blocks	2,000,409,264
	Features	TCG Opal 2.0; TRIM; L1.2

SSD 256GB 2280 PCIe NVMe Value	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	2000 MB/s $\pm$ 10%
	Minimum Sequential Write	900 MB/s $\pm$ 10%
	Logical Blocks	500,118,192
	Features	Pyrite 2.0; TRIM; L1.2

SSD 512GB 2280 PCIe NVMe Value	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	2200 MB/s $\pm$ 10%
	Minimum Sequential Write	1000 MB/s $\pm$ 10%
	Logical Blocks	1,000,215,215
	Features	Pyrite 2.0; TRIM; L1.2

Technical Specifications

NETWORKING/COMMUNICATIONS

Intel® AX211 Wi-Fi 6E + Bluetooth® 5.3 M.2 160MHz CNVi World-Wide WLAN non-vPro Wireless Card ¹	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax 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 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	• 802.11b: 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
	Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
	Security ²	• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • WPA3 certification • IEEE 802.11i • WAPI
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points

Technical Specifications

Output Power ³	• 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 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 : -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, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express M.2 MiniCard
Dimensions	1. Type 2230: 2.3 x 22.0 x 30.0 mm
Weight	1. Type 2230: 2.8g
Operating Voltage	3.3v +/- 9%
Temperature	Operating 14° to 158° F (–10° to 70° C) Non-operating –40° to 176° F (–40° to 80° C)
Humidity	Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing)
Altitude	Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m)

Technical Specifications

LED Activity	LED Amber – Radio OFF; LED OFF – Radio ON
HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2/5.3 Wireless Card	
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.

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. 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.
2. Check latest software/driver release for updates on supported security features.
3. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.
4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

Technical Specifications

Intel® AX211 Wi-Fi 6E +Bluetooth® 5.3 M.2 160MHz CNVi World-Wide WLAN vPro Wireless Card¹	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax 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 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
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	Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
	Security²	• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • WPA3 certification • IEEE 802.11i • WAPI
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
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Technical Specifications

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HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2/5.3 Wireless Card



Technical Specifications

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- 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. 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.
- 2. Check latest software/driver release for updates on supported security features.
- 3. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.
- 4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

Technical Specifications

Intel® 5G Solution 5000¹ 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)

5G NR 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)

n7: 2500 to 2570 MHz (UL), 2620 to 2690 MHz (DL)

n8: 880 to 915 MHz (UL), 925 to 960 MHz (DL)

n20: 832 to 862 MHz (UL), 791 to 821 MHz (DL)

n25: 1850 to 1915 MHz (UL), 1930 to 1995 MHz (DL)

n28: 703 to 748 MHz (UL), 758 to 803 MHz (DL)

n38: 2570 to 2620 MHz (UL/DL)

n40: 2300 to 2400 MHz (UL/DL)

Technical Specifications

	n41: 2496 to 2690 MHz (UL/DL) 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	5G NR Air Interface 3GPP Rel15 5G NR sub-6 LTE Rel14 20 layers and 2 Gbps downlink (DL) throughput – 4 × 4 MIMO across 5x CA 200 Mbps/uplink (UL) throughput – 40 MHz ULCA and 256 QAM WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification
GPS	Standalone, A-GPS (MS-A, MS-B)
GPS bands	GPS: L1 (1575.42MHz) GLONASS: L1 (1602MHz) BeidouB1(1561.098MHz) Galileo E1 (1575.42) QZSS(1575.42 MHz)
Maximum data rates	SA 5G/NR sub-6 Peak: DL4.67Gbps/ UL 1.25Gbps 5G NSA sub 6G : DL: 3.8 Gbps/UL 700Mbps LTE: ue-CategoryDL 19, (DL : 1.6 Gbps) ue-CategoryUL 18 , (UL: 211Mbps)
Maximum output power	DC-HSPA+: 42 Mbps (Download), 11.5 Mbps (Upload) LTE: 23 dBm in all band except B41 LTE B41 HPUE = 26dBm NR: 23 dBm in all band except n41, n77, n78 and n79 LTE n41, n77, n78 and n79 HPUE = 26dBm HSPA+: 23.5 dBm
Maximum power consumption	5G Sub 6 : 2500 mA LTE: 1,300 mA (peak); 1100 mA (average) HSPA+: 1,100 mA (peak); 800 mA (average)
Form Factor	M.2, 3052-S3 Key B
Weight	8 g
Dimensions (Length x Width x Thickness)	52 mm × 30 mm × 2.3 mm
embedded eSIM Support	embedded eSIM Support

1. Intel® 5G module is optional and must be configured at the factory. Module designed for 5G SA (standalone), and 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

Technical Specifications

Intel® XMM™ 7560 R+ LTE-Advanced Pro ¹	Technology/Operating bands	FDD LTE: 2100 (Band 1), 1900 (Band 2), 1800 (Band 3), 1700/2100 (Band 4), 850 (Band 5), 2600 (Band 7), 900 (Band 8), 700 (Band 12 lower), 700 (Band 13 upper), 700 (Band 14 upper), 700 (Band 17 lower), 850 (Band 18 lower), 850 (Band 19 upper), 800 (Band 20), 1900 (Band 25), 850 (Band 26), 700 (Band 28), 700 (Band 29 RX only), 2300 (Band 30), 1700/2100 (Band 66), 600 (band 71). TDD LTE: 2100 (Band 34), 2600 (Band 38), 1900 (Band 39), 2400 (Band 40), 2500 (Band 41), 3500 (Band 42), 3700 (Band 43), 3700 (band 48), 5200 (Band 46 RX only) MHz; HSPA+: 2100 (Band 1), 1900 (Band 2), 1700/2100 (Band 4), 850 (Band 5), 900 (Band 8) MHz
	Wireless protocol standards	3GPP Release 12 LTE Specification DL-CAT.16, DL 100MHz BW throughput up to 978Mbps; UL-CAT.13 40MHz throughput up to 150Mbps WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification
	GPS	Standalone GPS/Beidou/Glonass, A-GPS (MS-A, MS-B)
	GPS bands	1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz, Beidou 1561.098 MHz
	Maximum data rates	LTE: 978 Mbps (Download), 150 Mbps (Upload) DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload) HSPA+: 21Mbps (Download), 5.76 Mbps (Upload)
	Maximum output power	LTE: 23 dBm in all band except B41 LTE B41 HPUE = 26dBm HSPA+: 23.5 dBm
	Maximum power consumption	LTE: 1,200 mA (peak); 900 mA (average) HSPA+: 1,100 mA (peak); 800 mA (average)
	Form Factor	M.2, 3042-S3 Key B
	Weight	6 g
	Dimensions (Length x Width x Thickness)	42 x 30 x 2.3 mm

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.

Technical Specifications

NFC NXP NPC300	Dimensions (L x W x H)	17x10x2.0 mm
	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	Tag Type 1, Type 2, Type3 and Type 4, NFCIP-1 and NFCIP-2
	Reader (PCD-VCD) Mode	ISO/IEC 14443 A
		ISO/IEC 14443 B
		ISO/IEC 15693
		MIFARE 1K
		MIFARE 4K
		MIFARE DESFire
		FeliCa
	Card Emulation (PICC-VICC) Mode	Jewel and Topaz cards
		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, 212, 424, 848 kbps
	Operating temperature	0°C to 70°C
	Storage temperature	-20°C to 125°C
	Humidity	10-90% operating
		5-95% non-operating
	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

Technical Specifications

Antenna	Antenna connector, 0.5mm pitch, 7 connector FPC. Antenna matching is external to module.
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Technical Specifications

POWER

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

AC Adapter 45 Watt nPFC Standard USB Type C® Straight 1.8m	Dimensions (H x W x D)	3.701 x 1.693 x 1.071 in (9.4 x 4.3 x 2.72 cm)
	Weight	0.44 lb (200 g) max (Not including power cord. Power cord varies by country.)
	Input	100~240VAC
	Input Efficiency	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec: 5V: 81.5% 9V: 86.7% 12V: 87.4% 15V: 87.8%
	Input frequency range	47 ~ 63Hz
	Input AC current	Max. 1.4 A at 90 Vac
	Output power	5V/15W 9V/27W 12V/36W 15V/45W
	DC output	5V/9V/12V/15V
	Hold-up time	100% load 5ms at 115 Vac input
	Output current limit	<5.0A
Connector	USB Type-C®	
Environmental Design	Operating temperature	32°F to 95°F (0°to 35°C)
	Non-operating (storage) temperature	-4°F to 185°F (-20°to 85°C)
	Altitude	0 to 16,400 ft (0 to 5000m)
	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, 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 RCM, BIS, BSMI, UAE, UKCA DoC, USB-IF, Ukraine (CoC+DoC+RoHS+ECO)	



Technical Specifications

AC Adapter 65 Watt nPFC Standard USB Type C® Straight 1.8m	Dimensions (H x W x D)	3.543 x 2.008 x 1.122 in (9.0 x 5.1 x 2.85 cm)
	Weight	0.53 lb (240 g) max (Not including power cord. Power cord varies by country.)
	Input	100-240Vac
	Input Efficiency	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec: 5V : 81.5% 9V : 86.7% 12V : 88.0% 15V : 89.0% 20V : 89.0%
	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 current limit	< 8.0A
Connector	USB Type-C®	
Environmental Design	Operating temperature	32°F to 95°F (0°to 35°C)
	Non-operating (storage) temperature	-4°F to 185°F (-20°to 85°C)
	Altitude	0 to 16,400 ft (0 to 5000m)
	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	



Technical Specifications

HP 65W Slim USB-C® Straight AC Power Adapter	Dimensions (H x W x D)	3.819 x 2.106 x 0.827 in (9.7x5.35x2.1 cm)
	Weight	0.49 lb (220 g) max (Not including power cord. Power cord varies by country.)
	Input	100-240Vac
	Input Efficiency	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec: 5V : 81.5% 9V : 86.7% 12V : 88.0% 15V : 89.0% 20V : 89.0%
	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 current limit < 8.0A
Connector		USB TYPE C®
Environmental Design	Operating temperature	32°F to 95°F (0° to 35°C)
	Non-operating (storage) temperature	-4°F to 185°F (-20° to 85°C)
	Altitude	0 to 16,400 ft (0 to 5000m)
	Humidity	20% to 95%
EMI and Safety Certifications	Storage Humidity	10% to 95%
	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	

Technical Specifications

HP 100W+10W Slim USB-C® + USB-A Straight AC Power Adapter	Dimensions (H x W x D)	5.354 x 2.362 x 0.866 in (13.6x6.0x2.2cm)
	Weight	0.88 lb (400 g) max (Not including power cord. Power cord varies by country.)
	Input	100-240Vac
	Input Efficiency	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec: 5V_USB Type-A : 73.62% 5V : 81.5% 9V : 86.7% 12V : 88.0% 15V : 89.0% 20V : 89.0%
	Input frequency range	47-63Hz
	Input AC current	Max. 1.6 A at 90 Vac
	Output power	5V/10W_USB Type-A 5V/15W 9V/27W 12V/60W 15V/75W 20V/100W
	DC output	5V_USB Type-A/5V/9V/12V/15V/20V
	Hold-up time	100% load 5ms at 115 Vac input/80% load 10ms at 115 Vac input
	Output current limit	5V_USB Type-A/5V/9V/12V/15V<125% max current, 20V<135% max current
Connector		USB TYPE C®
	Environmental Design	
	Operating temperature	32°F to 95°F (0° to 35°C)
	Non-operating (storage) temperature	-4°F to 185°F (-20° to 85°C)
	Altitude	0 to 16,400 ft (0 to 5000m)
EMI and Safety Certifications	Humidity	20% to 95%
	Storage Humidity	10% to 95%
		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

Technical Specifications

HP 3-cell Long Life Li-Ion (51 Wh)¹	Weight	0.229kg +/- 10g (0.505 lb)
	Cells/Type	3cell Lithium-Ion Polymer cell / 566075
	Energy	Voltage 11.58V
		Amp-hour capacity 4.431Ah
		Watt-hour capacity¹ 51.3Wh
	Temperature	Operating (Charging) 32° to 113° F (0° to 45° C)
		Operating (Discharging) 14° to 140° F (-10° to 60° C)
		Optional Travel Battery Available No

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

HP 6-cell Long Life Li-Ion (76 Wh)¹	Weight	0.357kg +/- 10g (0.787 lb)
	Cells/Type	6cell Lithium-Ion Polymer cell / 564975
	Energy	Voltage 11.58V
		Amp-hour capacity 6.565Ah
		Watt-hour capacity¹ 76Wh
	Temperature	Operating (Charging) 32° to 113° F (0° to 45° C)
		Operating (Discharging) 14° to 140° F (-10° to 60° C)
		Optional Travel Battery Available No

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

Technical Specifications

AUDIO

HD Stereo Codec	Realtek ALC3315
Audio I/O Ports	Headset: CTIA only and 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. Following MSFT Behaviour
Sampling	DAC:48kHz ADC:48kHz
Wavetable Syntheses	N/A
Analog Audio	Support 3.5mm Headset: CTIA only and Headphone-out
# of Channels on Line-Out	N/A
Internal Speaker	Yes

FINGERPRINT READER

Sensor vendor	Main source: Synaptics FS7605 2nd source: ELAN 80SW
Sensor type	Capacitive
DPI resolution	Main source: 363 DPI 2nd source: 508 DPI
Scan area	Main source: 104 x 86 pixels 2nd source: 80x80 pixels
False Rejection Rate	FRR= $\leq$ 3%
False Acceptance Rate	Main source: FAR 1/100K 2nd source: < 0.001%
Mobile Voltage Operation	Main source: 3.0V to 3.6V 2nd source: 2.7V~3.6V
Operating Temperature	Main source: 0°C~60°C 2nd source: -20°C - +80°C
Current Consumption	Main source: 100mA max
Image	2nd source: 35mA peak
Low Latency Wait For Finger	Main source: 260uA 2nd source: 300uA
Capture Rate	Main source: Image transmitter output frequency 9.6MHz 2nd source: 50 frame/sec
ESD Resistance	IEC 61000-4-2 4B (+15KV)
Detection Matrix	Main source: 363 dpi / 7.4x6mm sensor area 2nd source : 508 dpi / 4x4mm sensor area

Technical Specifications

ENVIRONMENTAL DATA

Eco-Label Certifications & declarations	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. • TCO Certified • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • Korea Eco-label • Japan PC Green label*		
Sustainable Impact Specifications	• Product Carbon Footprint (hp.com) • Ocean-bound plastic in Speaker • 60% post-consumer recycled plastic • 65% recycled metal • Low halogen • Outside Box and corrugated cushions are 100% sustainably sourced and recyclable • Molded Paper Pulp Cushion inside box is 100% sustainably sourced and recyclable • Bulk packaging available		
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook”.		
Energy Consumption (in accordance with US ENERGY STAR® test method)	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Sort idle)	5.71 W	6.14 W	5.89 W
Normal Operation (Long idle)	1.14 W	1.28 W	1.23 W
Sleep	1.14 W	1.28 W	1.23 W
Off	0.42 W	0.44 W	0.42 W
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	19.5 BTU/hr	21.0 BTU/hr	20.1 BTU/hr
Normal Operation (Long idle)	3.9 BTU/hr	4.4 BTU/hr	4.2 BTU/hr

Technical Specifications

Sleep	3.9 BTU/hr	4.4 BTU/hr	4.2 BTU/hr
Off	1.4 BTU/hr	1.5 BTU/hr	1.4 BTU/hr
	* NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.		
Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	Sound Power (L _{WAd} , bels)	Sound Pressure (L _{pAm} , decibels)	
Typically Configured – Idle	2.8	16.8	
Fixed Disk – Random writes	3.1	21.1	
Optical Drive – Sequential reads	3.9	29.8	
Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the		
	Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.		
Additional Information	• This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. • This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. • This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). • This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net • Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. • This product is 93.7% recycle-able when properly disposed of at end of life.		
Packaging Materials	External:	PAPER/Corrugated	287 g
		PAPER/Corrugated	72 g
		PAPER/Molded Pulp	139 g
		PAPER/Molded Pulp	23 g
		PAPER/Paper	4 g
	Internal:	PLASTIC/Polyethylene low density - LDPE	13 g
	The plastic packaging material contains at least 0.0% recycled content.		
	The corrugated paper packaging materials contains at least 51.8% recycled content.		
RoHS Compliance	HP Inc. complies fully with materials regulations. We were among the first companies to extend the restrictions in the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive to our products worldwide through the HP GSE. HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam. We believe the RoHS directive and similar laws play an important role in promoting industry-wide elimination of substances of concern. We have supported the inclusion of additional substances—including PVC, BFRs, and certain phthalates—in future RoHS legislation that pertains to electrical and electronics products.		

Technical Specifications

	We met our voluntary objective to achieve worldwide compliance with the new EU RoHS requirements for virtually all relevant products by July 2013, and we will continue to extend the scope of the commitment to include further restricted substances as regulations continue to evolve. To obtain a copy of the HP RoHS Compliance Statement, see HP RoHS position statement.
Material Usage	This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html): • Asbestos • Certain Azo Colorants • Certain Brominated Flame Retardants – may not be used as flame retardants in plastics • Cadmium • Chlorinated Hydrocarbons • Chlorinated Paraffins • Bis(2-Ethylhexyl) phthalate (DEHP) • Benzyl butyl phthalate (BBP) • Dibutyl phthalate (DBP) • Diisobutyl phthalate (DIBP) • Formaldehyde • Halogenated Diphenyl Methanes • Lead carbonates and sulfates • Lead and Lead compounds • Mercuric Oxide Batteries • Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user. • Ozone Depleting Substances • Polybrominated Biphenyls (PBBs) • Polybrominated Biphenyl Ethers (PBEBs) • Polybrominated Biphenyl Oxides (PBBOs) • Polychlorinated Biphenyl (PCB) • Polychlorinated Terphenyls (PCT) • Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications. • Radioactive Substances • Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)
Packaging Usage	HP follows these guidelines to decrease the environmental impact of product packaging: • Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials. • Eliminate the use of ozone-depleting substances (ODS) in packaging materials. • Design packaging materials for ease of disassembly. • Maximize the use of post-consumer recycled content materials in packaging materials. • Use readily recyclable packaging materials such as paper and corrugated materials. • Reduce size and weight of packages to improve transportation fuel efficiency.

Technical Specifications

	Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.
End-of-life Management and Recycling	HP offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.
HP, Inc. Corporate Environmental Information	For more information about HP's commitment to the environment: Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html ISO 14001 certificates: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842 and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf
footnotes	- Percentage of ocean-bound plastic contained in each component varies by product - Recycled plastic content percentage is based on the definition set in the IEEE 1680.1 - 2018 standard. - External power supplies, WWAN modules, power cords, cables and peripherals excluded. 100% outer box packaging and corrugated cushions made from sustainably sourced certified and recycled fibers. - Fiber cushions made from 100% recycled wood fiber and organic materials. - Plastic cushions are made from >90% recycled plastic. - Recycled metal is expressed as a percentage of the total weight of the metal according to ISO 14021 definitions for metal parts over 25 grams.

COUNTRY OF ORIGIN

China

Options and Accessories (Sold separately and availability may vary by country)

DOCKING (Sold Separately)

Docking station model #1	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 TB hosts or USB-C hosts DP 1.4 with DSC in high res mode
Dock Connectors	2xDP, 1xHDMI, 1xTB, 1xUSB-C Alt Mode
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.
Docking station model #2	HP Thunderbolt 280W G4 Dock
Total number of supported displays (incl. the notebook display)	4
Max. resolutions supported	Quad 4K @60Hz Dual 8K single cable@30 for TB hosts or USB-C hosts DP 1.4 with DSC in high res mode
Dock Connectors	2xDP, 1xHDMI, 1xTB, 1xUSB-C Alt Mode
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.
Docking station model #3	HP USB-C Dock G5

Options and Accessories (Sold separately and availability may vary by country)

Total number of supported displays (incl. the notebook display)	3
Max. resolutions supported	Dual 5K@ 30Hz + (1) 4K UHD (multi-function mode)
Dock Connectors	1xHDMI, 2xDP
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 #4	HP USB-C/A Universal Dock G2
Total number of supported displays (incl. the notebook display)	3
Max. resolutions supported	Dual 4K @ 60Hz Single 5K @ 60Hz
Dock Connectors	1xHDMI, 2xDP
Technical limitations	Maximum resolution and display support is dependent on the maximum capability of the notebook. The best resolution for dual or triple displays is 4K UHD@ 60Hz. For use with the USB-A adapter that comes in the box the maximum number of displays supported is (2) 4k x 60 Hz on the Type-A Gen 1 connection from the host.
Docking station model #5	HP USB-C G5 Essential Dock
Total number of supported displays (incl. the notebook display)	3
Max. resolutions supported	For hosts that support DisplayPort 1.4 with Display Stream Compression: 3x FHD @ 60 Hz 3x QHD @ 60 Hz 3x 4K @ 60 Hz For hosts that support DisplayPort 1.3/1.4: 3x FHD @ 60 Hz 3x QHD @ 60 Hz 2x 4K @ 60 Hz
Dock Connectors	1 x HDMI, 2 x DP
Technical limitations	Video resolution depends on the capability of the host machine. This dock provides up to 65W of power delivery to the host machine.

Options and Accessories (Sold separately and availability may vary by country)

Type	Description	Part Number
Audio	HP Wired USB-A Stereo Headset	428K6AA
	HP Wired 3.5mm Stereo Headset	428K7AA
	HP 365 BT Speaker	567D3AA#ACJ
Video	HP 325 FHD USB-A Webcam	53X27AA
	HP 965 4K USB-A STR Webcam	695J5AA
Cases	HP Renew Business 17.3 Laptop Backpack	3E2U5AA
	HP Renew Business 17.3 Laptop Bag	3E2U6AA
	HP Renew Executive 16 Laptop Backpack	6B8Y1AA
	HP Renew Executive 16 Laptop Bag	6B8Y2AA
Docking	HP USB-C 120W G5 Dock	5TW10AA
	HP USB-C/A 120W G2 Universal Dock	5TW13AA
	HP Thunderbolt 120W G4 Dock	4J0A2AA
	HP Thunderbolt 280W G4 Dock	4J0G4AA
Hub	HP 4K USB-C Multiport Hub	6G842AA
	HP Universal USB-C Multiport Hub	50H55AA
	HP USB-C Travel Dock G2	7PJ38AA
	HP USB-C to USB-A Hub	Z6A00AA
Adapter	HP USB-C to RJ45 Adapter G2	4Z527AA
	HP USB 3.0 to Gigabit RJ45 Adapter G2	4Z7Z7AA
	HP HDMI to VGA Adapter	H4F02AA
	HP USB-C to DisplayPort Adapter	N9K78AA
	HP USB-C to HDMI 2.0 Adapter	1WC36AA
	HP USB-C to USB 3.0 Adapter	N2Z63AA
	HP USB-C to VGA Adapter	N9K76AA
Keyboard/Combo	HP 125 WD USB Keyboard	266C9AA
	HP 320K WD USB Keyboard	9SR37AA
	HP 355 Compact Multi-Device BT Keyboard	692S9AA
	HP 455 Programmable Wireless Keyboard	4R177AA
	HP 975 USB+BT Dual-Mode Wireless Keyboard	3Z726AA
	HP 155 Wired Mouse and Keyboard Combo	5B8C0AA#ACJ
	HP 225 Antimicrobial Wired Mouse and Keyboard Combo	286K3AA#AB2
	HP 225 Wired Mouse and Keyboard Combo	286J4AA
	HP 235 Wireless Mouse and Keyboard Combo	1Y4D0AA

Options and Accessories (Sold separately and availability may vary by country)

	HP 655 Wireless Keyboard and Mouse Combo	4R009AA
	HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA
	HP Wireless Rechargeable 950MK Mouse and Keyboard	3M165AA
Mouse	HP 125 USB-A Wired Mouse	265A9AA
	HP 128 USB Laser Wired Mouse	265D9AA
	HP 155 USB-A Wired Mouse	5B8B7AA#ACJ
	HP 235 Wireless 2.4GHz Slim Wireless Mouse	4E407AA
	HP 320M USB-A Wired Mouse	9VA80AA
	HP 435 Bluetooth 5.0 + Wireless 2.4GHz Multi-Device Wireless Mouse	3B4Q5AA
	HP 715 Rechargeable Multi-Device Bluetooth 5.0 + Wireless 2.4GHz Bluetooth Mouse	6E6F0AA
	HP 925 Ergonomic Vertical Bluetooth 5.0 + Wireless 2.4GHz Wireless Mouse	6H1A5AA
	HP Creator USB-A+Bluetooth 935 Wireless Mouse Black	1D0K8AA
	HP USB Premium Wireless Mouse	1JR31AA
	HP USB-A+Bluetooth Multi-Device 635 Wireless Mouse Black	1D0K2AA
	HP USB-A+Bluetooth Travel Bluetooth Mouse	6SP30AA
Power	HP 45W USB-C LC Dali AC Power Adapter	1MZ01AA
	HP 65W GaN USB-C Laptop Charger	600Q7AA
	HP 65W USB-C Laptop Charger	671R3AA
	HP 65W USB-C LC AC Power Adapter	1P3K6AA
Commodity	HP USB DVD-Writer EXT ODD	F2B56AA
	HP Nano Keyed Cable Lock	1AJ39AA
	HP Nano Master Keyed Cable Lock	1AJ40AA
	HP SureKey Standard/Nano/Wedge Cable Lock	6UW42AA
	HP Combination Nano Cable Lock	63B28AA
	HP Essential Combination Nano Cable Lock	63B31AA

Change Log

Date of change:	Version History:		Description of change:
March 30, 2023	V1 to V2	Added	Environmental Data and Battery life
April 6, 2023	V2 to V3	Updated	DisplayPort™ in Display section
April 11, 2023	V3 to V4	Updated	Integrated Graphics
May 4, 2023	V4 to V5	Updated	Product Dimensions
May 18, 2023	V5 to V6	Updated	Storage and Drives section
June 5, 2023	V6 to V7	Updated	Sorge and Drives section
August 1, 2023	V7 to V8	Updated	Environmental Data
August 2, 2023	V8 to V9	Updated	Power section
August 14, 2023	V9 to V10	Updated	Processors section
October 11, 2023	V10 to V11	Updated	Panel Color Depth in Displays section
November 2, 2023	V11 to V12	Updated	Storage and Drives
	V12 to V13		

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HP EliteBook 865 16 inch G10 Notebook PC

Engineered for the hybrid worker

Overcome obstacles to hybrid work with the HP EliteBook 865. The latest AMD processor², up to 64GB DDR5 memory³, and features that enhance online meetings let you listen, be heard⁹, and look your best. Work confidently knowing your PC has a suite of enterprise-ready security and manageability.

Designed for the enterprise. Made for you.

Highly secure and easy to manage remotely with AMD PRO manageability, the HP EliteBook 865 has the performance you for complex workloads and a sophisticated design.

Collaborate with confidence

Bring authenticity to your online meetings in a hybrid work world with optional 5G connectivity.⁴ Make virtual meetings more human and interactive with HP Presence^{17,5} technology like a 5MP IR auto tracking camera with an 88-degree wide-viewing angle, and Audio by Bang & Olufsen.

Protected by HP Wolf Security

HP Wolf Security for Business creates a hardware-enforced, always-on, resilient defense. From the BIOS to the browser, above, in, and below the OS, these constantly evolving solutions help protect your PC from modern threats.⁶



*Product image may differ from actual product

Sustainability in action

Outer box packaging 100% sustainably sourced⁸

This PC contains at least 30-percent post-consumer recycled plastic in the bezel, at least 50-percent post-consumer recycled plastic in the keycaps⁷, and the outer box packaging is 100-percent sustainably sourced.⁸



HP EliteBook 865 16 inch G10 Notebook PC

Featuring

Easy battery management

Manage battery performance and customize charging options with the easy-to-use HP Power Manager dashboard.⁹

Dual video stream

Stream one video of you and another of an object with support for dual video streams and camera switching.¹⁰

HP Presence

Move freely, and look your best, even in low light conditions during video calls enhanced by HP Presence.^{5,11}

Be right back

When you need a break during calls change your video feed to a still picture with Be Right Back.¹¹

HP Keystone Correction

HP Keystone Correction automatically crops and flattens the image feed of whiteboards and documents.¹¹

myHP

Enable hardware and software innovations from HP with the myHP application.¹²

HP Auto Frame

Move around a little without losing viewers' attention during video calls with optional HP Auto Frame.¹¹

Background Adjustment

Keep a consistent look across all your videoconferencing apps with Background Adjustment.¹¹

Aware of its surroundings

HP Context Aware provides AI-based optimization to maximize performance, comfort, and responsiveness.¹³

See colors as they should be

Make the color of your screen look consistent in any light with the Adaptive Color.¹²

Comfortable viewing

Optional TÜV certified HP Eye Ease low blue light panels help remove blue light waves.¹⁴

Fast and efficient wireless LAN

Get a fast and reliable connection in dense wireless environments with gigabit data rate Wi-Fi 6E.^{15,16}



HP EliteBook 865 16 inch G10 Notebook PC

Technical specifications

Available Operating Systems	Windows 11 Pro ¹ Windows 11 Pro Education ¹ Windows 11 Home ¹ Windows 11 Home Single Language – HP recommends Windows 11 Pro for business ¹ Windows 11 Pro (Windows 11 Enterprise or Windows 10 Enterprise available with a Volume Licensing Agreement) ¹ Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade) ^{1,2} FreeDOS ¹
Processor family ³	AMD Ryzen™ 5 processor AMD Ryzen™ 7 processor
Available Processors ^{3,4,5,6}	AMD Ryzen™ 7 7840U with AMD Radeon™ Graphics (3.5 GHz base clock, up to 4.9 GHz max boost clock, 16 MB L3 cache, 8 cores, 16 threads) AMD Ryzen™ 5 7540U with AMD Radeon™ Graphics (3.5 GHz base clock, up to 4.9 GHz max boost clock, 16 MB L3 cache, 6 cores, 12 threads) AMD Ryzen™ 7 7840HS with Radeon™ Graphics (3.8 GHz base clock, up to 5.1 GHz max boost clock, 16 MB L3 cache, 8 cores, 16 threads) AMD Ryzen™ 9 7940HS with Radeon™ Graphics (4.0 GHz base clock , up to 5.2 GHz max boost clock, 16 MB L3 cache, 8 cores, 16 threads) AMD Ryzen™ 3 7440U with AMD Radeon™ Graphics (3.0 GHz base clock, up to 4.7 GHz max boost clock, 8 MB L3 cache, 4 cores, 8 threads)
Maximum memory	64 GB DDR5-5600 MHz RAM; ²⁸ Dual channel support.
Memory slots	2 SODIMM
Internal storage	512 GB up to 2 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ⁷ 256 GB up to 1 TB PCIe® Gen4x4 NVMe™ M.2 SED SSD TLC ⁷ 256 GB up to 512 GB PCIe® NVMe™ Value M.2 SSD ⁷
Display size (diagonal, metric)	40.6 cm (16")
Display	40.6 cm (16") diagonal, WUXGA (1920 x 1200), touch, IPS, anti-glare, 250 nits, 45% NTSC; 40.6 cm (16") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 250 nits, 45% NTSC; 40.6 cm (16") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 400 nits, low power, 100% sRGB with HP Eye Ease; 40.6 cm (16") diagonal, WUXGA (1920 x 1200), IPS, anti-glare, 1000 nits, 100% sRGB, HP Sure View Reflect integrated privacy screen with HP Eye Ease ^{12,13,14}
Available Graphics	Integrated: AMD Radeon™ Graphics ¹² (Support HD decode, DX12, HDMI 2.0, HDCP 2.3.)
Audio	Bang & Olufsen, dual stereo speakers, dual array microphones
Wireless technologies	Realtek Wi-Fi 6E RTL8852CE 802.11a/b/g/n/ax (2x2) and Bluetooth® 5.3 wireless card; MediaTek Wi-Fi 6E RZ616 (2x2) and Bluetooth® 5.3 wireless card (Compatible with Miracast-certified devices.) NFC Mirage WNC XRAV-1
Ports and connectors	2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4); 2 USB Type-A 5Gbps signaling rate (1 charging); 1 HDMI 2.1; 1 stereo headphone/microphone combo jack ⁸ ; (HDMI cable sold separately.)
Input devices	HP Premium Keyboard – spill-resistant with optional backlit keyboard; Clickpad with multi-touch gesture support, taps enabled as default
Communications	Intel® XMM™ 7560 LTE Advanced Pro
Camera	HP True Vision 5 MP camera with integrated dual array digital microphones
Software	HP Connection Optimizer; HP Hotkey Support; HP Support Assistant; HP Easy Clean; HP Power Manager; myHP; HP Privacy Settings; HP Notifications; HP PC Hardware Diagnostics Windows; HP Services Scan; HP Smart Support (download) Buy Office (Sold separately) ^{15,16,17,18,19}
Security management	Absolute persistence module; HP Secure Erase; HP Sure Click; HP Sure Recover; HP Sure Run; HP Sure Sense; BIOS Update via Network; HP Sure Admin; HP BIOSphere Gen6; TPM 2.0 embedded security chip (Common Criteria EAL4+ and FIPS 140-2 Level 2 Certified); HP Sure Start Gen7; HP Wake on WLAN; HP Tamper Lock; Secured-Core PC Enable
Security Software Licenses	HP Wolf Pro Security Edition ⁵⁶
Fingerprint reader	Fingerprint sensor (select models)



HP EliteBook 865 16 inch G10 Notebook PC

Technical specifications

Management features	HP Client Management Script Library (download); HP Driver Packs (download); HP Client Catalog (download); HP Manageability Integration Kit Gen4 (download); HP Image Assistant Gen5 (download); HP Patch Assistant (download); HP Cloud Recovery; HP Connect for Microsoft Endpoint Manager ^{20,21,22,23}
Power	HP Smart 65 W USB Type-C® adapter ²⁵
Battery type	HP Long Life 3-cell, 51 Wh polymer; HP Long Life 6-cell, 76 Wh polymer ²⁴ . Battery is internal and not replaceable by customer. Serviceable by warranty.
Battery life	Up to 23 hours and 30 minutes
Dimensions	35.87 x 25.1 x 1.92 cm; 2.71 x 20.47 x 12 in 6.9 x 52 x 30.5 cm (Package)
Weight	Starting at 1.73 kg; (Weight will vary by configuration. Does not include power adapter.)
Ecolabels	EPEAT® Gold registered; SEPA; TCO Certified ²⁷
Energy star certified (series fixed)	ENERGY STAR® certified
Certification and compliance	CCC; CECP; GS Mark
Warranty	1-year and 3-year limited warranties and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty. Refer to http://www.hp.com/support/batterywarranty/ for additional battery information. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/cpc .



HP EliteBook 865 16 inch G10 Notebook PC

Footnotes

Key Selling Points Footnotes

- ² Multi-core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. AMD's numbering is not a measurement of clock speed.
- ³ Sold separately or as an optional feature.
- ⁴ Intel® 5G module is optional and must be configured at the factory. Module designed for 5G SA (standalone), and 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.
- ⁵ Select HP Products are enhanced with HP Presence. Features vary by platform.
- ⁶ HP Wolf Security for Business requires Windows 10 Pro and higher, includes various HP security features and is available on HP Pro, Elite, Workstation, and RPOS products. See product details for included security features.
- ⁷ Recycled plastic content percentage is based on the definition set in the IEEE 16801-2018 standard.
- ⁸ 100% outer box packaging made from sustainably sourced certified and recycled fibers. Fiber cushions made from 100% recycled wood fiber and organic material. Any plastic cushions are made from >90% recycled plastic.
- ⁹ HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.
- ¹⁰ Dual video streams and camera switching with Multi-Camera requires second camera that is sold separately or as an optional feature and requires myHP application.
- ¹¹ Requires myHP application and Windows OS.
- ¹² Requires Windows OS.

Feature Messaging Footnotes

- ¹³ Available on select HP PCs with Windows 10.
- ¹⁴ Low blue light panel is only available with 400nit, non-touch, models without HP Sure View Reflect.
- ¹⁵ 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.
- ¹⁶ Wi-Fi® supporting gigabit data rate is achievable with Wi-Fi 6E (802.11ax) when transferring files between two devices connected to the same router. Requires a wireless router, sold separately, that supports 160MHz channels.
- ¹⁷ HP conferencing features require Windows and the latest myHP app, available over the air or for download via sofpaq on the HP Support website. Planned availability in spring 2023.

Technical Specifications Footnotes

- 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>.
- ² This system is preinstalled with Windows 10 Pro software and also comes with a license for Windows 11 Pro software and provision for recovery software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.
- ³ 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>.
- ⁴ 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.
- ⁵ Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
- ⁶ Max Boost clock frequency performance varies depending on hardware, software and overall system configuration.
- ⁷ For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.
- ⁸ SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.
- ⁹ HD content required to view HD images.
- ¹⁰ Actual brightness will be lower with touchscreen or Sure View.
- ¹¹ HP Sure View Reflect integrated privacy screen is an optional feature that must be configured at purchase and is designed to function in landscape orientation.
- ¹² HP Smart Support requires HP TechPulse to be installed. For more information about how to enable or to download HP Smart Support, please visit <http://www.hp.com/smart-support>.
- ¹³ HP Services Scan is provided with Windows Update on select products and will check entitlement on each hardware device to determine if an HP TechPulse-enabled service has been purchased, and will download applicable software automatically. HP TechPulse is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP TechPulse follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access with connection to TechPulse portal is required. For full system requirements or to disable this feature, please visit <http://www.hpdaas.com/requirements>. Not applicable in China.
- ¹⁴ HP Support Assistance requires Windows and Internet Access.
- ¹⁵ HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.
- ¹⁶ Microsoft Office sold separately and requires Internet access for activation.
- ¹⁷ 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.
- ¹⁸ HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.
- ¹⁹ 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>.
- ²⁰ HP Cloud Recovery is available for Z by HP, HP HP Elite and Pro desktops and laptops PCs with Intel® or AMD processors and requires an open, wired network connection. Note: You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Details please refer to: <https://support.hp.com/us-en/document/c05115630>.
- ²¹ Actual battery Watt-hours (Wh) will vary from design capacity. Battery capacity will naturally decrease with shelf life, time, usage, environment, temperature, system configuration, loaded apps, features, power management settings and other factors.
- ²² Availability may vary by country.
- ²³ HP Fingerprint sensor is an optional feature that must be configured at purchase.
- ²⁴ Based on US EPEAT® registration according to IEEE 16801-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.
- ²⁵ 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.
- ²⁶ HP Sure Click requires Windows 10 Pro or higher or Enterprise. See <https://bit.ly/2PrLT6A>, SureClick for complete details.
- ²⁷ HP Sure Sense is available on select HP PCs with Windows 10 Pro, Windows 10 Enterprise, Windows 11 Pro, or Windows 11 Enterprise OS25. HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.
- ²⁸ HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.
- ²⁹ HP Sure Recover Gen5 with Embedded Reimaging is an optional feature which requires Windows 10 and higher must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module.
- ³⁰ HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher.
- ³¹ HP Sure Admin requires Windows 10 or higher, HP BIOS, HP Manageability Integration Kit from <http://www.hp.com/go/clientmanagement> and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store.
- ³² HP Client Security Manager Gen7 requires Windows and is available on the select HP Elite and Pro PCs.
- ³³ HP BIOSphere Gen6 features may vary depending on the platform and configuration.
- ³⁴ HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.
- ³⁵ Absolute 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/>.
- ³⁶ 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.
- ³⁷ HP Wolf Pro Security Edition (including HP Sure Click Pro and HP Sure Sense Pro) is available preloaded on select SKUs and, depending on the HP product purchased, includes a paid 1-year or 3-year license. The HP Wolf Pro Security Edition software is licensed under the license terms of the HP Wolf Pro Security Software - End User License Agreement (EULA) that can be found at: https://support.hp.com/us-en/document/ish_3875769-3873014-16 as that EULA is modified by the following: "7. Term. Unless otherwise terminated earlier pursuant to the terms contained in this EULA, the license for the HP Wolf Pro Security Edition (HP Sure Sense Pro and HP Sure Click Pro) is effective upon activation and will continue for either a twelve (12) month or thirty-six (36) month license term ("Initial Term"). At the end of the Initial Term you may either (a) purchase a renewal license for the HP Wolf Pro Security Edition from HP.com, HP Sales or an HP Channel Partner, or (b) continue using the standard versions of HP Sure Click and HP Sure Sense at no additional cost with no future software updates or HP Support."



Overview

HP Elite x360 830 13 inch G10 2-in-1 Notebook PC



Left

- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Internal Microphones (2) 2. Ambient Light Sensor (Optional) 3. Webcam 4. Camera Shutter 5. IR Camera (Optional) 6. IR Camera LEDs (Optional) 7. NFC Sensor | <ul style="list-style-type: none"> 8. Glass Clickpad 9. Smartcard Reader (Optional) 10. LED Indicator 11. Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)¹ 12. Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4)¹ 13. SuperSpeed USB Type-A 5Gbps signaling rate (USB 3.2 Gen 1) 14. HDMI 2.1 Port (Cable not included) |
|---|--|

1. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

Overview



Right

- | | |
|--|---|
| 1. Power Button Key | 4. Nano Security Lock Slot (Lock sold separately) |
| 2. Audio Combo Jack | 5. SIM Card Slot (Optional) |
| 3. SuperSpeed USB Type-A 5Gbps signaling rate (Charging) (USB 3.2 Gen 1) | 6. Touch Fingerprint Sensor (Select models) |

Overview



Overview

At a Glance

- Preinstalled with Windows 11 versions or FreeDOS
- Premium ultraslim design with precision-crafted all-metal x360 design with four usage modes
- 13th Generation Intel® Core™ i5, i7 U-series Processors up to ten-core
- New LPDDR5-4800 memory with up to 32GB capacity
- 5MP camera with increased 88° field of view allows you to move around more freely in front of the camera or accommodate a group
- Optional ultrabright displays with HP Eye Ease, ambient light and ambient color sensors
- Choice of displays:
 - 33.8 cm (13.3") diagonal WUXGA IPS Anti-Glare LED-backlit non-touch, 250 nits, 45% NTSC
 - 33.8 cm (13.3") diagonal WUXGA IPS Anti-Glare On-Cell LED-backlit touch, 250 nits, 45% NTSC
 - 33.8 cm (13.3") diagonal WUXGA IPS Anti-Glare LED-backlit non-touch, 400 nits, 100% sRGB with HP Eye Ease
 - 33.8 cm (13.3") diagonal WUXGA IPS Anti-Glare LED-backlit non-touch, 1000 nits, 100% sRGB with HP Sure View Reflect with HP Eye Ease
- New enhanced HP Auto Frame provides improved face tracking and more natural framing movement
- New "Be Right Back" functionality allows you to set an image and notify meeting participants you'll "BRB" when you need to leave for a few minutes
- Choose from 38Whr or 51Whr battery options
- HP Wolf Security for Business creates a hardware-enforced, always-on, resilient defense
- Connectivity with optional Intel® 5000 5G/WWAN, and Thunderbolt™ Docking (Dock sold separately)
- Undergoes MIL-STD 810H tests¹
- An optional HP Rechargeable Active Pen with Magnetic Attach and 4096 Levels of pressure
- Supports fast charging (50% in 30 minutes) with no impact on battery recharge cycles
- Designed to support all HP docking options including the HP Universal Dock G5
- Can be wiped up to 10,000 times with germicidal cleaning wipes²

1. MIL-STD 810H is not intended to demonstrate fitness of 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.

2. Approved germicidal wipes for use on Select HP Platforms

<https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-9819ENW>

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

Technical Specifications

PRODUCT NAME

HP EliteBook x360 830 13 inch G10 2-in-1 Notebook PC

OPERATING SYSTEMS

Preinstalled	Windows 11 Pro ¹
	Windows 11 Pro Education ¹
	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 or Windows 10 Enterprise available with a Volume Licensing Agreement) ¹
	Windows 11 Pro (preinstalled with Windows 10 Pro Downgrade) ^{1,2}
	FreeDOS

1. Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. Windows 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>.
2. This system is preinstalled with Windows 10 Pro software and also comes with a license for Windows 11 Pro software and provision for recovery software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.

PROCESSORS

Processor 3,4,5,6,7	Cores	Number of P-cores	Number of E-cores	Threads	L3 Cache	Max Turbo Frequency		Base Frequency		Intel SIPP/vPro® Enterprise	Intel vPro® Essentials
						P-cores	E-cores	P-cores	E-cores		
Intel® Core™ i7-1365U	10	2	8	12	12 MB	5.2 GHz	3.9 GHz	1.8 GHz	1.3 GHz	X	
Intel® Core™ i7-1355U	10	2	8	12	12 MB	5.0 GHz	3.7 GHz	1.7 GHz	1.2 GHz		
Intel® Core™ i5-1345U	10	2	8	12	12 MB	4.7 GHz	3.5 GHz	1.6 GHz	1.2 GHz	X	
Intel® Core™ i5-1335U	10	2	8	12	12 MB	4.6 GHz	3.4 GHz	1.3 GHz	0.9 GHz		X

3. 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’s numbering, branding and/or naming is not a measurement of higher performance.
4. Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.

Technical Specifications

5. Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.
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>
7. Intel vPro® requires Windows 10 Pro 64 bit or higher, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or Wi-Fi 6E WLAN and TPM 2.0. Some functionality requires additional 3rd party software in order to run. Features of vPro® Essentials and Enterprise vary. See <http://intel.com/vpro>

CHIPSET

Chipset is integrated with processor

GRAPHICS

Integrated

Intel® Iris® Xe Graphics ⁸

Supports

Support HD decode, DX12, HDMI 2.1, HDCP 2.3 ⁹

8. Intel® Iris® Xe Graphics capabilities require system to be configured with Intel® Core™ i5 or i7 processors and dual channel memory. Intel® Iris® Xe Graphics with Intel® Core™ i5 or 7 processors and single channel memory will only function as UHD graphics.

9. HDMI cable sold separately

DISPLAY

Touch

33.8 cm (13.3") diagonal WUXGA Bent touch screen , BrightView UWVA, eDP, 250 nits, 45% NTSC with 5MP camera (1920 x 1200) ^{10,11,13}

33.8 cm (13.3") diagonal WUXGA Bent touch screen , BrightView UWVA, eDP, 250 nits, 45% NTSC with 5MP camera for WWAN(1920 x 1200) ^{10,11,13}

33.8 cm (13.3") diagonal WUXGA Bent touch screen, Low Blue Light, anti-glare UWVA eDP1.4+PSR, 400 nits, 100% sRGB, Low Power, Ambient Light Sensor+Ambient Color Sensor with 5MP+IR Camera (1920 x 1200) with HP Eye Ease ^{10,11,13}

33.8 cm (13.3") diagonal WUXGA Bent touch screen, Low Blue Light, anti-glare UWVA eDP1.4+PSR, 400 nits, 100% sRGB, Low Power, Ambient Light Sensor+Ambient Color Sensor with 5MP+IR Camera for WWAN (1920 x 1200) with HP Eye Ease ^{10,11,13}

33.8 cm (13.3") diagonal WUXGA Bent touch screen, Low Blue Light, BrightView UWVA eDP1.4+PSR, 400 nits, 100% sRGB, Low Power, Ambient Light Sensor+Ambient Color Sensor with 5MP+IR Camera (1920 x 1200) with HP Eye Ease ^{10,11,13}

33.8 cm (13.3") diagonal WUXGA Bent touch screen, Low Blue Light, BrightView UWVA eDP1.4+PSR, 400 nits, 100% sRGB, Low Power, Ambient Light Sensor+Ambient Color Sensor with 5MP+IR Camera for WWAN (1920 x 1200) with HP Eye Ease ^{10,11,13}

33.8 cm (13.3") diagonal WUXGA Bent touch screen, Low Blue Light, anti-glare UWVA eDP+PSR, 1000 nits, 100% sRGB with HP Sure View Reflect integrated privacy screen, Ambient Light Sensor+Ambient Color Sensor with 5MP+IR camera (1920 x 1200) with HP Eye Ease ^{10,11,12,13}

Technical Specifications

33.8 cm (13.3") diagonal WUXGA Bent touch screen, Low Blue Light, BrightView UWVA eDP+PSR, 1000 nits, 100% sRGB with HP Sure View Reflect integrated privacy screen, Ambient Light Sensor+Ambient Color Sensor with 5MP+IR camera (1920 x 1200) with HP Eye Ease ^{10,11,12,13}

33.8 cm (13.3") diagonal WUXGA Bent touch screen, Low Blue Light, anti-glare UWVA eDP+PSR, 1000 nits, 100% sRGB with HP Sure View Reflect integrated privacy screen, Ambient Light Sensor+Ambient Color Sensor with 5MP+IR camera for WWAN (1920 x 1200) with HP Eye Ease ^{10,11,12,13}

33.8 cm (13.3") diagonal WUXGA Bent touch screen, Low Blue Light, BrightView UWVA eDP+PSR, 1000 nits, 100% sRGB with HP Sure View Reflect integrated privacy screen, Ambient Light Sensor+Ambient Color Sensor with 5MP+IR camera for WWAN (1920 x 1200) wit HP Eye Ease ^{10,11,12,13}

DisplayPort™ 1.4
HDMI 2.1 Support resolution up to 4K @60 Hz ⁹

Displays support
Supports dual display through the dock

Display Size (Diagonal)
13.3" diagonal
33.8 cm (13.3") diagonal

- 9. HDMI cable sold separately
- 10. HD content required to view HD images.
- 11. Resolutions are dependent upon monitor capability, and resolution and color depth settings.
- 12. HP Sure View Reflect integrated privacy screen is an optional feature that must be configured at purchase and is designed to function in landscape orientation.
- 13. Actual brightness will be lower with touchscreen or Sure View.

DOCKING (Sold Separately)

Docking station model #1	HP Thunderbolt 120W G4 Dock
Docking station model #2	HP Thunderbolt 280W G4 Dock
Docking station model #3	HP USB-C Dock G5
Docking station model #4	HP USB-C/A Universal Dock G2
For additional aftermarket options and docking specs please see page 42.	



Technical Specifications

STORAGE AND DRIVES

Primary Storage

2 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ¹⁴
1 TB PCIe® Gen4x4 NVMe™ NMIC SSD TLC ¹⁴
1 TB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ¹⁴
1 TB PCIe® Gen4x4 NVMe™ SED TLC NMIC OPAL2 ¹⁴
1 TB PCIe® Gen4x4 NVMe™ SED TLC OPAL2 ¹⁴
512 GB PCIe® Gen4x4 NVMe™ SED TLC OPAL2 ¹⁴
512GB PCIe® Gen4x4 NVMe™ M.2 SSD TLC ¹⁴
512 GB PCIe® NVMe™ Value NMIC M.2 SSD ¹⁴
512 GB PCIe® NVMe™ Value M.2 SSD ¹⁴
256 GB PCIe® Gen4x4 NVMe™ Value SED TLC OPAL2¹⁴
256GB PCIe® NVMe™ Value M.2 SSD ¹⁴

14. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.

MEMORY

Maximum Memory

32 GB LPDDR5-4800MHz RAM ¹⁵

Memory

32 GB LPDDR5-4800MHzRAM ¹⁵
16 GB LPDDR5-4800MHzRAM¹⁵
8 GB LPDDR5-4800 MHz RAM¹⁵

Memory Slots

Memory soldered down
LPDDR5, System runs at: 4800MHz
Supports Dual Channel Memory

15. 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.

Technical Specifications

NETWORKING/COMMUNICATIONS

WLAN

Intel® AX211 Wi-Fi6E+ Bluetooth® 5.3 M.2 160MHz CNVi World-Wide WLAN vPro Wireless Card ¹⁶

Intel® AX211 Wi-Fi6E+ Bluetooth® 5.3 M.2 160MHz CNVi World-Wide WLAN non-vPro Wireless Card ¹⁶

WWAN

Intel® 5000 5G Solution WWAN ^{17,18}

Intel® XMM 7560 R+ LTE-Advanced Pro WWAN (Cat 16) ¹⁷

NFC

Near Field Communication (NFC) module ¹⁹

HP Module with NXP NFC Controller NPC300 I2C NCI

Miracast

Native Miracast Support ²⁰

16. 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.

17. WWAN module is an optional feature, requires factory configuration and requires separately purchased service contract. Check with service provider for coverage and availability in your area. Connection speeds will vary due to location, environment, network conditions, and other factors. 4G LTE not available on all products, in all regions.

18. Intel 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.

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

20. Sold separately or as an optional feature.

Technical Specifications

AUDIO/MULTIMEDIA

Audio

Audio by Bang & Olufsen
2 Integrated stereo speakers
Discrete Amplifiers
Integrated dual array microphone

Speaker Power

1W/8ohm Per speaker

Camera

5 MP camera ²¹
5 MP+IR camera ²¹
5 MP + IR camera for face authentication with Windows Hello

Sensors

ALS (ambient light sensor)
Adaptive Color Sensor
Hall effect Sensor
Motion AI LSM6DSL
Thermal Sensor
HP Tamper Lock ²²
Magnetometer
Accelerometer + Gyroscope

21. Sold separately or as an optional feature.

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

Technical Specifications

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

HP Premium Keyboard, spill resistant, Backlit keyboard and DuraKeys ²³

HP Premium Keyboard, spill resistant, Non-Backlit keyboard and DuraKeys

HP Premium Keyboard, spill resistant, Backlit keyboard and DuraKeys Privacy

Pointing Device

Clickpad with multi-touch gesture support, taps enabled as default

Microsoft Precision Touchpad Default Gestures Support

Function Keys

ESC: system information

F1 - Display Switching

F2 - Blank or Privacy

F3 - Brightness Down

F4 - Brightness Up

F5 - Audio Mute

F6 - Volume Down

F7 - Volume Up

F8 - Mic Mute

F9 - Blank or Backlit Toggle

F10 - Insert

F11 - Airplane Mode

F12 - HP Command Center

home

end

Power Button (with LED)

Delete

Hidden Function Keys

Fn+R - Break

Fn+S - Sys Rq

Fn+C - Scroll Lock

[23. Backlit keyboard is an optional feature.](#)

Technical Specifications

SOFTWARE AND SECURITY

Preinstalled Software

Software

HP Easy Clean ²⁴

HP PC Hardware Diagnostics Windows

myHP

HP Smart Support ²⁵

HP Services Scan ²⁶

HP Connection Optimizer

HP Hotkey Support

HP Support Assistant²⁷

HP Notifications

HP Privacy Settings

HP Power Manager ²⁸

Microsoft Office sold separately and requires Internet access for activation

Manageability Features

HP Connect ²⁹

HP Image Assistant Gen5 (download)

HP Manageability Integration Kit (download) ³⁰

HP Client Management Script Library (download)

HP Patch Assistant (download) ³¹

HP Driver Packs (download)

HP Client Catalog (download)

HP Cloud Recovery ³²

Security Management

HP Wolf Security for Business ³³ includes:

HP Sure Click ³⁴

HP Sure Sense ³⁵

HP Sure Run ³⁶

HP Sure Recover³⁷

HP Sure Start ³⁸

HP Tamper Lock ³⁹

HP Sure Admin ⁴⁰

BIOS

HP BIOSphere Gen6 ⁴¹

HP Secure Erase ⁴²

Absolute Persistence Module ⁴³

BIOS Update via Network

HP Wake on WLAN

Secured-Core PC Enable ⁴⁴

TPM 2.0 Embedded Security Chip (Common Criteria EAL4+ Certified) (FIPS 140-2 Level 2 Certified)

HP Fingerprint Sensor ⁴⁵

Security

TPM

Model: Nuvoton NPCT760HABYX

Technical Specifications

Version: 7.2.3.1

Revision: TPM 2.0

FIPS 140-2 Compliant: Yes

Smartcard Reader

Model number: Alcor AU9560

FIPS 201 Compliant: Yes

IPv6 Support

Yes

FirstNet Certified

Yes

The BIOS on this notebook implements ISO/IEC 19678:2015 guidelines (formerly NIST 800-147).

UEFI version: 2.7

Class: 3

24. HP Easy Clean requires Windows 10 RS3 and higher and will disable the keyboard, touchscreen, and clickpad only. Ports are not disabled. See user guide for cleaning instructions.

25. HP Smart Support requires HP TechPulse to be installed. For more information about how to enable or to download HP Smart Support, please visit <http://www.hp.com/smart-support>.

26. HP Services Scan is provided with Windows Update on select products and will check entitlement on each hardware device to determine if an HP TechPulse-enabled service has been purchased, and will download applicable software automatically. HP TechPulse is a telemetry and analytics platform that provides critical data around devices and applications and is not sold as a standalone service. HP TechPulse follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access with connection to TechPulse portal is required. For full system requirements or to disable this feature, please visit <http://www.hpdaas.com/requirements>. Not applicable in China.

27. HP Support Assistance requires Windows and Internet Access

28. HP Power Manager requires Windows 10 and higher and can be downloaded from the Microsoft Store.

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 Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.

31. 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>.

32. 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, wired network connection. **NOTE:** You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Details please refer to: <https://support.hp.com/us-en/document/c05115630>.

33. HP Wolf Security for Business requires Windows 10 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 and OS requirement.

34. HP Sure Click requires Windows 10 Pro or higher or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.

35. HP Sure Sense is available on select HP PCs with Windows 10 Pro, Windows 10 Enterprise, Windows 11 Pro, or Windows 11 Enterprise OS

36. HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.

Technical Specifications

- 37. HP Sure Recover Gen5 with Embedded Reimaging is an optional feature which requires Windows 10 and higher must be configured at purchase. You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module
 - 38. HP Sure Start Gen7 is available on select HP PCs and requires Windows 10 and higher
 - 39. HP Tamper Lock must be enabled by the customer or your administrator.
 - 40. HP Sure Admin requires Windows 10 or higher, HP BIOS, HP Manageability Integration Kit from <http://www.hp.com/go/clientmanagement> and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store
 - 41. HP BIOSphere Gen6 features may vary depending on the platform and configuration.
 - 42. HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.
 - 43. Absolute 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/>
 - 44. 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.
 - 45. HP Fingerprint sensor is an optional feature that must be configured at purchase.
-

Technical Specifications

POWER

Power Supply

HP Smart 65 W USB Type-C® adapter ⁴⁶

HP Smart 45 W USB Type-C® adapter ⁴⁶

Battery

HP Long Life 3-cell, 38 Wh Polymer ^{47,48}

HP Long Life 3-cell, 38 Wh Polymer SET ^{47,48}

HP Long Life 3-cell, 51 Wh Polymer ^{47,48}

Power Cord

3-wire plug - 1m ⁴⁶

2-wire plug - 1m ⁴⁶

Battery Life

Up to 14 hours 45mins (U15, HP Long Life 3-cell, 51 Wh Li-ion Polymer, UMA graphic, display set to 200nits, 16GB LPDDR5 memory, 512GB NVMe SSD)⁴⁹

46. Availability may vary by country.

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

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

49. MM18 battery life will vary depending on various factors including product model, configuration, loaded applications, features, use, wireless functionality, and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See www.bapco.com for additional details.

WEIGHTS & DIMENSIONS

Product Weight⁵⁰

Starting at 2.95 lb

Starting at 1.34 kg

Product Dimensions (W x D x H)

11.81 x 8.51 x 0.76 in

30.01 x 21.62 x 1.92 cm

Packaging Dimensions (W x D x H) ⁵¹

12"-15" boxes (305mm height): 1200mm x 1000mm x 1080mm

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

51. Product packaging size varies based on options chosen. Please contact your HP representative for your packaging size details.

Technical Specifications

PORTS/SLOTS

- 2 Thunderbolt™ 4 with USB4 Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4) ⁵²
- 2 Super Speed USB Type-A 5Gbps signaling rate (1 charging)
- 1 HDMI 2.1 ⁹
- 1 Headphone/microphone combo jack
- 1 Nano Security Lock Slot (Lock sold separately)
- 1 Smartcard reader (Optional)
- 1 nano SIM card slot

52. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

9. HDMI cable sold separately.

SERVICE AND SUPPORT

1-year warranty and 90 day software limited warranty options depending on country. Batteries have a default one year limited warranty except for HP Long Life batteries which will follow the one or three year warranty of the platform. Refer to <http://www.hp.com/support/batterywarranty/> for additional battery information. On-site service and extended coverage is also available. HP Care Pack Services are optional extended service contracts that go beyond the standard limited warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: <http://www.hp.com/go/cpc>. 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.

Technical Specifications

SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	Type-C Adapter
Nominal Operating Voltage	AC 20V
Average Operating Power	
Integrated graphics	Yes
Discrete Graphics	N/A
Max Operating Power	65W
Temperature	
Operating	32° to 95° F (0° to 35° C) (No sustained direct exposure to sunlight) (System performance may be reduced above 32°C (89.6°F))
Non-operating	-4° to 140° F (-20° to 60° C)
Relative Humidity	
Operating	10% to 90% (non-condensing)
Non-operating	5% to 95% (38.7° C (101.6° F) maximum wet bulb tempera-ture; non-condensing)
Shock	
Operating	40 G, 2 ms, half-sine
Non-operating	240 G, 2 ms, half-sine
Random Vibration	
Operating	1.043 grams
Non-operating	3.5 grams
Altitude (unpressurized)	
Operating	10,000 ft (3,048 m)
Non-operating	40,000 ft (12,192 m)
Planned Industry Standard Certifications	
Regulatory Model Number	HSN-I46C
CSA/UL 62368-1	Yes
ENERGY STAR®	Yes ⁵⁴
EPEAT®	EPEAT® Gold in the United States ⁵⁵
FCC/ICES/CISPR/VCCI	Yes
CE MARKING	Yes
GS Mark	Yes
	Related commodity should comply with ISO 9241 Standards.
China CCC/SRRC	Yes
Taiwan BSMI/NCC	Yes
Korea KCC/KC/KES	Yes
Ukraine NSoC/TEC	Yes
EAEU Compliance	Yes
Saudi Arabian Compliance	Yes
TCO	Yes
Low Blue Light	Yes
WW RoHS	Yes

Technical Specifications

54. Configurations of the HP EliteBook x360 830 13 inch G10 2-in-1 Notebook PC that are ENERGY STAR® qualified are identified as HP EliteBook x360 830 13 inch G10 2-in-1 Notebook PC ENERGY STAR on HP websites and on <http://www.energystar.gov>.

55. 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.

DISPLAYS

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

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

13.3 in WUXGA (1920 x 1200) Anti-Glare UWVA WLED+LBL sRGB NB2Y 1000 eDP 1.3+PSR 100 PrivacyG4 Plus bent LCD Panel	Outline Dimensions (W x H x D)	291.380 x 188.640 (max)
	Active Area	286.080 x 178.800 (typ)
	Weight	210 (max)
	Diagonal Size	13.3
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1500:1 (typ)
	Refresh Rate	60 Hz
	Brightness	1000 nits ¹
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Backlight	RGB
	Pixel Resolution	WLED
	Color Gamut Coverage	sRGB 100%
	Color Depth	8
	Viewing Angle	UWVA 85/85/85/85
	Low Blue Light	Yes
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	N/A

13.3 in WUXGA (1920 x 1200) Anti-Glare UWVA LED NTSC NB2X 250 eDP 1.2 w/o PSR 45 bent LCD Panel	Outline Dimensions (W x H x D)	292.040 x 189.830 (max)
	Active Area	286.040 x 178.780 (typ)
	Weight	280 (max)
	Diagonal Size	13.3
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1000:1 (typ)
	Refresh Rate	60 Hz
	Brightness	250 nits ¹
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Backlight	RGB

Technical Specifications

	Pixel Resolution	WLED
	Color Gamut Coverage	NTSC 45%
	Color Depth	6+2
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	No
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	2.26 (max) / 2.78 (max)
13.3 in WUXGA (1920 x 1200) Anti-Glare UWVA WLED+LBL sRGB NB2X 400 eDP 1.4+PSR2 Low-Power 100 bent LCD Panel	Outline Dimensions (W x H x D)	292.040 x 189.830 (max)
	Active Area	286.040 x 178.780 (typ)
	Weight	185 (max)
	Diagonal Size	13.3
	Surface Treatment	Anti-Glare
	Touch Enabled	No
	Contrast Ratio	1200:1(typ)
	Refresh Rate	60 Hz
	Brightness	400 nits ¹
	Pixel Resolution - Format	1920 x 1200 (WUXGA)
	Backlight	RGB
	Pixel Resolution	WLED
	Color Gamut Coverage	sRGB 100%
	Color Depth	8
	Viewing Angle	UWVA 89/89/89/89
	Low Blue Light	Yes
	Power Consumption (W, EBL@ 150nits max/ 200nits max)	1.21 (max) / 1.45 (max)

Technical Specifications

STORAGE AND DRIVES

For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB (for Windows 10 and 11) is reserved for system recovery software.

SSD 512GB 2280 PCIe-4x4 NVMe Three Layer Cell	Form Factor	M.2 2280
	Capacity	512GB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s ± 10%
	Minimum Sequential Write	3500 MB/s ± 10%
	Logical Blocks	1,000,215,215
	Features	Pyrite 2.0; TRIM; L1.2

SSD 1TB 2280 PCIe-4x4 NVMe Three Layer Cell	Form Factor	M.2 2280
	Capacity	1TB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s ± 10%
	Minimum Sequential Write	5000 MB/s ± 10%
	Logical Blocks	2,000,409,264
	Features	Pyrite 2.0; TRIM; L1.2

SSD 2TB 2280 PCIe-4x4 NVMe Three Layer Cell	Capacity	2TB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s ± 10%
	Minimum Sequential Write	5000 MB/s ± 10%
	Logical Blocks	4,000,797,360
	Features	Pyrite 2.0; TRIM; L1.2

256GB PCIe 2280 NVMe Self Encrypted OPAL2 Value Solid State Drive	Capacity	256GB
	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	2000 MB/s ± 10%
	Minimum Sequential Write	900 MB/s ± 10%
	Logical Blocks	500,118,192
	Features	TCG Opal 2.0; TRIM; L1.2

Technical Specifications

512GB PCIe-4x4 2280 NVMe Self Encrypted OPAL2 Three Layer Cell Solid State Drive	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s $\pm$ 10%
	Minimum Sequential Write	3500 MB/s $\pm$ 10%
	Logical Blocks	1,000,215,215
	Features	TCG Opal 2.0; TRIM; L1.2

1TB PCIe-4x4 2280 NVMe Self Encrypted OPAL2 Three Layer Cell Solid State Drive	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	6400 MB/s $\pm$ 10%
	Minimum Sequential Write	5000 MB/s $\pm$ 10%
	Logical Blocks	2,000,409,264
	Features	TCG Opal 2.0; TRIM; L1.2
	NAND Type	TLC

SSD 256GB 2280 PCIe NVMe Value	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	2000 MB/s $\pm$ 10%
	Minimum Sequential Write	900 MB/s $\pm$ 10%
	Logical Blocks	500,118,192
	Features	Pyrite 2.0; TRIM; L1.2

SSD 512GB 2280 PCIe NVMe Value	NAND Type	TLC
	Interface	PCIe NVMe Gen4X4
	Minimum Sequential Read	2200 MB/s $\pm$ 10%
	Minimum Sequential Write	1000 MB/s $\pm$ 10%
	Logical Blocks	1,000,215,215
	Features	Pyrite 2.0; TRIM; L1.2

Technical Specifications

NETWORKING/COMMUNICATIONS

Intel® AX211 Wi-Fi 6E + Bluetooth® 5.3 M.2 160MHz CNVi World-wide WLAN non-vPro Wireless Card¹	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax 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 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	• 802.11b: 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
	Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
	Security²	• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • WPA3 certification • IEEE 802.11i • WAPI
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points

Technical Specifications

Output Power ³	• 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 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 : -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, mounted in the display enclosure Two embedded dual band 2.4/5 GHz antennas are provided to the card to support WLAN MIMO communications and Bluetooth communications
Form Factor	PCI-Express M.2 MiniCard
Dimensions	1. Type 2230: 2.3 x 22.0 x 30.0 mm
Weight	1. Type 2230: 2.8g
Operating Voltage	3.3v +/- 9%
Temperature	Operating 14° to 158° F (–10° to 70° C) Non-operating –40° to 176° F (–40° to 80° C)
Humidity	Operating 10% to 90% (non-condensing) Non-operating 5% to 95% (non-condensing)
Altitude	Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m)

Technical Specifications

LED Activity	LED Amber – Radio OFF; LED OFF – Radio ON
HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2/5.3 Wireless Card	
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.

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. 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.
2. Check latest software/driver release for updates on supported security features.
3. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.
4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

Technical Specifications

Intel® AX211 Wi-Fi 6E +Bluetooth® 5.3 M.2 160MHz CNVi World-Wide WLAN vPro Wireless Card¹	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n IEEE 802.11ac IEEE 802.11ax 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 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	• 802.11b: 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
	Modulation	Direct Sequence Spread Spectrum OFDM, BPSK, QPSK, CCK, 16-QAM, 64-QAM, 256-QAM, 1024QAM
	Security²	• IEEE and WiFi compliant 64 / 128 bit WEP encryption for a/b/g mode only • AES-CCMP: 128 bit in hardware • 802.1x authentication • WPA, WPA2: 802.1x. WPA-PSK, WPA2-PSK, TKIP, and AES. • WPA2 certification • WPA3 certification • IEEE 802.11i • WAPI
	Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power³	• 802.11b : +17dBm minimum • 802.11g : +16dBm minimum

Technical Specifications

	• 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
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Altitude	Operating 0 to 10,000 ft (3,048 m) Non-operating 0 to 50,000 ft (15,240 m)
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HP Integrated Module with Bluetooth 4.0/4.1/4.2/5.0/5.1/5.2/5.3 Wireless Card



Technical Specifications

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- 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. 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.
- 2. Check latest software/driver release for updates on supported security features.
- 3. The FCC has declared as of September 1, 2014 products that utilize passive scanning on channel 12/13 and are capable of transmitting must fully comply with requirements of 15.247 or otherwise disable those channels.
- 4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

Technical Specifications

Intel® 5G Solution 5000¹ 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)

5G NR 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)

n7: 2500 to 2570 MHz (UL), 2620 to 2690 MHz (DL)

n8: 880 to 915 MHz (UL), 925 to 960 MHz (DL)

n20: 832 to 862 MHz (UL), 791 to 821 MHz (DL)

n25: 1850 to 1915 MHz (UL), 1930 to 1995 MHz (DL)

n28: 703 to 748 MHz (UL), 758 to 803 MHz (DL)

n38: 2570 to 2620 MHz (UL/DL)

n40: 2300 to 2400 MHz (UL/DL)

Technical Specifications

	n41: 2496 to 2690 MHz (UL/DL) 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	5G NR Air Interface 3GPP Rel15 5G NR sub-6 LTE Rel14 20 layers and 2 Gbps downlink (DL) throughput – 4 × 4 MIMO across 5x CA 200 Mbps/uplink (UL) throughput – 40 MHz ULCA and 256 QAM WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification
GPS	Standalone, A-GPS (MS-A, MS-B)
GPS bands	GPS: L1 (1575.42MHz) GLONASS: L1 (1602MHz) BeidouB1(1561.098MHz) Galileo E1 (1575.42) QZSS(1575.42 MHz)
Maximum data rates	SA 5G/NR sub-6 Peak: DL4.67Gbps/ UL 1.25Gbps 5G NSA sub 6G : DL: 3.8 Gbps/UL 700Mbps LTE: ue-CategoryDL 19, (DL : 1.6 Gbps) ue-CategoryUL 18 , (UL: 211Mbps)
Maximum output power	DC-HSPA+: 42 Mbps (Download), 11.5 Mbps (Upload) LTE: 23 dBm in all band except B41 LTE B41 HPUE = 26dBm NR: 23 dBm in all band except n41, n77, n78 and n79 LTE n41, n77, n78 and n79 HPUE = 26dBm HSPA+: 23.5 dBm
Maximum power consumption	5G Sub 6 : 2500 mA LTE: 1,300 mA (peak); 1100 mA (average) HSPA+: 1,100 mA (peak); 800 mA (average)
Form Factor	M.2, 3052-S3 Key B
Weight	8 g
Dimensions (Length x Width x Thickness)	52 mm × 30 mm × 2.3 mm
eSIM	Support

1. Intel® 5G module is optional and must be configured at the factory. Module designed for 5G SA (standalone), and 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.

Technical Specifications

Intel® XMM™ 7560 R+ LTE-Advanced Pro ¹	Technology/Operating bands	FDD LTE: 2100 (Band 1), 1900 (Band 2), 1800 (Band 3), 1700/2100 (Band 4), 850 (Band 5), 2600 (Band 7), 900 (Band 8), 700 (Band 12 lower), 700 (Band 13 upper), 700 (Band 14 upper), 700 (Band 17 lower), 850 (Band 18 lower), 850 (Band 19 upper), 800 (Band 20), 1900 (Band 25), 850 (Band 26), 700 (Band 28), 700 (Band 29 RX only), 2300 (Band 30), 1700/2100 (Band 66), 600 (band 71). TDD LTE: 2100 (Band 34), 2600 (Band 38), 1900 (Band 39), 2400 (Band 40), 2500 (Band 41), 3500 (Band 42), 3700 (Band 43), 3700 (band 48), 5200 (Band 46 RX only) MHz; HSPA+: 2100 (Band 1), 1900 (Band 2), 1700/2100 (Band 4), 850 (Band 5), 900 (Band 8) MHz
	Wireless protocol standards	3GPP Release 12 LTE Specification DL-CAT.16, DL 100MHz BW throughput up to 978Mbps; UL-CAT.13 40MHz throughput up to 150Mbps WCDMA R99, 3GPP Release 5, 6, 7 and 8 UMTS Specification
	GPS	Standalone GPS/Beidou/Glonass, A-GPS (MS-A, MS-B)
	GPS bands	1575.42 MHz ± 1.023 MHz, GLONASS 1596-1607MHz, Beidou 1561.098 MHz
	Maximum data rates	LTE: 978 Mbps (Download), 150 Mbps (Upload) DC-HSPA+: 42 Mbps (Download), 5.76 Mbps (Upload) HSPA+: 21Mbps (Download), 5.76 Mbps (Upload)
	Maximum output power	LTE: 23 dBm in all band except B41 LTE B41 HPUE = 26dBm HSPA+: 23.5 dBm
	Maximum power consumption	LTE: 1,200 mA (peak); 900 mA (average) HSPA+: 1,100 mA (peak); 800 mA (average)
	Form Factor	M.2, 3042-S3 Key B
	Weight	6 g
	Dimensions (Length x Width x Thickness)	42 x 30 x 2.3 mm

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.

Technical Specifications

NFC NXP NPC300	Dimensions (L x W x H)	17x10x2.0 mm
	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	Tag Type 1, Type 2, Type3 and Type 4, NFCIP-1 and 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 cards
	Card Emulation (PICC-VICC) Mode	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, 212, 424, 848 kbps
	Operating temperature	0°C to 70°C
	Storage temperature	-20°C to 125°C
	Humidity	10-90% operating 5-95% non-operating
	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

Technical Specifications

Antenna	Antenna connector, 0.5mm pitch, 7 connector FPC. Antenna matching is external to module.
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Technical Specifications

POWER

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

AC Adapter 45 Watt nPFC Standard USB Type C® Straight 1.8m	Dimensions (H x W x D)	3.701 x 1.693 x 1.071 in (9.4 x 4.3 x 2.72 cm)
	Weight	0.44 lb (200 g) max (Not including power cord. Power cord varies by country.)
	Input	100~240VAC
	Input Efficiency	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec: 5V: 81.5% 9V: 86.7% 12V: 87.4% 15V: 87.8%
	Input frequency range	47 ~ 63Hz
	Input AC current	Max. 1.4 A at 90 Vac
	Output	Output power 5V/15W 9V/27W 12V/36W 15V/45W
	DC output	5V/9V/12V/15V
	Hold-up time	100% load 5ms at 115 Vac input
	Output current limit	<5.0A
Connector	USB Type-C®	
Environmental Design	Operating temperature	32°F to 95°F (0°to 35°C)
	Non-operating (storage) temperature	-4°F to 185°F (-20°to 85°C)
	Altitude	0 to 16,400 ft (0 to 5000m)
	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, 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 RCM, BIS, BSMI, UAE, UKCA DoC, USB-IF, Ukraine (CoC+DoC+RoHS+ECO)	

Technical Specifications

AC Adapter 65 Watt nPFC Standard USB Type C® Straight 1.8m	Dimensions (H x W x D)	3.543 x 2.008 x 1.122 in (9.0 x 5.1 x 2.85 cm)	
	Weight	0.53 lb (240 g) max (Not including power cord. Power cord varies by country.)	
Input	Input	100-240Vac	
		Input Efficiency	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec:
			5V : 81.5%
			9V : 86.7%
			12V : 88.0%
			15V : 89.0%
			20V : 89.0%
		Input frequency range	
		47-63Hz	
		Input AC current	
		Max. 1.6 A at 90 Vac	
Output	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 current limit	
Connector	Environmental Design	< 8.0A	
		USB Type-C®	
		Operating temperature	32°F to 95°F (0°to 35°C)
		Non-operating (storage) temperature	-4°F to 185°F (-20°to 85°C)
		Altitude	
		0 to 16,400 ft (0 to 5000m)	
		Humidity	
		20% to 95%	
EMI and Safety Certifications	EMI and Safety Certifications	Storage Humidity	
		10% to 95%	
		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	

Technical Specifications

HP 65W Slim USB-C® Straight AC Power Adapter	Dimensions (H x W x D)	3.819 x 2.106 x 0.827 in (9.7x5.35x2.1 cm)
	Weight	0.49 lb (220 g) max (Not including power cord. Power cord varies by country.)
	Input	100-240Vac
	Input Efficiency	Average Efficiency of 25%, 50%, 75%, 100% load condition with 115Vac/230Vac Spec: 5V : 81.5% 9V : 86.7% 12V : 88.0% 15V : 89.0% 20V : 89.0%
	Input frequency range	47-63Hz
	Input AC current	Max. 1.6 A at 90 Vac
	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 current limit	< 8.0A
Connector		
USB TYPE C®		
Environmental Design	Operating temperature	32°F to 95°F (0° to 35°C)
	Non-operating (storage) temperature	-4°F to 185°F (-20° to 85°C)
	Altitude	0 to 16,400 ft (0 to 5000m)
	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		

Technical Specifications

HP 3-cell Long Life Li-Ion (WQ 38Wh) ¹	Weight	0.178kg +/- 10g(0.392lb)	
	Cells/Type	3cell Lithium-Ion Polymer cell / 604975	
	Energy	Voltage	11.55V
		Amp-hour capacity	3.291Ah
		Watt-hour capacity ¹	38Wh
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 140° F (-10° to 60° C)
		Optional Travel Battery Available	No

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

HP 3-cell Long Life Li-Ion (51 Wh) ¹	Weight	0.229kg +/- 10g (0.505 lb)	
	Cells/Type	3cell Lithium-Ion Polymer cell / 566075	
	Energy	Voltage	11.58V
		Amp-hour capacity	4.431Ah
		Watt-hour capacity ¹	51.3Wh
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 140° F (-10° to 60° C)
		Optional Travel Battery Available	No

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

Technical Specifications

AUDIO

HD Stereo Codec	Realtek ALC3315
Audio I/O Ports	Headset: CTIA only and 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. Following MSFT Behavior
Sampling	DAC:48kHz ADC:48kHz
Wavetable Syntheses	N/A
Analog Audio	Support 3.5mm Headset: CTIA only and Headphone-out
# of Channels on Line-Out	N/A
Internal Speaker	Yes

FINGERPRINT READER

Sensor vendor	Main source: Synaptics FS7605 2nd source: ELAN 80SW
Sensor type	Capacitive
DPI resolution	Main source: 363 DPI 2nd source: 508 DPI
Scan area	Main source: 104 x 86 pixels 2nd source: 80x80 pixels
False Rejection Rate	FRR=≤ 3%
False Acceptance Rate	Main source: FAR 1/100K 2nd source: < 0.001%
Mobile Voltage Operation	Main source: 3.0V to 3.6V 2nd source: 2.7V~3.6V
Operating Temperature	Main source: 0°C~60°C 2nd source: -20°C - +80°C
Current Consumption	Main source: 100mA max 2nd source: 35mA peak
Image	Main source: 260uA 2nd source: 300uA
Low Latency Wait For Finger	Main source: 260uA 2nd source: 300uA
Capture Rate	Main source: Image transmitter output frequency 9.6MHz 2nd source: 50 frame/sec
ESD Resistance	IEC 61000-4-2 4B (+15KV)
Detection Matrix	Main source: 363 dpi / 7.4x6mm sensor area 2nd source: 508 dpi / 4x4mm sensor area

Technical Specifications

ENVIRONMENTAL DATA

Eco-Label Certifications & declarations	This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks: • IT ECO declaration • US ENERGY STAR® • US Federal Energy Management Program (FEMP) • EPEAT® Gold registered in the United States. See http://www.epeat.net for registration status in your country. • TCO Certified • China Energy Conservation Program (CECP) • China State Environmental Protection Administration (SEPA) • Taiwan Green Mark • Korea Eco-label • Japan PC Green label*		
Sustainable Impact Specifications	• Product Carbon Footprint (hp.com) • Ocean-bound plastic in Speaker • 59.4% post-consumer recycled plastic • 79.3% recycled metal • Low halogen • Outside Box and corrugated cushions are 100% sustainably sourced and recyclable • Molded Paper Pulp Cushion inside box is 100% sustainably sourced and recyclable • Bulk packaging available		
System Configuration	The configuration used for the Energy Consumption and Declared Noise Emissions data for the Notebook model is based on a “Typically Configured Notebook”.		
Energy Consumption (in accordance with US ENERGY STAR® test method)	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Sort idle)	4.33 W	4.66 W	4.44 W
Normal Operation (Long idle)	0.98 W	1.16 W	1.02 W
Sleep	0.98 W	1.16 W	1.02 W
Off	0.41 W	0.44 W	0.41 W
	NOTE: Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.		
Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	14.8 BTU/hr	15.9 BTU/hr	15.2 BTU/hr
Normal Operation (Long idle)	3.4 BTU/hr	4.0 BTU/hr	3.5 BTU/hr
Sleep	3.4 BTU/hr	4.0 BTU/hr	3.5 BTU/hr
Off	1.4 BTU/hr	1.5 BTU/hr	1.4 BTU/hr
	*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.		

Technical Specifications

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)	Sound Power (L_{WAd} , bels)	Sound Pressure (L_{pAm} , decibels)
Typically Configured – Idle	3.4	24.4
Fixed Disk – Random writes	4.1	31.4
Optical Drive – Sequential reads	3.9	30.1
Longevity and Upgrading	This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the	
	Spare parts are available throughout the warranty period and or for up to “5” years after the end of production.	
Additional Information	- This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC. - This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive – 2002/96/EC. - This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986). - This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net - Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043. - This product is 93.8% recycle-able when properly disposed of at end of life.	
Packaging Materials	External:	220 g
	PAPER/Corrugated	41 g
	PAPER/Molded Pulp	54 g
	PAPER/Molded Pulp	62 g
	PAPER/Paper	3 g
	Internal:	14 g
	PLASTIC/Polyethylene low density - LDPE	
	The plastic packaging material contains at least 0.0% recycled content.	
	The corrugated paper packaging materials contains at least 56.5% recycled content.	
RoHS Compliance	HP Inc. complies fully with materials regulations. We were among the first companies to extend the restrictions in the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive to our products worldwide through the HP GSE. HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam. We believe the RoHS directive and similar laws play an important role in promoting industry-wide elimination of substances of concern. We have supported the inclusion of additional substances—including PVC, BFRs, and certain phthalates—in future RoHS legislation that pertains to electrical and electronics products. We met our voluntary objective to achieve worldwide compliance with the new EU RoHS requirements for virtually all relevant products by July 2013, and we will continue to extend the scope of the commitment to include further restricted substances as regulations continue to evolve. To obtain a copy of the HP RoHS Compliance Statement, see HP RoHS position statement.	
Material Usage	This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html): Asbestos	

Technical Specifications

	• Certain Azo Colorants • Certain Brominated Flame Retardants – may not be used as flame retardants in plastics • Cadmium • Chlorinated Hydrocarbons • Chlorinated Paraffins • Bis(2-Ethylhexyl) phthalate (DEHP) • Benzyl butyl phthalate (BBP) • Dibutyl phthalate (DBP) • Diisobutyl phthalate (DIBP) • Formaldehyde • Halogenated Diphenyl Methanes • Lead carbonates and sulfates • Lead and Lead compounds • Mercuric Oxide Batteries • Nickel – finishes must not be used on the external surface designed to be frequently handled or carried by the user. • Ozone Depleting Substances • Polybrominated Biphenyls (PBBs) • Polybrominated Biphenyl Ethers (PBBEs) • Polybrominated Biphenyl Oxides (PBBOs) • Polychlorinated Biphenyl (PCB) • Polychlorinated Terphenyls (PCT) • Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications. • Radioactive Substances • Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)
Packaging Usage	HP follows these guidelines to decrease the environmental impact of product packaging: • Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials. • Eliminate the use of ozone-depleting substances (ODS) in packaging materials. • Design packaging materials for ease of disassembly. • Maximize the use of post-consumer recycled content materials in packaging materials. • Use readily recyclable packaging materials such as paper and corrugated materials. • Reduce size and weight of packages to improve transportation fuel efficiency. • Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.
End-of-life Management and Recycling	HP offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

Technical Specifications

HP, Inc. Corporate Environmental Information	For more information about HP's commitment to the environment: Global Citizenship Report http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html Eco-label certifications http://www8.hp.com/us/en/hp-information/environment/ecolabels.html ISO 14001 certificates: http://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c04755842 and http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/cert.pdf
footnotes	• Percentage of ocean-bound plastic contained in each component varies by product • Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard. • External power supplies, WWAN modules, power cords, cables and peripherals excluded. • 100% outer box packaging and corrugated cushions made from sustainably sourced certified and recycled fibers. • Fiber cushions made from 100% recycled wood fiber and organic materials. • Plastic cushions are made from >90% recycled plastic.\ • Recycled metal is expressed as a percentage of the total weight of the metal according to ISO 14021 definitions for metal parts over 25 grams.

COUNTRY OF ORIGIN

China



Options and Accessories (Sold separately and availability may vary by country)

DOCKING (Sold Separately)

Docking station model #1	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 TB hosts or USB-C hosts DP 1.4 with DSC in high res mode
Dock Connectors	2xDP, 1xHDMI, 1xTB, 1xUSB-C Alt Mode
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.
Docking station model #2	HP Thunderbolt 280W G4 Dock
Total number of supported displays (incl. the notebook display)	4
Max. resolutions supported	Quad 4K @60Hz Dual 8K single cable@30 for TB hosts or USB-C hosts DP 1.4 with DSC in high res mode
Dock Connectors	2xDP, 1xHDMI, 1xTB, 1xUSB-C Alt Mode
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.
Docking station model #3	HP USB-C Dock G5

Options and Accessories (Sold separately and availability may vary by country)

Total number of supported displays (incl. the notebook display)	3
Max. resolutions supported	Dual 5K@ 30Hz + (1) 4K UHD (multi-function mode)
Dock Connectors	1xHDMI, 2xDP
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 #4	HP USB-C/A Universal Dock G2
Total number of supported displays (incl. the notebook display)	3
Max. resolutions supported	Dual 4K @ 60Hz Single 5K @ 60Hz
Dock Connectors	1xHDMI, 2xDP
Technical limitations	Maximum resolution and display support is dependent on the maximum capability of the notebook. The best resolution for dual or triple displays is 4K UHD@ 60Hz. For use with the USB-A adapter that comes in the box the maximum number of displays supported is (2) 4k x 60 Hz on the Type-A Gen 1 connection from the host.

Options and Accessories (Sold separately and availability may vary by country)

Type	Description	Part Number
Audio	HP Wired USB-A Stereo Headset	428K6AA
	HP Wired 3.5mm Stereo Headset	428K7AA
	HP 365 BT Speaker	567D3AA#ACJ
Video	HP 325 FHD USB-A Webcam	53X27AA
	HP 965 4K USB-A STR Webcam	695J5AA
Cases	HP Prelude G2 15.6 Backpack	1E7D6AA
	HP Prelude G2 15.6 Top Load	1E7D7AA
	HP Prelude Pro Recycled 15.6 Backpack	1X644AA
	HP Prelude Pro Recycled 15.6 Top Load	1X645AA
	HP Renew 14 Laptop Sleeve	2E6U9AA
	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	3E2U5AA
	HP Renew Business 17.3 Laptop Bag	3E2U6AA
	HP Renew Executive 14.1 Laptop Sleeve	6B8Y3AA
	HP Renew Executive 16 Laptop Backpack	6B8Y1AA
	HP Renew Executive 16 Laptop Bag	6B8Y2AA
	HP Reversible 13.3 Sleeve	7ZE82AA
	HP Travel 18L 15.6 Iron Gray Laptop Backpack	6H2D9AA
	HP Travel 25L 15.6 Iron Gray Laptop Backpack	6H2D8AA
Digital Pen	HP Active RECHBL G3 Moonracer 2.0 Pen	6SG43AA
Docking	HP USB-C 120W G5 Dock	5TW10AA
	HP USB-C/A 120W G2 Universal Dock	5TW13AA
	HP Thunderbolt 120W G4 Dock	4J0A2AA
	HP Thunderbolt 280W G4 Dock	4J0G4AA
Hub	HP 4K USB-C Multiport Hub	6G842AA
	HP Universal USB-C Multiport Hub	50H55AA
	HP USB-C Travel Dock G2	7PJ38AA
	HP USB-C to USB-A Hub	Z6A00AA
Adapter	HP USB-C to RJ45 Adapter G2	4Z527AA
	HP USB 3.0 to Gigabit RJ45 Adapter G2	4Z7Z7AA
	HP HDMI to VGA Adapter	H4F02AA

Options and Accessories (Sold separately and availability may vary by country)

	HP USB-C to DisplayPort Adapter	N9K78AA
	HP USB-C to HDMI 2.0 Adapter	1WC36AA
	HP USB-C to USB 3.0 Adapter	N2Z63AA
	HP USB-C to VGA Adapter	N9K76AA
Keyboard/Combo	HP 125 WD USB Keyboard	266C9AA
	HP 320K WD USB Keyboard	9SR37AA
	HP 355 Compact Multi-Device BT Keyboard	692S9AA
	HP 455 Programmable Wireless Keyboard	4R177AA
	HP 975 USB+BT Dual-Mode Wireless Keyboard	3Z726AA
	HP 155 Wired Mouse and Keyboard Combo	5B8C0AA#ACJ
	HP 225 Antimicrobial Wired Mouse and Keyboard Combo	286K3AA#AB2
	HP 225 Wired Mouse and Keyboard Combo	286J4AA
	HP 235 Wireless Mouse and Keyboard Combo	1Y4D0AA
	HP 655 Wireless Keyboard and Mouse Combo	4R009AA
	HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA
	HP Wireless Rechargeable 950MK Mouse and Keyboard	3M165AA
Mouse	HP 125 USB-A Wired Mouse	265A9AA
	HP 128 USB Laser Wired Mouse	265D9AA
	HP 155 USB-A Wired Mouse	5B8B7AA#ACJ
	HP 235 Wireless 2.4GHz Slim Wireless Mouse	4E407AA
	HP 320M USB-A Wired Mouse	9VA80AA
	HP 435 Bluetooth 5.0 + Wireless 2.4GHz Multi-Device Wireless Mouse	3B4Q5AA
	HP 715 Rechargeable Multi-Device Bluetooth 5.0 + Wireless 2.4GHz Bluetooth Mouse	6E6F0AA
	HP 925 Ergonomic Vertical Bluetooth 5.0 + Wireless 2.4GHz Wireless Mouse	6H1A5AA
	HP Creator USB-A+Bluetooth 935 Wireless Mouse Black	1D0K8AA
	HP USB Premium Wireless Mouse	1JR31AA
	HP USB-A+Bluetooth Multi-Device 635 Wireless Mouse Black	1D0K2AA
	HP USB-A+Bluetooth Travel Bluetooth Mouse	6SP30AA
Power	HP 45W USB-C LC Dali AC Power Adapter	1MZ01AA
	HP 65W GaN USB-C Laptop Charger	600Q7AA
	HP 65W USB-C Laptop Charger	671R3AA
	HP 65W USB-C LC AC Power Adapter	1P3K6AA
Commodity	HP USB DVD-Writer EXT ODD	F2B56AA
	HP Nano Keyed Cable Lock	1AJ39AA
	HP Nano Master Keyed Cable Lock	1AJ40AA
	HP SureKey Standard/Nano/Wedge Cable Lock	6UW42AA

Options and Accessories (Sold separately and availability may vary by country)

HP Combination Nano Cable Lock	63B28AA
HP Essential Combination Nano Cable Lock	63B31AA

Change Log

Date of change:	Version History:		Description of change:
March 30, 2023	V1 to V2	Updated	LPDDR5 memory speed, added Environmental Data and Battery Life
April 6, 2023	V2 to V3	Updated	DisplayPort™ in Display section
April 11, 2023	V3 to V4	Updated	Integrated Graphics
May 9, 2023	V4 to V5	Updated	Product weight in Weight and Dimensions section
June 5, 2023	V5 to V6	Updated	Storage and Drives section
June 30, 2023	V6 to V7	Updated	Environmental Data
July 12, 2023	V7 to V8	Added	Memory in Memory section
August 2, 2023	V8 to V9	Updated	Environmental Data and Memory section
August 14, 2023	V9 to V10	Updated	Graphics section
August 18, 2023	V10 to V11	Updated	Networking section
October 11, 2023	V11 to V12	Updated	Panel Color Depth in Displays section
November 2, 2023	V12 to V13	Updated	Storage and Drives section
	V13 to V14		

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